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## **Reducing Inequality in Higher Education: Where Do We Go From Here?**

**by**

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## **I. Introduction**

Differences in inequality in college enrollment rates across students from families of different socioeconomic levels have only marginally narrowed since the early 1970s.<sup>1</sup> Moreover, students from lower-income families are much more likely to start higher education in two-year public colleges and public four-year institutions than are their higher income counterparts.<sup>2</sup> Among students who initially enter four-year institutions, six year graduation rates of students from families with incomes of less than \$50,000 are substantially less than the graduation rates of students from families with incomes of more than \$75,000.<sup>3</sup> Finally, at a set of our nation's most selective private colleges and universities, the proportion of students coming from families whose family incomes are in the lowest two-fifths of the distribution of family income, averaged only about 10% in recent years.<sup>4</sup>

I begin in the next section by discussing some of the forces influencing public and private higher education in the United States in recent years that have worked against improving access and persistence of students from the lower tail of the family income distribution. Where students go to college may be as important as whether they go to college, as a considerable body of research shows that, other factors held constant, students who attend better-funded more-selective colleges earn higher post graduation earnings, with this effect being greatest for students who come from lower income

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<sup>1</sup> Baum and Payea (2004), figure 21

<sup>2</sup> Baum and Payea (2004), figure 22

<sup>3</sup> Baum and Payea (2004), figure 24

<sup>4</sup> Hill, Winston and Boyd (2005)

families.<sup>5</sup> Hence I also discuss why it became increasingly difficult for students from lower income families to enroll at top public and private institutions during the period.

Spurred by public attention that has been drawn to the under representation of students from lower income families, both selective public and private universities have begun to institute policies to improve their access to talented students from lower income families.<sup>6</sup> The next section discusses a number of these strategies and provides preliminary estimates for some of their success to date. Efforts have also been made to enhance college preparedness of lower income high school students and to provide them with improved information about college costs, the availability of financial aid, and prerequisites needed to succeed in college; a few issues related to these efforts are discussed in the following section. Finally, I speculate about directions that future institutional and public policies might take.

## **II. Pessimistic Forces**

A host of forces have influenced public and private higher education during the last thirty years that have served to reduce progress at improving access in general and to our nation's most selective academic institutions.<sup>7</sup> First, following the Reagan revolution and federal income tax cuts in the 1980s, which reduced the value of the state income tax deductions on federal income tax returns, taxpayers clamored for state income tax cuts. Increased state funding needs for Medicaid, elementary and secondary education and the criminal justice system since then have put increased pressures on state tax revenues and structural deficits appeared in many state budgets. There have not been sufficient

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<sup>5</sup> Even Dale and Kruger (2002), who dispute the "college selectivity matters" finding of other researchers find the expenditure per student are related to subsequent earnings, with the effect being largest for students from lower income families, other factors held constant.

<sup>6</sup> Hill, Winston and Boyd (2005), Kahlenberg (2004), and Bowen, Kurzweil and Tobin (2005)

<sup>7</sup> Much of the material in this section draws on Ehrenberg (forthcoming)

revenues to fund public higher education generously and dramatic reductions in the share of state budgets devoted to higher education have taken place.<sup>8</sup> Enrollments in public higher education grew by over 50% during the 1994 to 2000 period and state support per student at public higher education institutions remained roughly flat (in terms of the HEPI) during the period.

While traditionally public higher education has been viewed as a social good that yields benefits to the nation as a whole, as the earnings differences between highly educated and less educated individuals widened and the private return to higher education grew, policymakers focused much more on the private return to public higher education. Any increase in real expenditures per student at the publics had to come from tuition increases and from students and their families paying a greater share of their higher educational costs.

