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The Federal Role in Financing 21st Century Higher Education: Effectiveness, Issues, and Alternatives

Prepared for the

National Commission on Financing 21st Century Higher Education

By: Gabriel R. Serna, Virginia Polytechnic Institute and State University

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Letter from the Commissioners

The University of Virginia Miller Center created the National Commission on Financing 21st Century Higher Education in 2014 to recommend policy and funding changes to help the nation attain the goal of 60 percent of the labor force with a postsecondary degree or certificate by 2025. This means that 62 million Americans must graduate with a postsecondary degree or credential between 2015 and 2025. At current rates, the United States will produce only 39 million such graduates, leaving a gap of 23 million—a shortfall of more than 2 million per year.

To meet the goal, the nation must maintain high school graduation and college entrance rates at or above 75 percent and 70 percent, respectively—reachable goals close to historical norms. The nation must also *increase* college graduation rates from 40 percent to 60 percent. Increasing the college graduation rate is inherently challenging but made even more so because of major demographic changes. Many of the upcoming college-aged individuals will be people of color or from low-income families, populations that traditionally have needed additional counseling, mentoring, academic support, and financial assistance to successfully enter into and complete higher education. How to increase access and graduation rates and thus equality for these two population groups is the major focus of the commission.

The need to address these issues is also urgent given that other nations are catching up to—and even surpassing—the United States in postsecondary degree- and credential-attainment rates. The United States ranked 13th relative to other Organization for Economic Cooperation and Development countries in 2014 in the percentage of 25- to 34-year-olds with higher education degrees or credentials. The cost of failure in attaining this goal—to the nation in terms of international leadership and to citizens in terms of job creation and income—is too high, and so action is required now.

To learn more about these issues, the commission engaged highly qualified experts to create 10 white papers on different dimensions of the higher education problem. The commission asked all the authors to push the limits of their knowledge and engage in "blue sky" thinking on individual topics. Each paper represents the views of the individual authors, not the commission. Nevertheless, the papers provide a foundation for the recommendations in the final report. In addition, the commission hopes the papers stimulate further discussion and debate about higher education policy and funding.

The 10 papers and the final report focus on answering three primary questions related to reaching the 60 percent goal. First, how do we realign incentives and retarget existing public funding to make the entire system more efficient and to increase graduation rates for students generally and students of color and from low-income families in particular? Second, what are the new, innovative models to deliver postsecondary education that can both lower the cost and increase the productivity of the entire system? Third, what options do federal and state governments and the private sector have for increasing funding for higher education? It is important to stress here that the interest is in the " value proposition " that underlies these three primary questions. The" value proposition " focuses on the national imperative of

The U.S. higher education system is still the envy of the world, but it must become more affordable for the next generation. It must also become more innovative and adaptable, especially in its use of technology, and be more productive with regard to graduation rates. Finally, additional funding must be available from federal, state, and private-sector sources to reach the goal.

National Commission on Financing 21st Century Higher Education

- Mike Castle, former governor of Delaware and former U.S. congressman (co-chair)
- Bob Graham, former governor of Florida and former U.S. senator (co-chair)
- Andrea J. Ayers, president and chief executive officer (CEO), Convergys
- Jorge Benitez, (retired) CEO United States and senior managing director, Accenture North America
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- Lou Anna K. Simon, president, Michigan State University

White Papers written for the National Commission on Financing 21st Century Higher Education

Paper 1. **Crowded Out: The Outlook for State Higher Education Spending**
Authors: Dan White and Sarah Crane, Moody's Analytics

Paper 2. **Transformations Affecting Postsecondary Education**
Author: Jeffrey J. Selingo, Arizona State University and Georgia Institute of Technology

Paper 3. **State Higher Education Finance: Best Practices**
Authors: Martha Snyder, Brian Fox, and Cristen Moore, HCM Strategists

Paper 4. **Financing American Higher Education in the 21st Century: What Can the United States Learn From Other Countries?**
Author: D. Bruce Johnstone, professor, Higher and Comparative Education Emeritus, University at Buffalo

Paper 5. **State Strategies for Leveraging Employer Investments in Postsecondary Education**
Authors: Robert Sheets and Stephen Crawford, George Washington Institute of Public Policy, The George Washington University

Paper 6. **Understanding State and Local Higher Education Resources**
Authors: Sandy Baum and Kim S. Rueben, Urban Institute

Paper 7. **New Directions in Private Financing**
Author: Andrew P. Kelly, American Enterprise Institute

Paper 8. **Higher Education: Social Impact Bonds and Income Share Agreements**
Author: Carlo Salerno, higher education economist/analyst

Paper 9. **State Support for Higher Education: How Changing the Distribution of Funds Could Improve College Completion Rates**
Author: Bridget Terry Long, Harvard Graduate School of Education

Paper 10. **The Federal Role in Financing 21st-Century Higher Education: Effectiveness, Issues, and Alternatives**
Author: Gabriel R. Serna, Virginia Polytechnic Institute and State University

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Executive Summary

For the United States to remain competitive in the world market, 60 percent of new entrants into the workforce by 2025 would have to possess a college degree or certificate of postsecondary training. Currently, that number is only about 40 percent.

Because of demographic changes, it is also true that a large chunk of that 20 percent gap consist of first-generation, low-income, and underrepresented students, such as minorities, who in decades past did not attend higher education in large numbers.

State and federal policies can work in unison to increase higher education affordability, access, and attainment for these students, and money is particularly important. Financing mechanisms that keep these students and their families from being saddled with debt must be available, and federal funding goes a long way toward this end. In fact, grants and loans provide the majority of financing for most students, although grants appear to be more effective than loans at creating pathways and removing barriers to access for students. Nevertheless, loans play a major role when students—low-income students in particular—select a college or university.

Finances are not the only obstacle preventing first-generation, low-income, and underrepresented students from going to college, however: The complexity of the application process, lack of familiarity with colleges and universities, and limited experience with finances are all significant barriers to access. The very social and economic issues facing first-generation, low-income, and underrepresented students, arising from structural, social inequities, often inhibit these students' ability to access higher education.

Nontraditional students, such as veterans taking advantage of the Post-9/11 GI Bill and older students with dependents, may face similar challenges.

This paper makes seven recommendations for remedying the financial issues facing first-generation, low-income, and underrepresented college students:

- **Recommendations 1–3.** Provide progressive grants and loans that more carefully match the amount of aid to family income, where (1) the neediest students from families earning less than $40,000 per year leave college with no debt, (2) those from lower-middle-- and middle-income

families ($40,001 to $80,000 per year) receive some combination of subsidized loans and grants, and (3) those from families earning $80,001 to $160,000 per year receive a mix of subsidized and unsubsidized loans of which the unsubsidized could be part of a public–private partnership. With a similar restructuring of state aid programs, this approach could provide much-needed funding for high-ability, low-income, first-generation, and underrepresented students.

- **Recommendation 4.** Last-in aid for federal loans could lower the debt burden of the lowest-income students by requiring that all other aid be awarded before loans. Under this structure, unsubsidized loans would be the last portion added to a student's aid package, with other actors, such as states and institutions, required to provide their aid first.
- **Recommendation 5.** Invert tax benefits so that these monies are collected and used as a refundable tax credit for those from low- and middle-income families and underrepresented backgrounds, making tax code benefits more equitable, progressive, and targeted to groups that have not traditionally attended college. Tax benefits appear to favor those from wealthy backgrounds and provide little assistance to low-income students and their families. These benefits largely go to families that would have sent their children to college anyway.
- **Recommendation 6.** Introduce a new federal grant program to the states, perhaps in the form of a maintenance-of-effort requirement related to state accountability policies, so that state governments have an incentive to provide consistent support to their public institutions. Such a program could include cost-control measures that are already part of many states' accountability structures, but it would do so with a careful focus on the mission and history of individual institutions and with their input. Reliance on federal aid dollars would likely decrease, and students at the low end of the income scale would face lower prices and acquire less debt.
- **Recommendation 7.** Provide substantial and expanded federal incentives for public colleges and universities to enroll and support low-income and underrepresented students, with input and metrics determined both by states and by institutions. This would include operating funds and funds dedicated to student support services and a possible expansion of Pell grant programs and incentives. An implicit component of this move would be to make college environments more attractive to those who often feel like outsiders.

The federal role in financing 21st-century higher education is unlikely to diminish, but research has clearly shown what matters and what works. It is the synchronization of aid and policy—and enhanced transparency at all levels—that will likely affect the nation's ability to meet its stated goal of 60 percent college attainment. Indeed, meeting this goal will be impossible without increased enrollment and attainment from the first-generation, low-income, and underrepresented student communities. States and the federal government must determine how much more robust their roles will be as additional students attend college and the realities of shifting demographics materialize. The important question is this: Can government implement policies that effectively lower financial barriers for low-income students and other higher education "outsiders"?

Introduction

The effectiveness of financing strategies in enhancing access and attainment for first-generation, low-income, and underrepresented students remains a central policy concern for both the states and the federal government. The ability of state and federal policies to work in tandem to increase affordability, access, student learning, and attainment for such students is a leading policy issue.[1] These concerns were accentuated by the so-called Great Recession, but they are not necessarily new.[2] That said, the reverberations from this economic downturn highlighted underlying misgivings about higher education price and costs[3] and how they relate to student access, retention, and completion, particularly for low-income, first-generation, and underrepresented students.[4] As a result, these topics continue to drive much of the higher education policy discussion.

