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Reassessing the Role of Federal Aid Policy in Financing 21st Century Higher Education for Underserved Groups: Recent Trends, Contemporary Problems, and New Proposals

Gabriel R. Serna
Michigan State University, sernagab@msu.edu

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Cover Page Footnote

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Reassessing the Role of Federal Aid Policy in Financing 21st Century Higher Education for Underserved Groups: Recent Trends, Contemporary Problems, and New Proposals

By: Gabriel R. Serna

This review explores the expanding role of federal aid policy considered from a contemporary and social justice perspective. It highlights recent trends in aid policy as well as difficulties that arise from the current system. Next, the review takes up an analysis of current aid policy that carefully considers equity and efficiency as primary criteria for funding public higher education. Through a meticulous review of the most up-to-date literature and data it then moves on to new proposals to increase equity, efficiency, and effectiveness with an eye toward increasing access and attainment. Indeed, a general takeaway from this review is that the federal role in financing 21st Century higher education is unlikely to diminish. Finally, research clearly points to what works, an important question however, is whether policy can be made to align with what is known about lowering financial barriers for underserved groups, particularly under the new Trump Administration.

Keywords: *federal aid policy, higher education finance, college access and choice, equity and efficiency in education*

The effectiveness of financing strategies to enhance access and attainment for low-income, first-generation, underrepresented students remains a central policy concern for both the states and federal government. The ability of state and federal policies to work in tandem to increase affordability, access, student learning, and attainment for these student groups continues to be a leading policy issue (Callan, 2011; Hauptman, 2011; Hearn & Holdsworth, 2004; St. John, Daun-Barnett, & Moronski-Chapman, 2013). While the so-called "Great Recession" accentuated these concerns, they are not necessarily new (Brinkman, 1990; St. John, 1991). However, the reverberations from this economic downturn have highlighted some underlying misgivings about higher education price and costs (Archibald & Feldman, 2008, 2011) and how this relates to student access, retention, and completion particularly for low-income, first-generation, underrepresented students (Hossler, Dundar, & Shapiro, 2013; Jones, 2013; Perna, 2013; Serna, 2015a). As a result, these topics continue to drive much of the policy discussion around higher education.

The primary aim of this review is to help motivate further discussion on the topic of federal aid policy as it relates to supporting underserved student groups. Therefore, it covers five major and interrelated policy topics by reviewing up-to-date data and research with a primary focus on the previous 10 years; though foundational pieces of research are cited in a handful of instances. First, it provides a brief background on federal higher education funding in the United States. Next, it reviews trends and patterns in recent federal

Gabriel R. Serna is Assistant Professor of Higher, Adult, and Lifelong Education (HALE) in the Department of Educational Administration at Michigan State University.

aid policies. Third, it evaluates the role of federal aid in promoting access and attainment for low-income, first-generation, and underrepresented students, termed here as underserved populations or groups. Fourth, the analysis segues into a discussion of possible financing alternatives where each recommendation is based upon the maintenance of funding mechanisms using the current aid structure and policies. Fifth, two new alternatives that substantially increase federal funding are presented that can be considered in turn or in tandem as possible policy prescriptions. The final section of the paper includes a summative conclusion and ties back the primary arguments to speculation on possible changes in federal policy due to the relatively recent change in administration at the presidency and secretary level.

Method: Surveying Federal Aid Policy

Relying heavily on Google Scholar, I chose literature from 2005–2017 placing primary focus on the decade preceding the manuscript's initiation (August 2015). This time period was chosen because it has seen stability, tumult, and a re-centering of federal policy as a primary finance mechanism for higher education, particularly for underserved populations. In some instances, Google Scholar led to other databases including EBSCOhost, JSTOR, ERIC, and Project MUSE, but again, these were secondary to the initial search. Next, I employed Google Scholar's citation tracking function to examine articles citing foundational pieces as early as 1990; hence, there are instances where much older, but influential scholarship is included. This same function allowed for careful tracking of more recent research across a number of fields and disciplines resulting in a robust number of studies including those from a recent edition of *The ANNALS of the American Academy of Political and Social Science* (Baker & Doyle, 2017; Boatman & Evan, 2017; Hillman & Orosz, 2017; Kelchen & Li, 2017; Perna, Kvaal, & Ruiz, 2017; Rosinger, 2017).