On average, private higher education institutions increased their tuition levels by more than 3% a year above the rate of inflation during the last 30 years. Faced with no real increases in state appropriation per students, in an effort to generate resources to remain competitive with their private counterparts, public colleges and universities raised their tuitions at roughly the same rate during the period. However, because the publics started off with much lower levels of tuition, the dollar increases in tuition that they generated from these increases were much smaller than those generated by their public counterparts. As a result, expenditures per student in public higher education fell substantially relative to expenditures per student in private higher education; this was reflected in declining relative salaries of faculty at public institutions, growing student/faculty ratios at the publics relative to the privates and more rapid increases in

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<sup>8</sup> Rizzo (forthcoming)

usage of part-time and full-time non tenure track faculty at the publics than at the privates.<sup>9</sup> Research suggests that, other factors held constant, increased use of these types of contingent faculty is associated with reductions in 5-year graduation rates at colleges and universities.<sup>10</sup>

As public tuition levels have increased, states and the federal government have responded to political pressure from the middle class by shifting financial aid away from need-based financial aid. At the state level, aid is increasingly merit, rather than needs based; one study calculated that between 1982 and 2002, the percentage of total state aid that is not based on need grew from about 10% to over 25%.<sup>11</sup> This occurred because 13, mostly Southern states, had introduced broad-based merit scholarship programs modeled along the lines of Georgia's *Hope Scholarship Program* that was designed to encourage high school graduates to attend in-state institutions. Susan Dynarski has calculated that in many of these states the 30% or more of high school students who qualify for these awards are disproportionately white and come from middle or upper-income families.<sup>12</sup> Hence the growth of these programs can be understood as policymakers responding to large voting blocs concerned with rising college tuition, not as an effort to increase access.

At the federal level, the major growth in financial aid has been in loans and tax credits for college attendance, not in increases in the real level of the maximum Pell Grant award per recipient. Given evidence that students from lower income families are not inclined to take on large loan burdens, these policies have also not stimulated access.

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<sup>9</sup> Ehrenberg (2003), Kane and Orszag (2003), Ehrenberg and Zhang (2005a)

<sup>10</sup> Ehrenberg and Zhang (2005b)

<sup>11</sup> *Trends in College Pricing 2004*, figure 10

<sup>12</sup> Dynarski (2004)

Increasingly, financial aid to guarantee access at both public and private academic institutions will have to come from institutional, rather than state or federal funds.

Data on the share of Pell Grant recipients among the undergraduate student bodies at our nation's major public universities (a crude estimate of the share of their student bodies coming from the lowest two-fifths of the distribution of family incomes) indicate that a number of these institution's currently enroll relatively few students from these groups (some flagships, such as the University of California campuses, are notable exceptions). For example, Don Heller has estimated that in 2001-2002, Pell Grant recipients were 19 percent of the undergraduate student bodies at our nation's most selective public universities, while I estimate that they were about 27% of the undergraduate student bodies nationally at all public four-year institutions that year.<sup>13</sup>

The flagship publics are the public institutions that are most likely to privatize and raise their tuitions substantially in the years ahead.<sup>14</sup> Absent their devoting many more institutional resources to need-based financial aid, this is likely to lead to even greater increased stratification of public higher education, with upper and upper middle income students studying at relatively well-funded public flagships and lower and lower middle income students studying at other public 4-year and 2-year institutions. Large expenditure per student differentials already exist across these institutional categories; for example, in 2001-2002 instructional expenditures per full-time student averages \$9,763 at public flagship (doctoral-extensive campuses), \$4,903 at public comprehensive institutions and \$3,973 at public two-year colleges. As I have already indicated, these differences make a

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<sup>13</sup> Heller (2004)

<sup>14</sup> Ehrenberg (forthcoming)

real difference in student's lives; students attending better funded institutions are more likely to graduate and to achieve higher earnings after graduation.

What about the privates? Heller (2004), as well as Hill, Winston and Boyd (2005), show that the share of students coming from lower and lower middle income families at many of our nation's most selective and best funded private colleges and universities is quite small. In part this arises from these institutions being involved in an arms race to achieve prestige and the prestige of an institution is heavily determined by the test scores of its entering students. Fueled partially by the *U.S. News & World Reports* rankings, which started in 1983 and quickly became the "gold standard" of the rankings business, partially by the consent degree between the Ivy League institutions and the U.S. Department of Justice in 1991 that prohibited these institutions from colluding on financial aid offers, and partially by the growing use of preferential packaging (giving different levels of grant aid to students with the same levels of financial need based upon their perceived "attractiveness to the institution"), both public and private academic institutions have increasingly competed for top test score students using merit aid.<sup>15</sup>