To spark discussion on this topic, this paper aims to cover five major, interrelated topics using the most up-to-date data and research. First, it provides a brief background on the landscape of federal higher education funding in the United States. Next, it introduces trends and patterns in recent federal aid policies. By employing data gathered over the past decade, this section provides a broad overview of major federal actions aimed at helping students obtain higher education, including Pell grants, veteran/military benefits, and loans and tax benefits. Third, this paper evaluates the role of federal aid in promoting access and attainment for low-income and underrepresented students. Specifically, Section 3 considers how federal policies work to lower barriers to access and completion for low-income students based on recent evidence and research. To do so, the section carefully examines literature on the effectiveness of each major aid type, drawing connections between aid allocation and outcomes. The section closes with a summary of the major findings and themes across the literature.

The ability of state and federal policies to work in tandem to increase affordability, access, student learning, and attainment for such students is a leading policy issue.

[1] P. Callan, "Reframing Access and Opportunity: Public Policy Dimensions," in *The States and Higher Education Policy: Affordability, Access, and Accountability,* 2nd ed., ed. D. Heller (Baltimore: The Johns Hopkins University Press, 2011), 87–105; J. Hearn and J. Holdsworth, "Federal Student Aid: The Shift From Grants to Loans," in *Public Funding of Higher Education: Changing Contexts and New Rationales,* ed. E. St. John and M. Parsons (Baltimore: The Johns Hopkins University Press, 2004); A. Hauptman, "Reforming the Ways in Which States Finance Higher Education," in *The States and Public Higher Education Policy: Affordability, Access, and Accountability,* 2nd ed., ed. D. Heller (Baltimore: The Johns Hopkins University Press, 2011); and E. St. John, N. Daun-Barnett, and K. Moronski-Chapman, *Public Policy and Higher Education: Reframing Strategies for Preparation, Access, and College Success* (New York: Routledge, 2013).

[2] P. Brinkman, "Higher Education Cost Functions," in *The Economics of American Universities: Management, Operations, and Fiscal Environments,* ed. S. Hoenack and E. Collins (Albany, NY: State University of New York, 1990), 215–232.

[3] R. Archibald and D. Feldman, "Explaining Increases in Higher Education Costs." *The Journal of Higher Education* 79 no. 3 (2008): 268–295; and R. Archibald and D. Feldman, *Why Does College Cost So Much?* (New York: Oxford University Press, 2011).

[4] D. Hossler, A. Dundar, and D.T. Shapiro, "Longitudinal Pathways to College Persistence and Completion," in *The State of College Access and Completion: Improving College Success for Students From Underrepresented Groups,* ed. L. Perna and A. Jones (New York: Routledge, 2013); A. Jones, "Improving Postsecondary Access, Persistence, and Completion in the United States: Setting the Stage," in *The State of College Access and Completion: Improving Success for Students From Underrepresented Groups,* ed. L. Perna and A. Jones (New York: Routledge, 2013); L. Perna, "Improving College Access, Persistence, and Completion: Lessons Learned," in *The State of College Access and Completion: Improving College Success for Students From Underrepresented Groups,* ed. L. Perna and A. Jones (New York: Routledge, 2013); and G. Serna, "Do Tax Revolt Provisions Influence Tuition and Fee Levels? Evidence From the States Using Recent Panel Data," *Journal of Education Finance* 41 no. 1 (2015): 48–82.

In Section 4, the analysis segues into a discussion of possible financing alternatives, with each recommendation based on the maintenance of funding mechanisms using the current aid structure and policies. The goal of this section is to explore how current systems can be modified to develop federal-level incentive structures that produce sustained increases in funding for public higher education aimed at low-income, first-generation, and underrepresented students.

Finally, two new alternatives that substantially increase federal funding are presented in Section 5. One of these alternatives substantially increases federal funding, with moderate policy changes for the existing federal programs, while the other alternative provides matching grants to states and incorporates state maintenance of efforts for higher education.

Section 1. Background and Overview of Federal Aid Policy

From its inception, at least one of the major goals of federal student aid has been to enhance access to higher education.[5] This emphasis developed shortly after World War II—specifically in 1944, with the passage of the Servicemen's Readjustment Act (SRA). The SRA resulted in higher education enjoying a great deal of government support at just about every level. The SRA's adoption led to campuses, particularly public ones, serving a more diversified student body than ever before. As higher education went through a sort of "massification," students from middle- and low-income backgrounds were suddenly attending college in significant numbers, in large part because these and other newly established federal programs mitigated some price concerns—a situation that mostly remains today.

Government support to the sector, predominantly at the federal level, continued throughout the next 30 years, with the passage of the Higher Education Act of 1965 and the Basic Education Opportunity Grant[6] in 1972.[7] Fast-forward 70 years, and evidence of such federal support is in shorter supply. Still, the federal government's role in promoting access, especially for low-income students, has been evident since the post-war era, with the adoption of federal legislation and tax policy additions helping to ease financial concerns about attending college.[8] Even with a relatively stable and increasing commitment from the federal government, however, access and attainment gaps endure, and completion rates remain relatively stagnant.[9]

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5 J. Thelin, *A History of American Higher Education,* 2nd ed. (Baltimore: The Johns Hopkins University Press, 2011).

6 These grants subsequently became Pell grants in honor of Rhode Island Senator Claiborne Pell (see J. Thelin, *A History of American Higher Education*).

7 S. Dynarski and J. Scott-Clayton, "Financial Aid Policy: Lessons From Research," *The Future of Children* 23 no. 1 (2013): 67–91; D. Heller, "Affordability, Access, and Accountability in Twenty-First Century Public Higher Education," in *The States and Public Higher Education Policy: Affordability, Access, and Accountability,* 2nd ed., ed. D. Heller (Baltimore: The Johns Hopkins University Press, 2011); A. Jones, *Improving Postsecondary Access;* D. Mundel, "What Do We Know About the Impact of Grants to College Students?" in *The Effectiveness of Student Aid Policies: What the Research Tells Us,* ed. S. Baum, M. McPherson, and P. Steele (New York: The College Board, 2008), 9–38; L. Perna, "Improving College Access"; and J. Thelin, *A History of American Higher Education.*

8 S. Dynarski, J. Scott-Clayton, and M. Wiederspan, *Simplifying Tax Incentives and Aid for College: Progress and Prospects* (Cambridge, MA: National Bureau of Economic Research, 2013); D. Heller, "The Impact of Student Loans on College Access," in *The Effectiveness of Student Aid Policies: What the Research Tells Us,* ed. S. Baum, M. McPherson, and P. Steele (New York: The College Board, 2008), 39–67; D. Heller, "Affordability, Access, and Accountability"; and D. Heller, "The Role of Finances in Postsecondary Access and Success," in *The State of College Access and Completion: Improving College Success for Students From Underrepresented Groups,* ed. L. Perna and A. Jones (New York: Routledge, 2013).

9 S. Baum and M. McPherson, "Introduction," in *The Effectiveness of Student Aid Policies: What the Research Tells Us,* ed. S. Baum, M. McPherson, and P. Steele (New York: The College Board, 2008), 1–7; D Hossler, "Longitudinal Pathways to College Persistence and Completion"; and L. Perna, "Improving College Access."

In a continued attempt to decrease the gaps and increase completion rates, the federal government has adopted policies such as direct grant aid and loans, education benefits for military service members and veterans, and benefits distributed through the tax code. The policy objectives are to make college more affordable and accessible. As the demographics of the country shift and the demand for individuals who hold a postsecondary degree or credential increase, the need to close educational attainment gaps becomes ever clearer.[10] There are major questions, however, about the effectiveness of these policy actions in increasing access for underrepresented, first-generation, and low-income groups. Indeed, concerns regarding the targeting and efficiency of aid policy have consistently surfaced in the policy and research discourse.[11]

Nevertheless, the literature examining financial aid policy is robust and provides strong evidence that aid policy can positively affect college attendance rates for these students. Moreover, research shows that federal financing efforts have closely correlated to robust enrollment increases over the past 40 years.[12] With this research in mind, the present analysis considers each core program and briefly examines pressing issues, new developments, and possible modifications and alternatives for federal financial aid in 21st-century higher education.

10 A. Jones, "Improving Postsecondary Access"; and L. Perna, "Improving College Access."
11 S. Baum, "Introduction"; S. Baum et al., *Rethinking Pell Grants: In Brief* (Washington, DC: The College Board Advocacy & Policy Center, 2015); and S. Dynarski, "Financial Aid Policy."
12 W. Bowen, M. Chingos, and M. McPherson, *Crossing the Finish Line: Completing College at America's Public Universities* (Princeton, NJ: Princeton University Press, 2009); and S. Dynarski, "Financial Aid Policy."

Section 2. Financial Aid Programs: Funding Trends Over the Past Decade

Using data from the College Board,[13] this section presents financial data[14] on core financial aid programs administered by the federal government. Looking at the years 2003–2004 through 2013–2014, it examines trends and patterns in funding allocations to establish a foundation for the analysis presented in Section 3.