Brief Review of Historical Policy Goals

From its inception, at least one of the major goals of federal student aid has been to enhance access to higher education (Thelin, 2011). This emphasis developed shortly after WWII and, specifically, in 1944 with the passage of the Servicemen's Readjustment Act (SRA), also known as the GI Bill. 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 due in large part to these and other newly established federal programs aimed at mitigating price or increasing tuition concerns; a situation that closely resembles today's context (Thelin, 2011).

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, later to become the Pell Grant, in 1972 (Dynarski & Scott-Clayton, 2013; Heller, 2011; Jones, 2013; Mundel, 2008; Perna, 2013; Thelin, 2011). Fast-forward 70 years and evidence of federal support of a similar type 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 multiple pieces of federal legislation and tax policy additions, aimed primarily at middle- and upper-income students, to help ease financial concerns around college-going (Dynarski, Scott-Clayton, & Wiederspan, 2013; Heller, 2008, 2011, 2013; Hillman & Orosz, 2017). However, even with a relatively stable and increasing commitment from the federal government, access and attainment gaps endure and completion rates remain relatively stagnant (Baum & McPherson, 2008; Hossler, Dundar, & Shapiro, 2013; Perna, 2013; Perna, Kvaal, & Ruiz, 2017).

In a continued attempt to lessen the gaps and increase completion rates, the federal government adopted policies ranging from direct grant aid and loans to support for military/veteran servicemembers and benefits distributed via the tax code. The underlying objectives for each of these policies has been to reduce

concerns about paying for college. As the demographics of the country shift and the demand for individuals with a postsecondary degree or credential increase, the need to close educational attainment gaps becomes ever clearer (Jones, 2013; Perna, 2013). Major questions surrounding aid policy arise when determining the effectivness of these policy actions for increasing access for underrepresented, first-generation, and low-income groups. Indeed, questions connected to the targeting and efficiency of aid policy have surfaced in the policy and research discourse rather consistently (Baum & McPherson, 2008; Baum et al., 2015; Dynarski & Scott-Clayton, 2013).

As policymakers consider action that supports increased participation and graduation of underserved students in public higher education, substantial concerns emerge regarding the effectiveness of these efforts. Indeed, the research literature examining financial aid policy is robust and provides strong evidence that aid policy can, in fact, postively influence college going rates for these students. Moreover, research shows that federal financing efforts have closely correlated to robust enrollment increases during the past 40 years (Bowen, Chingos, & McPherson, 2009; Dynarski & Scott-Clayton, 2013). It is with this in mind that the present analysis considers each of the core programs and briefly examines pressing issues, new developments, and possible modifications and alternatives for federal financial aid in 21st Century higher education.

Recent Trends in Federal Aid Policy

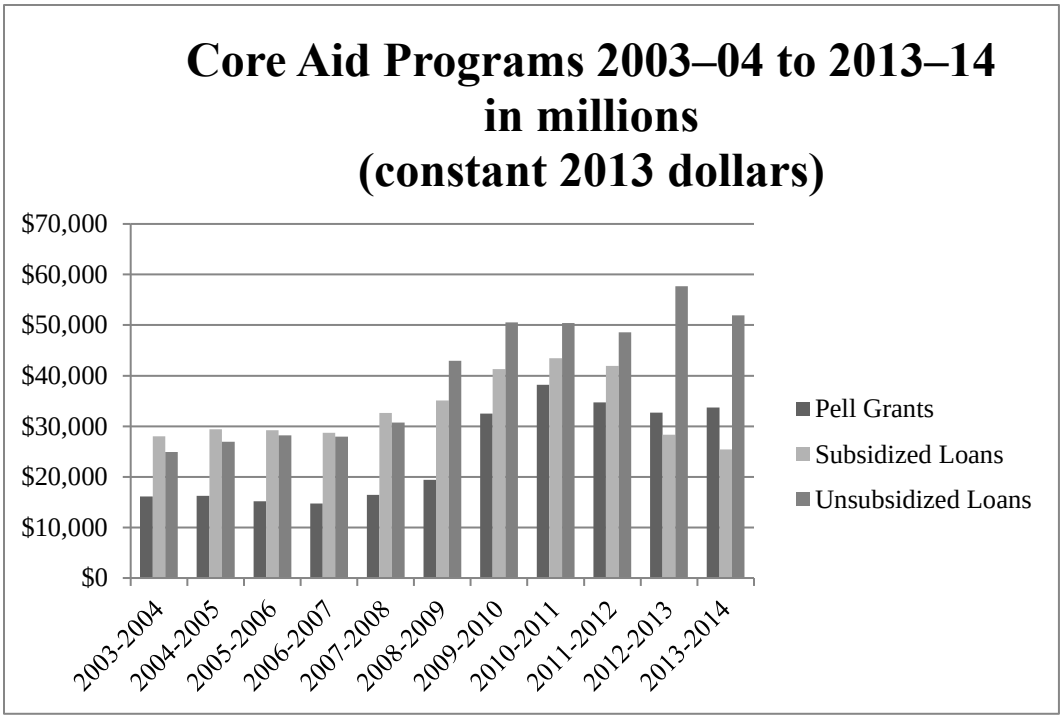
Using recent data from The College Board (2014), and reported in constant 2013 dollars, this section presents financial data on core financial aid programs administered by the federal government. Looking at the years 2003–2004 through 2013–2014, it examines trends and patterns in funding allocations to set the foundation for the analysis presented in the next section.