It is well-known that test scores are correlated with family income levels, so not surprisingly recent research that I conducted with colleagues showed that as institutions increase the share of their first-year class that receive institutionally financed *National Merit Scholarships*, the share of their entering student bodies that are Pell Grant recipients falls.<sup>16</sup> Given limited resources, increased usage of institutional merit aid more generally threatens to crowd out need-based financial aid, which would further stratify private higher education, with students from lower-income families who are less likely to

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<sup>15</sup> McPherson and Shapiro (2005)

<sup>16</sup> Ehrenberg, Zhang and Levin (forthcoming)

be high test score students, increasingly likely not to make it to the best funded selective private institutions.

### **III. Examples of Current Institutional and State Financial Policies**

The leaders of the flagship campuses at a number of our nation's public universities understand the importance of increasing their accessible to students from lower-income families and other underrepresented groups. Examples of public flagships that have undertaken such efforts are the University of North Carolina Chapel Hill with its *Carolina Covenant* and the University of Virginia with its *Access UVA* programs.<sup>17</sup> Both programs guarantee students that have income less than twice the federal poverty level that they can attend the institutions without incurring any debt. Both include comprehensive efforts by the universities to recruit more students from low income families and, in the case of Virginia, a promise to report to the state each year on the socioeconomic distribution of its student body.

Increased enrollment of students from low income families at these institutions can come via three routes. First, the programs may succeed in increasing the flow of applicants from lower income families to the universities. Second, the realization that it is a goal of the university to increase enrollments of students from these groups may cause admission officers to give added preference to them in the admissions process. Third, the improved financial packages being offered to accepted applicants from these groups may increase the likelihood that they accept the university's offer of admissions. A careful study of the first year's experience of *Access UVA*, found that the program did increase enrollments of students from lower income families, with much of the impact coming from (in Bowen, Kurzweil and Tobin's words) admissions officers putting "a thumb on

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<sup>17</sup> For details of these programs, see [www.unc.edu/carolinacovenant](http://www.unc.edu/carolinacovenant) and [www.virginia.edu/accessuva](http://www.virginia.edu/accessuva).

the scale” for these students.<sup>18</sup> While their initial evaluation suggested that the increase was due primarily to these students’ probabilities of admission increasing, not to an increase in a number of applications from students in the group, this result was not surprising because it will likely take a number of years before application behavior will be influenced. Students from lower income families who are enrolled in high schools that are not traditional feeder schools to UVA will need time to internalize that attendance at UVA is now a real option for them and to take the high school courses that will make them eligible for admission.

A similar program is the University of Texas *Longhorn Opportunity Scholarship* program that provides scholarships to students from high schools located in census tracts with average family incomes of less than \$35,000 whose students were historically underrepresented at the University of Texas. The program also provides coordinated focused mentorship opportunities designed to provide substantial assistance to students in their first year of enrollment.<sup>19</sup> This program was originally designed, along with the “top 10% rule”, to help counter the effect of the *Hopwood* decision, which prohibited racial preferences in admissions in Texas and other states in the appeals court region.

A number of states have needs-based financial aid programs for high school graduates from the states that attend in-state institutions. Two notable examples are New York State’s Tuition Assistance Program and California’s Cal Grant program. A careful evaluation of the latter suggested that it substantially increases college enrollment rates for students from lower income families.<sup>20</sup> Still another innovative program is the D.C.

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<sup>18</sup> Tebbs and Turner (2005). The authors are in the process of estimating whether admission probabilities, given that students from lower income families were accepted, were influenced by the program.

<sup>19</sup> See [www.utexas.edu/student/connexus/scholars](http://www.utexas.edu/student/connexus/scholars)

<sup>20</sup> Kane (2003)

Tuition Assistance Grant program that allows residents of the District of Columbia to attend public institutions in other states, but pay only the tuition charged to residents of the state. The program led to an increase in college enrollment rates of District high school graduates. Although this program is not needs based, given the socioeconomic distribution of high school graduates in the District, it is not surprising that the increases in college enrollments it induced were largely among students eligible for Pell Grants.<sup>21</sup>

As noted above, our nation's richest and most selective private higher educational institutions have also begun to realize their social obligation to enhance their enrollments of top students from lower income families.<sup>22</sup> Princeton took the first step in 1998 when it eliminated all loans from its financial aid packages. Researchers found that the program increased the enrollment rates of accepted low income applicants by about 3 percentage points and of accepted low income minority applicants by about 8 to 10 percentage points, but only the latter increase was statistically significant.