Major grant and loan programs: Pell grants, subsidized loans, and unsubsidized loans

Of all federal aid programs, three tend to draw the most attention from stakeholders: Pell grants, Stafford subsidized loans, and Stafford unsubsidized loans. Figure 1 shows what is called "core aid" programs for the past 10 years. Funding in these programs has grown but at differential rates. In 2003–2004, subsidized loans made up the largest funding portion at nearly $28 billion, followed by unsubsidized loans at just below $25 billion, and then Pell grants at approximately $16 billion. From 2003–2004 through 2007–2008, these programs fluctuated only slightly and began an upward trend, with only a slight dip in all three aid types in 2006–2007. During this same five-year period, subsidized loan funding maintained its place as the largest percentage of federal aid.

In 2007–2008, however, a new trend became apparent. Although all three programs saw overall increases in 2007–2008, 2008–2009 was the first time unsubsidized loans made up the largest proportion of aid. In fact, unsubsidized loans began and continue to dominate federal aid funding. From 2003–2004 to 2013–2014 (the most current year for which data are available), federal aid in the form of unsubsidized loans more than doubled, going from around $24.9 billion to $ 51.9 billion. Pell grant funding also grew over the decade, rising from just over $16.1 billion to approximately $33.7 billion, with its peak in 2010–2011 at more than $38 billion. In contrast, subsidized loans appear to have peaked at the same point at around $43.4 billion but fell considerably and to their lowest level for the time series in 2013–2014 at just over $25.4 billion.

Most important to the current discussion is the relationship between student debt and grant aid for low-income, first-generation, and underrepresented students,[15] because taken together, these programs provided aid totaling more than $111 billion in 2013–2014 alone. Moreover, Baum and McPherson[16] note that "aid programs that merely subsidize college-going behaviors without increasing enrollment rates, altering the types of institutions students attend, or improving success and completion rates" are questionable as a need worthy of public investment.

13 The College Board, "Total Student Aid and Nonfederal Loans in 2013 Dollars Over Time," http://trends.collegeboard.org/student-aid/figures-tables/total-student-aid-nonfederal-loans-2013-dollars-time (accessed August 15, 2015).

14 These data present constant 2013 dollars, thus making comparisons across the time period appropriate.

15 The majority of individuals who fall into the low- or lower-income range and who are eligible for Pell grants generally comes from families that earn $50,000 a year or less (see S. Dynarski, "Financial Aid Policy").

16 S. Baum, "Introduction," 1.

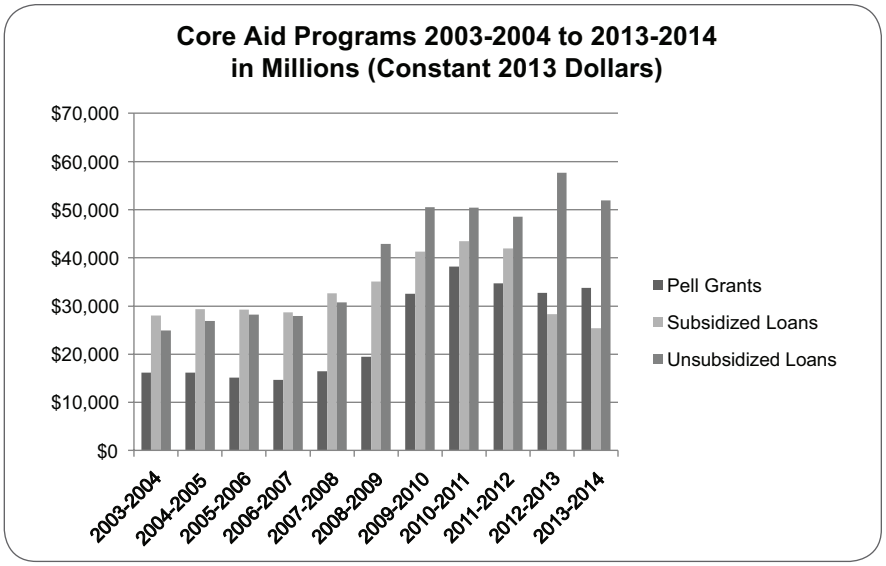


Figure 1: Core Federal Aid Programs by Type and Funding Level, 2003–2004 to 2013–2014.

Source: The College Board, 2014.

Hence, a principal policy goal is to determine how best to engage policy levers that will result in effective use of these substantial sums of money.

Tax and military/veteran benefits

The next two categories of federal aid relate to aid in the form of tax benefits and military/veteran benefits. Although these two types of assistance do not reach core aid funding levels, they have recently been increased (see Figure 2).

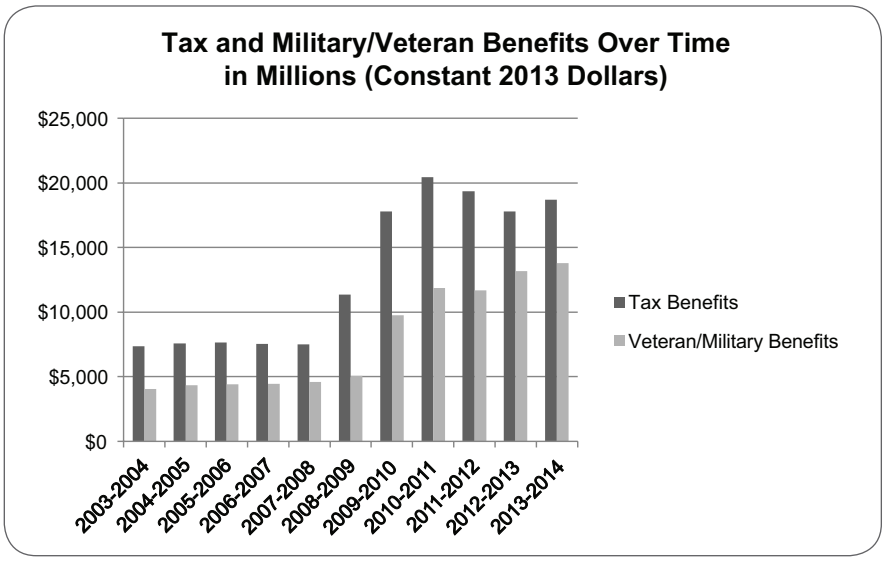


Figure 2: Tax and Military/Veteran Benefits by Funding Level, 2003–2004 to 2013–2014.

Source: The College Board, 2014.

Tax expenditures

Federal higher education tax benefits that students access through the tax code have grown considerably over the past decade and include numerous policy provisions. As Figure 2 shows, over the past 10 years, tax benefits[17] have risen from just above $7.3 billion in 2003–2004 to $18.7 billion in 2013–2014. After an initial rise in 2008–2009, tax benefits—or "tax expenditures," so called because they are valued as if they were expenditures in the federal budget—rose to a high of nearly $20.5 billion in 2010–2011. These same benefits saw a slight dip in the preceding years but remain a primary mechanism for providing aid to families higher up on the income distribution scale.[18]

A noteworthy change in 2009–2010 meant that families that did not have tax liability sufficient to cover the entire credit could obtain some of these benefits as refunds. This program, named the *American Opportunity Tax Credit* (AOTC), modified the previous Hope Scholarship Tax Credit to allow students to claim the credit for four instead of two years and increased the total qualifying expenses to $2,000 of eligible expenses and 25 percent of the next $2,000, with a refundable total of $1,000. The program was also expanded to apply to all eligible students in the household and changed income requirements such that individuals who earned less than $80,000 per year and joint filers who earned less than $160,000 combined were eligible.[19,20] AOTC benefits make up the largest proportion of tax benefits, totaling more than $15 billion in 2010–2011. Finally, the popularity of the program seems self-evident in that, at the end of 2012, the benefits were extended through 2017.[21]

Military/veteran benefits

Military and veteran benefits also saw a dramatic increase from 2008–2009 to 2009–2010. Benefits to these students nearly doubled, going from $5 billion in 2008–2009 to more than $9.7 billion in the subsequent year and topping out in 2013–2014 at around $13.8 billion. One reason for this spike in funding is related to passage of the Post-9/11 GI Bill of 2008, which went into effect in 2009. As Gonzalez et al. noted in testimony[22] to the U.S. House of Representatives and as emphasized by other scholars,[23] more than 1 million active-duty service members who have served since Sept. 11, 2001, have taken advantage of these much more generous benefits. A major addition to this program is support for housing and a stipend for books, which are included above tuition and fee benefits. Moreover, as of 2008, these students (compared to nonmilitary individuals) tended to enroll at private, nonprofit, four-year institutions; were generally older; had dependents; and were first-generation college students.[24]

17 The value of tax benefits has been reported as being as high as $25 billion—see G. Bulman and C. Hoxby, *The Returns to the Federal Tax Credits for Higher Education* (Cambridge, MA: National Bureau of Economic Research, 2014)—and $29 billion—see S. Dynarski, *Simplifying Tax Incentives and Aid for College*—depending on which programs are included as part of tax benefits. The data here are taken directly from The College Board (2014) and are more conservative estimates.

18 S. Dynarski, *Simplifying Tax Incentives and Aid for College;* M. McKeown-Moak and C. Mullin, *Higher Education Finance Research: Policy, Politics, and Practice* (Charlotte, NC: Information Age Publishing, 2014); and A. Reschovsky, "Higher Education Tax Policies," in *The Effectiveness of Student Aid Policies: What the Research Tells Us,* ed. S. Baum, M. McPherson, and P. Steele (New York: The College Board, 2008), 69–99.