Pell Grants, Subsidized, 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 provides a visual representation of what is called "core aid" programs for the last 10 years. During the past decade funding in these programs has grown, but at very differential rates. In 2003–04 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 2003–04 through 2007–08 these programs fluctuated only slightly and began an upward trend with only a slight dip in all three aid types in 2006–07. During this same five-year period, subsidized loan funding maintained its place as the largest percentage of federal aid.

Figure 1

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



Source: The College Board (2014).

However, in 2007–08, a different trend emerged. Although all three programs grew in this year, the subsequent year, 2008–09 was the first time during this period that unsubsidized loans made up the largest proportion of aid. In fact, unsubsidized loans began and continue to dominate federal aid funding. From 2003–04 to the most current year data 2013–14, federal aid in the form of unsubsidized loans more than doubled increasing from around $24.9 billion to $51.9 billion. Pell grant funding also grew during the decade rising from just over $16.1 billion to approximately $33.7 billion with its peak in 2010–11 at slightly more than $38 billion. Subsidized loans, by contrast, appeared 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 2013–14 at slightly more than $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, who generally fall into the low- or lower-income range from families earning $50,000 or less (Dynarski & Scott-Clayton, 2013). This is because, taken together, these programs provided aid totaling more than $111 billion in 2013–14 alone. Moreover, Baum and McPherson (2008) noted that "Aid programs that merely subsidize students' college-going behavior 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 (p. 1). That is, these funding streams may not actually be meeting the underlying goals of access and completion and the principles of federal student aid policy. 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 Expenditures and Military/Veteran Benefits

The next two categories of federal aid are those related to aid in the form of tax benefits and military/veteran benefits. Though these two programs do not reach the funding levels of the core aid

programs discussed previously, they have experienced a significant upward trend. These data are presented in Figure 2 and discussed in more depth in the next two sections.