Not to be outdone, Harvard quickly matched this program and went even further when it announced in the spring of 2004 that parents of students from families who earn less than \$40,000 a year would not be required to pay anything towards their students' education (students would still be expected to contribute to their education through academic and summer job earnings and families earning between \$40,000 and \$60,000 would be expected to pay a small amount). The program also included increased recruitment efforts, labeling the applications of students from lower-income families so that they might receive special consideration in admissions and establishing summer

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<sup>21</sup> Kane (2004)

<sup>22</sup> My own institution, Cornell, has long had a policy of eliminating loans from the financial aid packages of students coming from families with incomes of less than \$35,000 a year and not surprisingly this has led it to be among the selective private institutions that have the highest share of Pell Grant recipients in their student bodies (see Heller (2004))

programs for talented disadvantaged high school students in the Boston area to enhance their preparation for selective 4-year institutions.<sup>23</sup> In April 2005, it was reported that the Harvard class starting in the Fall of 2005 would have 22% more students than the previous year's class from families with family incomes of less than \$60,000.<sup>24</sup> Not to be outdone, evidence that Harvard's policy was beginning to work led Yale to adopt a similar no parental contribution policy for families with family incomes of less than \$45,000 in March of 2006.<sup>25</sup>

#### **IV. Examples of Other Policies to Improve Access and Persistence**

Financial aid and college costs are not the only barriers preventing access to, and persistence in, higher education for students from lower income families. Other papers at this conference have discussed the role of inequalities in elementary and secondary school preparation, linkages between secondary schools and colleges, the college application process, the increasingly important role that community colleges play and the role of remediation. So my remarks here will be much briefer.

First, concern has been expressed that high school students from lower income families have less information about the expected returns from attending college than their higher income counterparts and are discouraged from applying to college by the complexity of the financial aid application and admissions process. Research by Christopher Avery and Thomas Kane as part of the Boston COACH (College Opportunity and Career Help) program suggests that the first concern is probably incorrect, but that the second is very important in restricting college entrance for students

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<sup>23</sup> Basinger and Smallwood (2004)

<sup>24</sup> Kahlenberg (2005)

<sup>25</sup> Pacia and Sadeghi (2005)

from high schools that enroll primarily lower income students.<sup>26</sup> The COACH program includes mentoring of inner city Boston high school students by Harvard graduate students on the college applications and admissions process and it will be interesting to learn how the program impacts upon college going behavior.

Second, removing all financial barriers to attending college does not guarantee success for talented students from lower-income families. Berea College in Kentucky has been ranked as the top regional college in the south by *U.S. News & World Reports*, in large part because of its high endowment per student and high test scores of its entering student body. It restricts its enrollment to students who come from families with lower and lower middle class incomes; in 1997 virtually all of its undergraduates came from families with incomes of less than \$50,000. It provides all of its students with free tuition and grants that cover most of their living costs. All students are required to work for approximately 10 hours a week in a mandatory work study program and are not permitted to work longer hours.

In spite of Berea's students' having the costs of their education covered by grant aid and minimal work requirements and the distribution of their family incomes being truncated, research suggests that even after controlling for test scores, distance from home to the college, family size, race and gender, persistence is positively related to family income at Berea.<sup>27</sup> This research did not permit the authors to isolate the factors responsible for the relationship; plausible candidates relate to parental background differences, pre college schooling quality differences (although this does not appear to be an important variable), the types of peers students from different income levels had while

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<sup>26</sup> Avery and Kane (2005)

<sup>27</sup> Stinebrickner and Stinebrickner (2003)

in high school, or the difficulty students from very low income families have adjusting to an environment in which they are surrounded by wealthier classmates. It does suggest that while the net cost of attending college influences persistence, it is clearly not the only thing that matters for students from lower income families.