19 S. Dynarski, *Simplifying Tax Incentives and Aid for College.*

20 U.S. Internal Revenue Service, "American Opportunity Tax Credit," http://www.irs.gov/uac/American-Opportunity-Tax-Credit (accessed October 2, 2015).

21 Ibid.

22 G. Gonzalez et al., "Higher Education Benefits for Post-9/11 Military Service Members and Veterans," testimony before the Committee on Veterans' Affairs Subcommittee on Economic Opportunity, U.S. House of Representatives, March 17, 2015.

23 A. Radford, *Military Service Members and Veterans: A Profile of Those Enrolled in Undergraduate and Graduate Education in 2007–08* (Washington, DC: Institute of Education Sciences, National Center for Education Statistics, 2011); and E. Tinoco, "Student Veterans in Higher Education," *Community Investments* 26 no. 3 (2014/2015): 28–44.

24 A. Radford, *Military Service Members and Veterans;* and E. Tinoco, "Student Veterans in Higher Education."

Finally, scholars[25] expect funding and costs associated with these benefits to rise, because now more than 2 million post-9/11–era individuals are eligible for funding.

Other programs and new developments

Although Pell grants, along with subsidized and unsubsidized loans and (increasingly) tax benefits, make up the largest share of federal funding to higher education, several other federal programs exist to help students access higher education. And while these programs may share similar goals, the level of funding dedicated to each is substantially lower than any of the core programs or other aid policies cited previously. For example, Perkins loans, a stalwart of federal aid policy, were recently discontinued.[26] Based on the information presented in Figure 3, it would appear that although typical of federal aid policy, these other programs make up only a tiny fraction of aid.

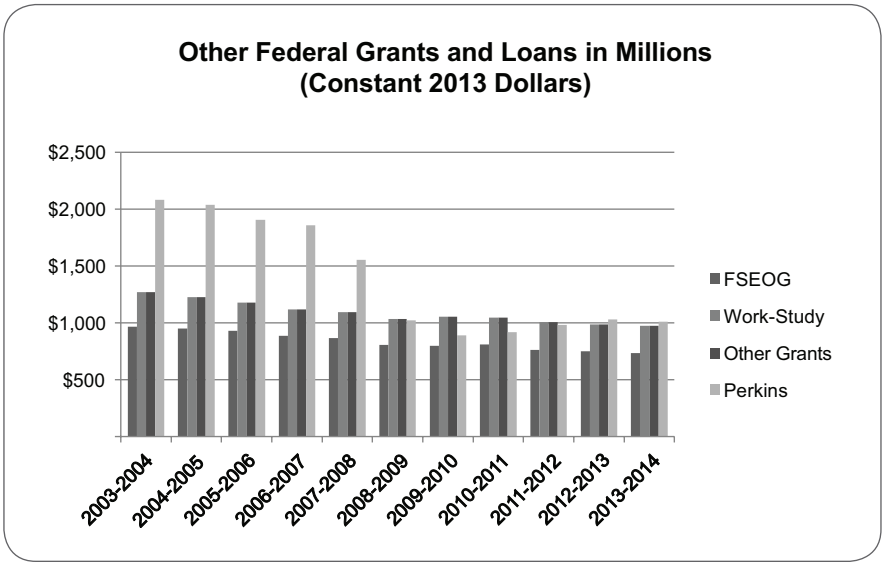


Figure 3: Other Federal Aid Programs, 2003–2004 Through 2013–2014.

Source: The College Board, 2014.
(FSEOG: Federal Supplemental Educational Opportunity Grant)

A quick review of the data shows that over the past decade, each of these programs now constitutes less than $1 billion individually. Coupled with the data on other aid programs and the discontinuation of the Perkins loan program, it is prudent to expect that the core aid programs, along with tax and military/veteran benefits, will continue to dominate federal aid funding.

In a related vein, two new policies may have longer-term impacts on college attendance and access for low-income students. The first is the College-Scorecard, which seeks to mitigate the information asymmetries that exist for students from low-income backgrounds. Essentially, the scorecard provides

[25] G. Gonzales, "Higher Education Benefits."
[26] K. Field, "Perkins Loan Program, a Federal Stalwart Since 1958, Meets Its Demise," *The Chronicle of Higher Education,* http://chronicle.com/article/Perkins-Loan-Program-a/233527 (accessed October 4, 2015).

information to students about the costs and benefits of attending a particular institution.[27] The second policy is a change in Free Application for Federal Student Aid (FAFSA) filing procedures to allow prior-year income. Now, families can automatically transfer U.S. Internal Revenue Service data to the FAFSA, apply earlier, and determine level of eligibility sooner.[28] It will take time to determine the effectiveness of these policy changes, but given that complexity has been a major obstacle for low-income students, providing more transparent application procedures and information about eligibility earlier might help this group access higher education in larger numbers.

27 U.S. Department of Education, *Better Information for Better College Choice & Institutional Performance* (Washington, DC: U.S. Department of Education, 2015).

28 National Association of Student Financial Aid Administrators, "President Obama: Feds to Allow Use of Prior-Prior Year Income Data on the FAFSA Starting in 2017–18 School Year. Financial Aid Administrators Laud Executive Action as a Victory for Students, Families," Press Release, Sept. 13, 2015, http://www.nasfaa.org/ppy_nasfaa_press_release (accessed Oct. 4, 2015).

Section 3. Analysis of Effectiveness and Current Issues Facing Federal Aid Policy

This section provides a sketch of the current aid system's effectiveness, with special attention to public institutions. It is followed by an analysis of the primary issues facing the programs cited in Section 2 and sets the stage for the alternatives and recommendations made later in this paper.

The effectiveness of and issues related to Pell grants

The effectiveness of grant aid has been widely studied. For example, in a comprehensive review, Mundel[29] carefully outlined the role of Pell grants in the college-going and enrollment decision-making processes of students and their families. Overall, he found that larger grant awards are positively related to the enrollment of price-sensitive[30] students. These results are supported by more recent evidence provided by Dynarski and Scott-Clayton.[31] Using data from The College Board for 1996–2011, they find that increases in Pell grant awards have closely tracked increased enrollments. Because this funding is directed at students from lower socioeconomic families, this finding suggests that Pell has had its intended effect on those who apply, although the definitive effects of grant aid on enrollments have yet to be found. A likely rationale provided by Kinzie et al.,[32] is that "increasingly varied and complex financial aid programs at the institutional, state, and federal levels are further complicating both actual and estimated college-choice processes." In other words, financial aid systems and policies are not well coordinated,[33] making it difficult to isolate the specific impacts of Pell grants.

Nonetheless, the student price-response literature provides a great deal of guidance in this area. Research on student responsiveness to price has shown that reductions in list-price tuition and fees are related to increased enrollments—3 to 5 percentage points for every $1,000 of price decrease.[34] Although this research focuses on overall enrollment response, because of its emphasis on list price, one can likely draw at least one conclusion: Low-income students generally use list price to make decisions,[35] and so increased grant aid should boost their enrollments. Moreover, if the goal is to increase not only access but retention and persistence rates for this population, Pell grants have an important role to play. For example, Hossler et al.[36] and Hossler, Dundar, and Shapiro[37] provide compelling evidence that, compared to loans, grants are more effective at enhancing persistence.

29 D. Mundel, "What Do We Know About the Impact of Grants."

30 *Price-sensitive students* are generally those individuals from low-income backgrounds whose enrollment choices are highly responsive to price and in most cases are based on list rather than net prices.

31 S. Dynarski, "Financial Aid Policy."

32 J. Kinzie et al., "Fifty Years of College Choice: Social, Political and Institutional Influences on the Decisionmaking Process," *New Agenda Series* 5 no. 3 (2004).

33 S. Baum, *Rethinking Pell Grants;* D. Hossler et al., "Student Aid and Its Role in Encouraging Persistence," in *The Effectiveness of Student Aid Policies: What the Research Tells Us,* ed. S. Baum, M. McPherson, and P. Steele (New York: The College Board, 2008); J. Kinzie et al., "Fifty Years of College Choice; and L. Perna, "Toward a More Complete Understanding of the Role of Financial Aid in Promoting College Enrollment: The Importance of Context," *Higher Education: Handbook of Theory and Research* 25 (2010): 129–179.

34 S. Dynarski, "Financial Aid Policy"; D. Heller, "Student Price Response in Higher Education: An Update to Leslie and Brinkman," *The Journal of Higher Education* 68 no. 6 (1997): 624–659; L. Leslie and P. Brinkman, "Student Price Response in Higher Education: The Student Demand Studies," *The Journal of Higher Education* 52 no. 2 (1987): 181–204; C. Manski and D. Wise, *College Choice in America* (Cambridge, MA: Harvard University Press, 1983); and D. Mundel, "What Do We Know About the Impact of Grants."

35 D. Mundel, "What Do We Know About the Impact of Grants."

36 D. Hossler, "Student Aid and Its Role in Encouraging Persistence."

37 D. Hossler, "Longitudinal Pathways to College Persistence and Completion."

Based on the available evidence, grants are powerful mechanisms to incentivize enrollment, lower access barriers, and extend persistence.

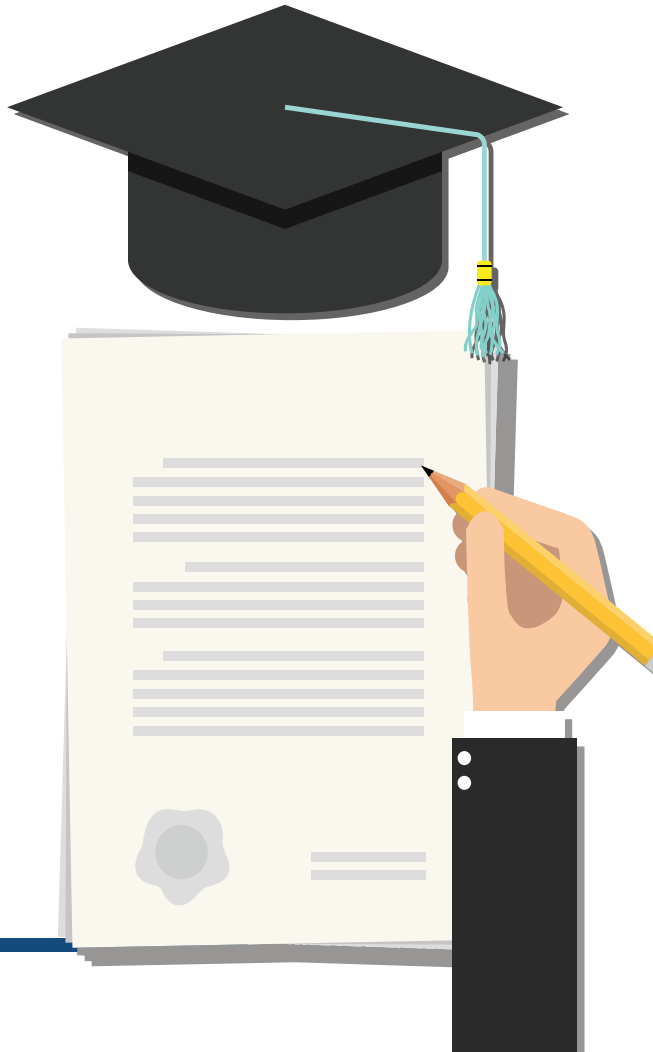
It must be said that the literature also highlights at least three major problems with the current system: the decreased purchasing power of Pell grants, the complexity of the aid application process, and the existence of inflexible program structures to accommodate changing demographics.

Let us consider each in turn.

The first issue is the purchasing power of Pell grants. Baum, Elliott, and Ma[38] show that although Pell grant awards have increased by 12 percent in inflation-adjusted total dollars over the past 10 years, they cover only 63 percent of average public university tuition and fees, down from 79 percent in 2004–2005. Hence, the increases in total Pell awards have not kept pace with the surge in public college and university tuition and fee levels. Because 66 percent of Pell grant recipients attend public institutions (30 percent for four-year institutions, 36 percent for two-year institutions), Pell's diminishing purchasing power is noteworthy if not worrying,[39] to say nothing of the social and economic context and complexity of the information available to students.[40]

For instance, even with the maximum Pell award, a first-generation or low-income student may not have sufficient knowledge about the college-going process to understand that the list-price is just a starting point and that a complex set of interrelated policies determines the final amount. When a Pell grant covers only one-third of total student costs and the student's familial and social context is not taken into consideration, the issue of decreased purchasing power plainly intersects with the next set of concerns regarding complexity.

A mounting body of evidence shows that the complexity of student aid application and program alignment can be a major deterrent for low-income, nontraditional, first-generation, and underrepresented students.[41] By and large, the research shows a great deal of support for simplifying the Free Application for Federal Student Aid (FAFSA) and making the process more transparent.

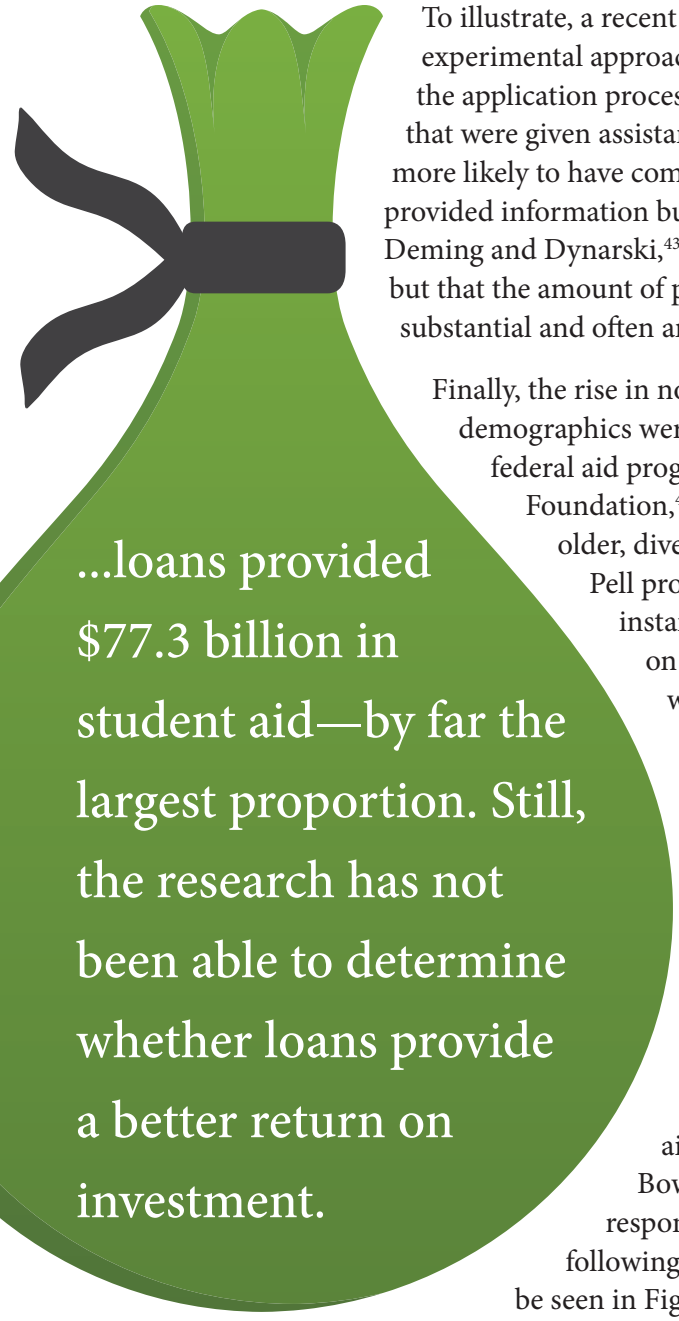


38 S. Baum, D. Elliott, and J. Ma, *Trends in Student Aid 2015* (New York: The College Board, 2015).

39 National Association of Student Financial Aid Administrators, *National Student Aid Profile: Overview of 2015 Federal Programs* (Washington, DC: NASFAA, 2015).

40 L. Perna, "Toward a More Complete Understanding"; and L. Perna, "Improving College Access."

41 S. Baum, *Rethinking Pell Grants;* S. Baum, "Introduction"; W. Bowen, *Crossing the Finish Line;* D. Deming and S. Dynarski, "College Aid," in *Targeting Investments in Children: Fighting Poverty When Resources Are Limited,* ed. P. Levine and D. Zimmerman (Chicago: University of Chicago Press, 2010), 238–302; S. Dynarski, "Financial Aid Policy"; S. Dynarski, *Simplifying Tax Incentives and Aid for College;* S. Dynarski and M. Wiederspan, "Student Aid Simplification: Looking Back and Looking Ahead," National Bureau of Economic Research Working Paper No. 17834, http://www.nber.org/papers/w17834 (accessed March 30, 2016); D. Heller, "The Role of Finances in Postsecondary Access and Success"; D. Hossler, "Student Aid and Its Role in Encouraging Persistence"; and D. Mundel, "What Do We Know About the Impact of Grants."



To illustrate, a recent study by Bettinger et al.[42] used a sophisticated quasi-experimental approach to draw causal conclusions regarding simplification of the application process. They showed that on average, students from families that were given assistance in filling out the FAFSA were 8 percentage points more likely to have completed at least two years of college than those who were provided information but no assistance. Another good example comes from Deming and Dynarski,[43] who show that targeted aid like Pell grants can help but that the amount of paperwork imposed on lower-income individuals is substantial and often an impediment to college access.

Finally, the rise in nontraditional student numbers and changing demographics were also cited as a limitation to current Pell and other federal aid programs.[44] In a recent policy brief from the Lumina Foundation,[45] experts noted that the rising number of independent, older, diverse students would require a rethinking of the current Pell program to respond more effectively to their needs. For instance, a major hindrance to the current system is its reliance on the previous year's income as a measure of financial need, which can result in a student receiving much less aid than required to attend college. For those who have families or other major responsibilities, this requirement can clearly be a barrier to access.

The effectiveness of and issues related to loans

The research on grant aid is robust, but the same cannot be said of loan-based aid. Nevertheless, a few central themes emerge from the literature. First, loans have come to occupy a fundamental position in providing aid to students from low- and middle-income families. Bowen, Chingos, and McPherson[46] note that loans were likely responsible for a portion of the increasing enrollments seen following their use as aid options. The importance of loans can also be seen in Figure 1, where in 2013–2014, subsidized loans made up $25.4 billion in aid, while unsubsidized loans totaled around $51.9 billion. Taken together, loans provided $77.3 billion in student aid—by far the largest proportion. Still, the research has not been able to determine whether loans provide a better return on investment.