Third, access to higher education includes access to 2-year colleges and persistence in higher education includes the ability to transfer from 2-year to 4-year colleges. As tuition levels at 4-year institutions rise, increasingly 2-year colleges are becoming the entry point to higher education for students from lower-income families. The ability of students enrolled in academic programs at 2-year colleges to transfer to 4-year institutions is likely to play an increasingly important role in the future in terms of persistence (to 4-year degree) of students from lower income families.

States differ widely in how easy it is for students to transfer from 2-year to 4-year colleges within their public higher education systems. Some states have common course numbering systems for all public institutions in the state, which makes requirements for transfer and for the 4-year institutions to grant credit for classes taken at the 2-year institutions more transparent. In other states, articulation agreements between individual 2-year and 4-year colleges often lay out terms for transfer; however, often such arrangements guarantee only admission to a 4-year institution if certain conditions are met, not admission to a specific major at the institution.

Research suggests that the probability that graduates of 2-year colleges, who transfer to 4-year colleges, receive 4-year degrees within three years of the time they transfer varies widely across institutions that are members of the same state system.<sup>28</sup> Moreover, the success rate of 2-year college students at the 4-year institutions appears to

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<sup>28</sup> Ehrenberg and Smith (2004)

be related to the share of these students in the student body; institutions that are heavily dependent upon transfer students for enrollment management purposes, appear to devote more attention to helping transfer students to succeed. If we are serious about wanting to enhance the persistence of students from lower-income families to receipt for 4-year college degrees, much more attention must be directed to facilitating transfers and enhancing the success of transfer students once they reach the 4-year colleges.<sup>29</sup>

Finally, federal and state governments, foundations and increasingly higher education institutions themselves have been devoting resources to intervene prior to college to better prepare students from low income families for access to higher education. The federal interventions began with the TRIO program in the 1960s; a major program that is part of it today is the Upward Bound program that provides services to eligible students between the ages of 13 and 19 to enhance the skills and motivation that are necessary for them to enroll and persist in postsecondary education.

Two recently completed analyses of many of these programs, including a meta evaluation of existing evaluations of them, suggested that early interventions are particularly important and that those programs that are most effective are those in which services continue to be provided as students progress from middle school through high school.<sup>30</sup> Given the vast inequities that exist between the quality of elementary and secondary school educations that students from different family incomes receive in the United States, if one truly wants to substantially reduce differences in educational attainment by income class, the numbers of students requiring such interventions are likely to be very large and thus the costs of these interventions very large. So inevitably,

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<sup>29</sup> In April 2005, several foundations announced an initiative to enhance the flow of community college graduates to our nation's most selective colleges and universities (see "Foundations Begin....", 2005)

<sup>30</sup> Perna (2005) and Jager-Hyman(2004)

there will be a tradeoff between the numbers of students from low-income families these programs can serve and the comprehensiveness of the programs that can be provided to them.

## **V. Looking to the Future**

Will our nation succeed in substantially reducing the inequities in college access and persistence that currently exist between students from lower income and other families? Economists, especially this economist, are notoriously bad at making predictions, but some speculations are in order.

Our nation's public higher education institutions, where 80% of all college students and 65% of all 4-year college students are educated will continue to face enormous pressures. Achieving the twin goals of improving (or at least maintaining) both access and quality is unlikely to be an easy task for them. Given the structural deficits present in many state budgets, public higher education is likely to be increasingly viewed as a private investment, and financed primarily by increases in tuition rather than increases in state appropriations. The increases in tuition are likely to be the largest at the flagship public research universities, where the greatest excess demand for undergraduate positions exists.

Many of these institutions do not have the large flow of annual giving and the large endowments that the University of Virginia or the University of Chapel Hill have and thus it will be more difficult for them to develop the resources necessary to support programs such as *Access UVA* or the *Carolina Covenant*. If these flagship institutions are successful in diversifying their student bodies along racial/ethnic and socioeconomic lines, they run the risk of alienating the traditional supporters of their institutions; the

upper and middle class families whose children attend high school that have been large feeders schools for them. This may translate into political pressure to reverse policies that led to the diversification, or a further loss of financial support for the public institutions. Certainly the pressure that has been building in Texas to modify the “top 10%” policy is an example of how quickly such pressures can arise.<sup>31</sup>

Further cut backs in state support are likely to be very damaging to the public comprehensives and 2-year colleges. Efforts by them to replace state support by tuition increases are likely to be more problematic, as these are the institutions in which enrollment demand is likely to be most sensitive to price and which are most likely to have only limited capacity to raise funds for increased institutional need based financial aid. Inasmuch as they already are the public institutions that have the highest fraction of students from low-income families, cut backs in their state support would likely have a negative effect on the goals of increasing access and persistence.