42 E. Bettinger et al., "The Role of Application Assistance and Information in College Decisions: Results From the H&R Block FAFSA Experiment," *The Quarterly Journal of Economics* 127 no. 3 (2012): 1205–1242.
43 D. Deming, "College Aid."
44 S. Baum, *Rethinking Pell Grants;* S. Dynarski, "Financial Aid Policy"; and E. Tinoco, "Student Veterans in Higher Education."
45 S. Baum, *Rethinking Pell Grants.*
46 W. Bowen, *Crossing the Finish Line.*

The second major theme is that loans are not as effective as grants when it comes to college access, persistence, and attainment for students from low-income families.[47] This is not necessarily a novel conclusion given that grant aid, which does not require repayment, is worth more to students than borrowed funds. Although it is relatively cheap to provide loans, they may not provide enough incentive for low-income, first-generation, and underrepresented students to attend college. That said, even though grants are more effective at helping students get into, stay in, and complete college, they are a more resource-intensive investment than loans and thus have a larger impact on the federal budget.

The third central theme that emerged was that some students and families, especially those from low-income and underrepresented backgrounds, are debt averse. Given that 59 percent of those who obtained a degree from a public four-year institution in 2012–2013 accumulated $25,600 of debt on average, 20 percent more than those who obtained a degree 10 years earlier,[48] an individual or family that is debt averse will likely see this as another barrier to access. Often, this perception has to do with lack of experience with credit and debt.[49] In other words, lack of information about and experience with college going or social/cultural values result in some students' unwillingness to borrow. Again, this finding highlights the intersection between social and economic forces in the college-going process in that finances, although important, are not the only factor at play in a student's decision-making process. It also underscores the problem noted earlier of complexity in aid processes and grant applications—namely, that it may undermine the power that subsidized and even unsubsidized borrowing has in making higher education more attractive to low-income students and families.[50]

Finally, the data show that student borrowing continues to rise.[51] Figure 1 (third column) shows that four of the past five years saw unsubsidized borrowing that reached levels exceeding $50 billion. In fact, a recent report from The College Board indicates that in 2012–2013, 59 percent of those who graduated from public institutions left with debt.[52] Although it is likely that this aid has resulted in increased participation, it is also cause for concern. The data presented in Figure 1 are only for student borrowing: They do not include Parent PLUS loans, which place the financial burden for a student's education on his or her family. In any event, loans provide a necessary source of financing for students when federal grant aid cannot cover the entirety of educational costs. A looming question, however, is whether more effective or better ways exist to make these programs comprehensible.[53] Alternatively, modifications can be made in the program structure to make it less risky for both students and taxpayers, especially for those who might incur debt and want to enter public service. Because many low-income students are fairly inexperienced when it comes to finances and credit,[54] this question is certainly an important one.

47 S. Dynarski, "Financial Aid Policy"; D. Heller, "The Impact of Student Loans on College Access"; D. Hossler, "Student Aid and Its Role in Encouraging Persistence"; and D. Hossler, "Longitudinal Pathways to College Persistence and Completion."
48 S. Baum, *Trends in Student Aid 2015,* 22.
49 W. Bowen, *Crossing the Finish Line.*
50 S. Dynarski, "Financial Aid Policy."
51 D. Heller, "The Impact of Student Loans on College Access."
52 S. Baum, *Trends in Student Aid 2015,* 7.
53 S. Dynarski, "Financial Aid Policy"; and D. Heller, "The Impact of Student Loans on College Access."
54 W. Bowen, *Crossing the Finish Line.*

...tax benefits for higher education are more symbolic and political in nature than a true economic incentive, particularly because they favor those at the higher end of the income spectrum who are college bound in any case.

The effectiveness of and issues related to tax benefits

Generally speaking, research on the effectiveness of tax benefits returns mixed results. For example, Dynarski and colleagues,[55] Reschovsky,[56] and Turner[57] all show that tax benefits are positively related to enrollment increases, but Bulman and Hoxby[58] find no evidence that tax benefits incentivize enrollment in higher education, although they recognize myriad reasons for this finding. Still, the research suggests that tax benefits favor wealthier families and, in fact, tend to work against the equality of financial opportunity.[59] The literature provides evidence that this type of funding goes to families and students who would have gone to college anyway. To illustrate, a few recent studies[60,61] suggest that tax incentives are ineffective tools for increasing enrollments among low-income students, and at least in one case,[62] tax benefits come at a steep cost. Turner indicates that if tax benefits were fully exercised—that is, everyone who is eligible takes the benefit—then 93 percent of this funding would go to students who would have attended or enrolled in college even without these benefits. Comparing this to a scenario in which full uptake of tax benefits is not present (Maag and Rohally, 2007, cited in Turner[63]), it is estimated that only one low-income student would be subsidized for every seven middle-income students who would have attended anyway.

Again, Bulman and Hoxby found little evidence that tax benefits were effective at income cutoff levels for the American Opportunity Tax Credit.[64] Citing the complexity of the application process, timing of payments, and salience of tax credits in the college-going process, they note that the higher education benefits may not be the best way to provide horizontally equitable tax cuts. Hence, it would appear that tax benefits for higher education are more symbolic and political in nature than a true economic incentive,[65] particularly because they favor those at the higher end of the income spectrum

55 S. Dynarski, *Simplifying Tax Incentives and Aid for College.*
56 A. Reschovsky, "Higher Education Tax Policies."
57 N. Tuner, "Who Benefits From Student Aid? The Economic Incidence of Tax-Based Federal Student Aid," *Economics of Education Review* 31 (2012): 463–481; and N. Turner, "The Effect of Tax-Based Federal Student Aid on College Enrollment," *National Tax Journal* 64 (2012): 839–861.
58 G. Bulman, *The Returns to the Federal Tax Credits.*
59 M. McKeown-Moak, *Higher Education Finance Research.*
60 A. Reschovsky, "Higher Education Tax Policies."
61 N. Turner, "The Effect of Tax-Based Federal Student Aid."
62 Ibid.
63 Ibid.
64 G. Bulman, *The Returns to the Federal Tax Credits.*
65 A. Reschovsky, "Higher Education Tax Policies."

who are college bound in any case. In general, the higher education tax credit, like most tax credits, is not cost-effective policy because it rarely changes families' decision to enroll their sons or daughters in college. Most of the credits become windfalls to students who would have enrolled even without the credit.

The effectiveness of and issues related to military/veteran benefits

Military and veteran benefits for higher education are a highly topical issue.[66] Increased higher education benefits has allowed many more service members and veterans to advance their education after service. The evidence shows that as of 2007–2008, most have chosen public two- and four-year institutions,[67] but misgivings have arisen around the role of the for-profit sector in educating the population receiving such benefits.[68] In fact, the U.S. Department of Defense barred one of the largest for-profit universities—the University of Phoenix—from enrolling active-duty service members.[69] The impacts of these decisions on military personnel and veteran enrollment decisions, however, are yet to be seen.

Regarding the demographics of this group, these students tend to be the first generation to attend college; have dependents; and are older than traditional, nonmilitary students.[70] Hence, a prominent concern for this group is the transition to campus and student life. Because traditional models of campus life and college environments have not often considered these students, new approaches, offices, and services are recommended to help them navigate higher education.

Complexity of aid and benefit programs is an access impediment for this group too. Much like the federal aid policy in other areas, the intricacy of applying for military and veteran benefits can serve as an obstacle to those who have little knowledge of the college-choice and going process. Because service members and veteran beneficiaries are increasing in number (1 million are estimated to have taken advantage of their benefits as of 2014), determining the best ways to support their effective use of funds is clearly a significant policy matter.[71] Overall, however, the literature on the effectiveness of these benefits is sparse.

66 G. Gonzalez, Higher Education Benefits.
67 A. Radford, *Military Service Members and Veterans.*
68 E. Tinoco, "Student Veterans in Higher Education."
69 E. Kelderman, "Why a Certain $21 Million Is Worth Much More to the U. of Phoenix," *The Chronicle of Higher Education,* http://chronicle.com/article/Why-a-Certain-21-Million-Is/233720 (accessed October 18, 2015); and A. Thomason, "Defense Department Suspends U. of Phoenix From Its Tuition Assistance Program," The Ticker Blog, entry posted October 9, 2015, http://chronicle.com/blogs/ticker/defense-department-suspends-u-of-phoenix-from-its-tuition-assistance-program/105697 (accessed October 18, 2015).
70 G. Gonzalez, Higher Education Benefits; A. Radford, *Military Service Members and Veterans;* and E. Tinoco, "Student Veterans in Higher Education."
71 G. Gonzalez, Higher Education Benefits; and E. Tinoco, "Student Veterans in Higher Education."

Section 4. Increasing the Cost-Effectiveness of the Current System

This section makes five recommendations that preserve the current financial structure while making it more targeted and cost-effective.

Recommendation 1: Restrict all-Pell grants to families that earn less than $40,000 per year

An important consideration regarding the efficiency of resource-allocation decisions relates to the effectiveness of such decisions. In other words, does aid policy direct subsidies efficiently and effectively to those most in need of college-attendance incentives? As noted earlier, Pell grants have been relatively well targeted. In fact, one need only review recent data from The College Board[72] to see that in 2013–2014, 77 percent of money from Pell grants went to those who earned less than $40,000 per year. Even with more generous grants, however, students and families are borrowing at an increasing rate.

Complexities must certainly be accounted for in making this recommendation, and so first let us present an alternative. Because most Pell grants already go to the lowest-income individuals, the idea would be to fully fund these students through a direct subsidy or "all-Pell" grant. Doing so would simplify the process of means testing, but keep the Free Application for Federal Student Aid (FAFSA) as the primary vehicle for determining need. In addition, this alternative would help alleviate some of the concerns that arise when individuals from lower-middle- and low-income families graduate because they will have no debt to repay. Students from these backgrounds must often borrow more heavily and do not have the same familial "safety net" that those from higher income levels do.[73] The literature clearly shows that family income and background closely correlate with student loan default, and so this policy would also potentially ease anxieties related to debt default.

Recommendation 2: Provide a mix of Pell grants and subsidized loans to families that earn $40,000 to $80,000 per year

Next, provide a more typical aid package that includes subsidized loans and grants to those individuals who earn more than $40,000 but less than $80,000 per year. Including these individuals would effectively set the limit on Pell grants to the upper threshold. It would also provide these individuals with incentives to go to college and offer a direct subsidy to lower the effective price of that education. In addition, this would mean relying on the FAFSA and estimated family contribution for this group, again providing the largest grants to those nearer the lower threshold. For example, an individual from a family that earns $55,000 per year might receive a package that is approximately 35–40 percent subsidized loans and 60–65 percent grants. Another example is an individual closer to the $80,000-per-year mark: An individual from a family that earns $75,000 per year would receive

[72] S. Baum, *Trends in Student Aid 2015*.
[73] J. Gross et al., "What Matters in Student Loan Default: A Review of the Research Literature," *Journal of Student Financial Aid* 39 no. 1 (2009): 19–29.

85–90 percent aid as subsidized loans and 10–15 percent as grants. Of course, this approach would require some retooling, but based on the information that the federal government has already collected, it would almost certainly provide a simpler process for awarding aid. Again, the exact thresholds and percentages would require careful consideration, but this illustration provides a foundation for such discussions.

Recommendation 3: Provide a mix of subsidized and unsubsidized loans to families that earn $80,001 to $160,000 per year through public–private partnerships

This recommendation would provide a mix of subsidized and unsubsidized loans to students from families that earn $80,001 to $160,000 per year based on current American Opportunity Tax Credit (AOTC) thresholds—similar to how Pell grant aid would be distributed (i.e., those at the lower end receiving a majority of subsidized loans, and those at the upper end receiving mostly unsubsidized loans). This group, typically in the top one-third of earners, already makes up the smallest number of Pell grant recipients[74] and so likely have a much more substantial financial safety net. As another possibility for the portion of unsubsidized loans, there exists an opportunity to create public–private partnerships, similar to those already in place, so that the private sector could administer and provide these loans. Of course, policies or agreements regarding appropriate interest rates on these loans would have to be in place, as would guidelines for the proper role of the public sector. In particular, if the federal government guarantees these loans, then a portion of the interest earnings could go to funding this new process and providing enhanced policy protection.

In adopting a policy structure like this, an arguably fairer and more progressive system would arise in which those who most need assistance to access higher education would receive it—a more efficient, equitable, and effective targeting of such funding. This recommendation aligns with and could easily incorporate state aid, as well, particularly if state aid moves from a merit-based structure to one that places greater emphasis on need. Indeed, one possible configuration could include a similar structure for state aid so that those at whom state aid is aimed and who exhibit high ability with low income receive the greatest financial support.

Recommendation 4: Provide last-in aid for federal loans

Another alternative that uses the current system employs the same financial aid packaging but would require that subsidized and unsubsidized loans go into the student's aid package last. Currently, institutional aid typically works as a "top-up" for financial aid packages—that is, it fills the last portion of aid not covered by other funding, such as Pell grants, state merit- or need-based aid, and loans. Here the suggestion is for a small change whereby loans make up the last part of student aid to be included, with unsubsidized loans as the last top-up. In other words, all other forms of aid would fill the financial aid package first, and only then would loans be used to make up any differences that arise. This approach might not change the structure of financial aid for every student, but it could

[74] See the U.S. Census Bureau American FactFinder for 2013 for these data: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_S1901&prodType=table.

serve to ensure that those who are most price sensitive obtain the fewest aid dollars as loans and experience more limited debt. Although there would likely be some resistance from public colleges and universities (institutional aid is often used as an enrollment-management or competitive tool), this alternative would broaden the applicant pool of low-income students, many of whom see debt as a barrier. It would also make institutional and state aid a more prominent feature of aid packages because these two aid programs and Pell grants would be included prior to any loans.

Recommendation 5: Invert tax benefit structures

Section 3 discussed the effectiveness and distribution of tax benefits and expenditures. A common thread in the literature on this topic is that tax expenditures go to wealthier students and their families. Indeed, they are largely directed at those who would have enrolled in higher education regardless of tax benefits. If the goal is more effective targeting and efficient use of resources in addition to lowering financial barriers to access, then these expenditures are clearly going where they are least needed. One alternative would make the AOTC, which is partially refundable tax credits (refundable in cash) to those in the middle- and low-income ranges for higher education.

As Figure 2 showed, these expenditures totaled more than $18 billion in 2013–2014. If instead these funds were collected from wealthier earners and directed at middle- and low-income students and families as refundable credits or even used to fund Recommendation 4, they would provide a significant new source of funds—funds that, it should be noted, are due to the federal government but not collected. This approach would shift a subsidy that goes to families that would have sent their children to college anyway to those who are on the margin and for whom finances are a major impediment. Moreover, this policy recommendation could be combined with the current FAFSA and provide tax benefits or credits similar to those discussed earlier in this section.

This recommendation would be easy to implement.; however, those in higher income groups often prize benefits given through the tax code, and this same group is generally a powerful political force. Although the benefits for this group are largely symbolic, they remain politically attractive concessions, even if their effects are minimal for those lower on the economic ladder. As a result, it would take a great deal of political will to implement such a policy.

Section 5. New Models

This section presents two alternative recommendations that employ new financing structures or expand the current structures to support access to public higher education. In providing these alternatives, I recognize that both proposals have limitations. Still, these recommendations look at the topic of higher education financing for low-income, first-generation, and underrepresented students through a more equitable lens.

Recommendation 6: Create a new federal higher education operating grant program for states

Many public institutions have over the past 20 years experienced a dramatic reduction in state funding as a proportion of their operating funds. As states withdraw support, public colleges and universities rely on students and their families to pay higher tuition and fees. This recommendation would require the federal government to enact a new state grant program to directly aid to institutions. To be clear, the goal of such a program is not simply to cover operating expenses; rather, this increase in federal monies would need to enhance capacity and hold down tuition rates for low-income students at each institution. It makes little sense to provide more funding if the price continues to rise for low-income students. The hope is that such a policy will reduce the costs of higher education for low-income students over the long run (and should only be implemented after the efficiency and effectiveness of existing programs are improved).

The federal government could phase in the recommended policy starting as early as fiscal year 2018 and provide an amount that offsets state cuts over the past seven to 10 years, increasing the amount over five years using a base that grows by at least 50 percent. For future years, the government would increase the amount in line with the consumer price index (CPI). To maintain funding stability, the program would be an entitlement to the states and not go through the appropriations process.

States would have to meet three conditions to receive the funding. First, they would have to increase higher education funding in line with the CPI, and the base year would be an average over 2014, 2015, and 2016. Second, states would have to incentivize total cost control by higher education institutions. In other words, these funds could be used as an incentive for states and institutions to work together and determine which ways to decrease total costs—a discussion that would hopefully result in a lower price (tuition and fees) for students. Of course, this decrease must be done with careful thought and an eye toward effectiveness rather than simply increasing efficiencies. Third, states would have to enhance graduation rates, with input from their colleges and universities. Indeed, intermediate measures would be helpful in this instance, and a system of this sort would not only incorporate output metrics but take into consideration institutional mission, inputs, and intermediate outcomes such as retention and persistence. Such a system is in line with current state efforts at accountability[75] and could also easily align with Recommendations 1 and 7 to incentivize enrollment of students eligible for Pell grants.

Before implementing this recommendation, note of one caution: Research has produced little evidence that accountability models have been effective across the states,[76] although some evidence exists to support the notion that early outcomes-based models may have had intermediate effects even if they did not necessarily result in improved student outcomes. This lack of effectiveness could be the result of several factors, but a likely one is the nature and variability of such policies from state to state. In fact, noted higher education scholar James Hearn states that:

> Turning to early performance-based and outcomes-based models in particular, these models exhibited and continue to exhibit substantial diversity in their details and in the volume of resources allocated for them (i.e., their "treatments" and "dosage"). This observation, along with the great variability in individual states' socioeconomic, educational and policy contexts, make it difficult to discern effects that are generalizable beyond the particular state in which a program is implemented. One can infer that the earlier performance-centered models have indeed had substantial effects on institutional behaviors that connect to students' enrollment, counseling, retention and graduation, but inferences about the programs' effects on student outcomes themselves are much more problematic, especially as analyses extend beyond any single state's environment.[77]

Still, this is not to suggest that these structures are useless; rather, the character of these policies is decidedly related to state needs and goals. Therefore, in pursuit of improved student outcomes, it is necessary to include contextual factors that matter. For example, Hillman and colleagues[78] note that although graduation rates at four-year institutions showed no relationship to this policy's implementation, two-year certificate rates were robustly related to policy reform.