What about state support for need based financial aid? The trend here has been exactly in the other direction, with the share of state funding for grant aid that is not based upon need and is based upon “merit” increasing. To the extent that merit aid programs disadvantage students from lower income families, which they appear to have in the past, they are unlikely to expand access or persistence in the future.

The very richest selective private colleges and universities have the resources to continue their efforts to expand enrollments of talented students from lower income families and this is a good thing. However, as one moves down the prestige pecking order resources rapidly fall off and institutions are increasingly using financial aid to help them craft classes that make them look more selective, rather than to promote access. As long

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<sup>31</sup> Elliott(2005)

as prestige is the currency of the day that enables private colleges and universities to attract higher test score students, better faculty and more resources, this is unlikely to change. The vast majority of private colleges and universities are already heavily involved in tuition discounting; preliminary results from the 2004 annual *NACUBO Tuition Discounting* study suggest that freshman tuition discount rates averaged 38.6 percent at private colleges and universities in the United States. Given tuition discount rates of this magnitude, which increasingly reflect merit rather than need based financial aid, the net effect of the policies of the most selective richest privates might be to shift increasing numbers of talented lower income students from less selective to more selective private institutions. While this may be socially desirable, it will not lead to an increase in the overall enrollment of lower income students in higher education.

So what can be done in the future to improve access and persistence for students from lower income families? Actions will have to come from academic institutions themselves and reflect the important social value that they place on doing so. However, given the competition for status that all institutions find themselves in, such actions are unlikely to occur unless incentives exist for all institutions to take the actions. Put simply, higher education needs to redefine the metric by which it judges success.

Given the impact that the annual *U.S News & World Reports* rankings have on the behavior of academic institutions, I have argued elsewhere that the rankings methodology could be modified in several ways that would provide incentives for our nation's 4-year colleges and universities to direct more efforts to increasing access and persistence of students from low-income families.<sup>32</sup> First, information on the share of Pell Grant recipients in each institution's first-year class could be added as an additional data

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<sup>32</sup> Ehrenberg (2005)

element in the rankings formula, with positive weight being assigned to this variable. If institutions' *USNWR* rankings improved when they enrolled more Pell Grant recipients, they would most certainly devote more efforts to doing so. While some might argue that it would be inappropriate for private higher education institutions to be judged by this standard, at the very least public institutions should be.

Second, given that more and more students from lower income families are finding that attendance at 2-year public institutions is the only way that they can begin their college careers, 4-year institutions could be required to provide information on transfer student success (say the 3-year graduation rate of students transferring after completing 2-year college degrees) that is analogous to the 6-year graduation rate data for freshman that they currently provide that appears in the *USNWR* formula. If institutions' *USNWR* rankings were based on the success rates of their transfer students this would provide an incentive for them to devote more efforts to assuring the persistence to graduation of their transfer students.

Federal and state governments could also play a role by providing financial incentives for public and private 4-year colleges to enroll, and see through to graduation, students from lower-income families. One way to do this would be to provide payments to the institutions for each Pell Grant recipient that received a degree from them. Making such "per graduate" payments would, as a byproduct, also encourage 4-year colleges to expand their enrollment of transfer students from 2-year colleges, because the institutions would receive full payments for graduating these students, but would only bear the costs of educating them during part of their college careers.<sup>33</sup>

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<sup>33</sup> This proposal is modeled after the *Bundy Aid* program in New York State that provides a grant of \$1,500 to private colleges in the state for each New York State resident who receives a bachelor's degree from

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them. This program has provided an extra incentive for private colleges in the state to enroll transfer students from the public 2-year colleges in the state, in addition to their desire to do so for enrollment management purposes (Cheslock (2005) discussed transfer students in the context of enrollment management)

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