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75 K. Dougherty et al., "Performance Funding for Higher Education: Forms, Origins, Impacts, and Futures," *Annals of the American Academy of Political and Social Science* 655 (2014): 163–184; M. McLendon, J. Hearn, and R. Deaton, "Called to Account: Analyzing the Origins and Spread of State Performance-Accountability Policies for Higher Education," *Educational Evaluation and Policy Analysis* 28 no. 1 (2006): 1–24; T. Rabovsky, "Accountability in Higher Education: Exploring Impacts on State Budgets and Institutional Spending Patterns," *Journal of Public Administration Research and Theory* 22 (2012): 675–700; D. Tandberg and N. Hillman, "State Higher Education Performance Funding: Data, Outcomes, and Policy Implications," *Journal of Education Finance* 39 no. 3 (2014): 222–243; and W. Zumeta and A. Kinne, "Accountability Policies: Directions Old and New," in *The States and Higher Education Policy,* 2nd ed., ed. D. Heller (Baltimore: The Johns Hopkins University Press, 2011), 173–199.

76 N. Hillman, D. Tandberg, and J. Gross, "Performance Funding in Higher Education: Do Financial Incentives Impact College Completions?" *The Journal of Higher Education* 85 no. 6 (2014): 826–857; and D. Tandberg, "State Higher Education Performance Funding."

77 J. Hearn, *Outcomes-Based Funding in Historical and Comparative Context* (Indianapolis: Lumina Foundation, 2015).

78 N. Hillman, D. Tandberg, and A. Fryar, "Evaluating the Impacts of 'New' Performance Funding in Higher Education," *Educational Evaluation and Policy Analysis,* https://news.education.wisc.edu/docs/WebDispenser/news-connections-pdf/performance-funding-eepa-study.pdf?sfvrsn=4 (accessed March 30, 2016).

The final caution is related to the blunt measures used in the assessment and evaluation of such an outcomes-based policy. Again, Hearn suggests that if they do not pay careful attention to policy elements, states run the risk of decreasing access and equity and rendering higher education into de facto production outputs.[79] Policies aimed simply at increasing the number of degrees or the number of degrees per dollar should consider this warning from Hearn, who reminds those associated with the decision-making process that degrees are not simply production outputs and that treating them as such is simplistic at best and harmful to the goals of higher education and society at worst.

Nevertheless, what is clear is that accountability efforts have altered the relationships between the states and their institutions of higher education.[80] In the context of accountability and outcomes-based funding, state support is only one factor among many that relate to higher education finance.[81] As a result, increased state funding to this area, with the help of the federal government, would mean that these resource-intensive efforts[82] receive the attention they need if they are to be effective. Indeed, in tandem with cost-saving enhancements, *careful consideration and deliberation with the input of institutions and states* of outcome metrics based on institutional mission, population, and goals—with a clear understanding of where cost savings might be found from both a student and institutional perspective—should help keep prices lower for this group.[83]

Returning to federal policy, in other policy areas where federal grant funding is or was significant (e.g., special education, Medicaid, and the education dollars in the American Recovery and Reinvestment Act), states cannot use federal funding to decrease their share of support. The maintenance-of-effort (MOE) requirement effectively provides an incentive for states to continue to fund public programs. In the case of higher education, a similar case could be made for funding public colleges and universities. If federal funds were tied to an MOE stipulation, then it might be possible for the federal government to incentivize continued state funding. As F. King Alexander noted, "A 'maintenance of effort' federal–state partnership would make it more difficult for states to further reduce their fiscal responsibility to public colleges and universities by shifting the increasing costs of higher education to students, and ultimately, federal tuition-based programs."[84] A limitation of this approach is that it does little to respond to the specific needs of first-generation, low-income, and underrepresented students. Much like current state funding to institutions, the subsidy lowers the price for every student regardless of need. This is not necessarily a bad thing, but if the goal is to target funding to these students, then this limitation should be acknowledged.

79 Ibid.

80 K. Dougherty and V. Reddy, "Performance Funding for Higher Education: What Are the Mechanisms? What Are the Impacts?" *ASHE Higher Education Report* 39 no. 2 (2013).

81 J. Hearn, *Outcomes-Based Funding;* and R. Toutkoushian and N. Shafiq, "A Conceptual Analysis of State Support for Higher Education: Appropriations versus Need-Based Financial Aid," *Research in Higher Education* 51 (2010): 40–64.

82 J. Hearn, *Outcomes-Based Funding.*

83 McKinsey & Company provides a set of possible cost-saving and productivity-enhancing mechanisms but find that they are mostly applicable to open-access, two-year institutions. Still, four-year colleges and universities could easily adapt some of these recommendations to their own operations. See B.G. Auguste et al., *Winning by Degrees: The Strategies of Highly Productive Higher-Education Institutions,* http://mckinseyonsociety.com/downloads/reports/Education/Winning%20by%20degrees%20report%20fullreport%20v5.pdf (accessed March 31, 2016) for more on this discussion.

84 F.K. Alexander, "Maintenance of State Effort for Higher Education: 'Barriers to Equal Educational Opportunity in Addressing the Rising Costs of a College Education,'" *Journal of Education Finance* 36 no. 4: 442–450.

Recommendation 7: Provide additional incentives to enroll low-income, first-generation, and underrepresented students

A central duty of public colleges and universities is to serve and educate their state's population. As the system currently exists, many prestigious public institutions are seeing the number of generally wealthy, out-of-state students rise on their campuses because these students are often "full-pay" or need only small amounts of institutional aid to incentivize their enrollment. This trend is undoubtedly related to the economic pressures that face higher education and the need to generate revenue, but such a focus places low-income students at a disadvantage in both their competiveness for admission and their ability to pay. Furthermore, the campus climate must signal to these students that they belong and school policies must help them reach graduation.[85] Not only must policy seek to remove or lower barriers to access, but it should seek to make campus environments more receptive and supportive of students from low-income and underrepresented backgrounds.

To accomplish this increased access to institutions we would need to take a page from the playbook of F. King Alexander,[86] who suggests providing funding for increased support services and general revenues if institutions raise the number of Pell grant–eligible students who enroll, persist, and graduate. Under this alternative, institutions would receive a sort of performance funding, or reward, directly related to enrolling Pell grant–eligible students, who tend to be from low-income, first-generation, and underrepresented backgrounds. Institutions would also receive increased funding to help offset the required support services that accompany enrolling students who have not traditionally attended college in large numbers. In an implicit way, the support services could help make college campuses feel more inviting for students who are often viewed by others—and may view themselves—as outsiders.[87] It would obviously mean an increased investment by the federal government and should entail buy-in and participation from state governments. Hence, this recommendation would require either an increase in funding or reallocation of existing funds. A possible and quite workable solution to this concern is simply to substantially increase Pell grants along the lines mentioned in Recommendation 1, coupling them with the extra incentives in this recommendation.

85 G. Serna, "Insiders/Outsiders? Market Signaling and Student Identity in College Choice," *Strategic Enrollment Management Quarterly* 3 no. 3 (2015): 167–183.
86 F.K. Alexander, "Maintenance of State Effort."
87 Ibid.

Comments on additional federal funding

For the United States to remain competitive in the world market, 60 percent of new entrants into the workforce by 2025 would have to have a college degree or certificate of postsecondary training. Currently, that number is only about 40 percent.

Because of demographic changes, it is also true that a large chunk of that 20 percent gap is low-income individuals and minorities, who in decades past did not receive higher education. The entire American higher education system can become much more efficient, but to do so, the system will need substantially more funding to reach the 60 percent goal.

Section 6. Conclusions and Limitations

This paper provided several possible policy alternatives to the current system for low-income, first-generation, and underrepresented students who wish to enter the public higher education system. Interestingly, although this paper has sought to lay the groundwork for continued discussion on increasing access for low-income and underrepresented groups, the reality is that the literature has clearly shown what matters and what works—namely, that the federal role in financing 21st-century higher education is unlikely to diminish. Rather, it is likely to grow as more students attend college and the realities of shifting demographics become apparent. Similarly, it is unlikely that the adoption of just one of the policy option presented in this paper will help the United States reach its goals. A major proviso for the adoption of any one policy or group of policies is that careful attention must be paid to the context facing first-generation, low-income, and underrepresented students and that detailed consideration and incorporation of the mission, values, and histories of the institutions that serve them play a central role in the policy process and in the incentives and funding that accompany any such decisions. An important question is whether policy can be made to align with what we know about lowering barriers for low-income students and those who often feel like outsiders to the college process.

Finally, this paper sought to examine and provide viable alternatives for the U.S. higher education finance system, particularly at the federal level. It focused primarily on those aspects of the system related to low-income, underrepresented students as well as college access, retention, persistence, and completion with regard to finance. Each recommendation in this paper was presented as a discrete policy option, but the recommendations might produce better results when applied together or within current structures. In the larger discussion of higher education policy in the 21st century, economic and finance policies at the state and federal levels must support other policy domains. To that end, this paper laid the groundwork for such a discussion and set the stage for developing a cost model that increases efficiency, effectiveness, productivity, and equity over the long run to remove barriers to access for first-generation, low-income, and underrepresented students and help them reach the finish line.