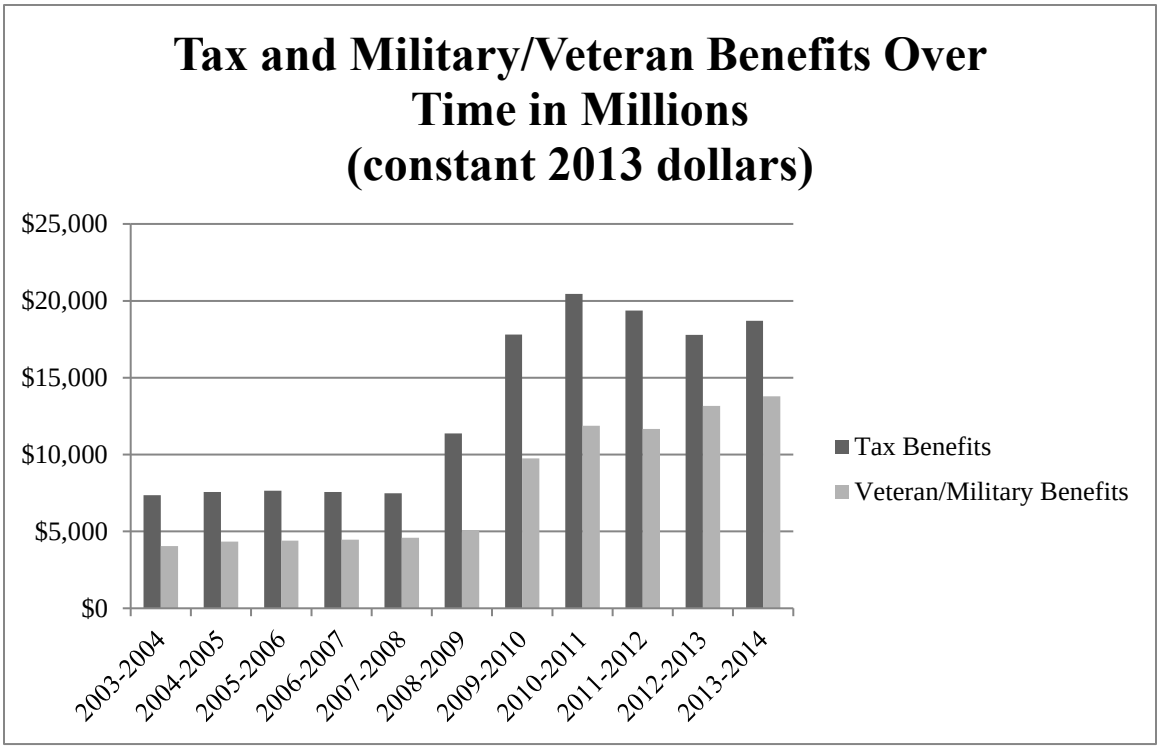
Tax expenditures. Federal higher education tax benefits that are accessed via the tax code have grown considerably during the past decade and include several policy provisions. Using data from The College Board (2014), Figure 2 shows that during the last 10 years, tax benefits have risen from approximately $7.3 billion in 2003–04 to $18.7 billion in 2013–14; though some value it as high as $25 billion (Bulman & Hoxby, 2014) and even $29 billion (Dynarski, Scott-Clayton, & Wiederspan, 2013) depending on which programs are included. After an initial rise in 2008–09, tax benefits, or commonly known as tax expenditures because they are valued as if they were expenditures in the federal budget, rose to a high of nearly $20.5 billion in 2010–11. These same benefits saw a slight dip in the proceeding years but remain an important mechanism for providing aid to higher income families (Dynarski, Scott-Clayton, & Wiederspan, 2013; McKeown-Moak & Mullin, 2014; Reschovsky, 2008).

A noteworthy change in 2009–10 meant that families who did not have tax liability suffient to cover the entire credit could obtain some of these benefits as refunds. The American Opportunity Tax Credit (AOTC) modified the previous Hope credit allowing students to claim the credit for 4 instead of 2 years and increased the total qualifying expenses to $2,000 of eligible expenses and 25% of the next $2,000 with a refundable total of $1,000. It was also expanded to apply to all eligible students in the household and changed income requirements such that individuals earning less than $80,000/year and joint filers earning less than $160,000 combined were eligible (Dynarksi, Scott-Clayton, & Wiederspan, 2013, Internal Revenue Service [IRS], 2015). AOTC benefits made up the largest proportion of tax benefits alone, totalling more than $15 billion in 2010–11. Finally, the popularity of the program seems self-evident in that at the end of 2012, the benefits were extended through 2017 (IRS, 2015).

Military/veteran benefits. As is evident in Figure 2, military and veteran benefits also experienced a dramatic increase in the period 2008–09 to 2009–10. Benefits to these students nearly doubled increasing from $5 billion in 2008–09 to more than $9.7 billion in the subsequent year and then topping out in 2013–14 at approximately $13.8 billion. One reason for this spike in funding is related to the passage of the post-9/11 G.I. Bill of 2008 that went into effect in 2009 (Steele, Salcedo, & Coley, 2010). As noted by Gonzalez, Miller, Buryk, and Wenger (2015) in testimony to the House of Representatives, as well as other scholars (Radford, 2011; Tinoco, 2014/2015), more than 1 million active duty service members who served since September 11, 2001 have taken advantage of these much more generous benefits. A major addition to this program includes support for housing and a stipend for books, in addition to tuition and fee benefits. Moreover, as of 2008, these students, as compared to non-military individuals, tended to enroll at private non-profit 4-year institutions, were generally older, had dependents, and were first-generation (Radford, 2011; Steele, Salcedo, & Coley, 2010; Tinoco, 2014/2015). Finally, scholars expect increased funding and costs associated with these benefits since there are now more than 2 million post-9/11 era individuals eligible for funding (Gonzalez et al., 2015).

Figure 2

Tax and Military/Veteran Benefits by Funding Level 2003–2004 to 2013–2014



Source: The College Board (2014).

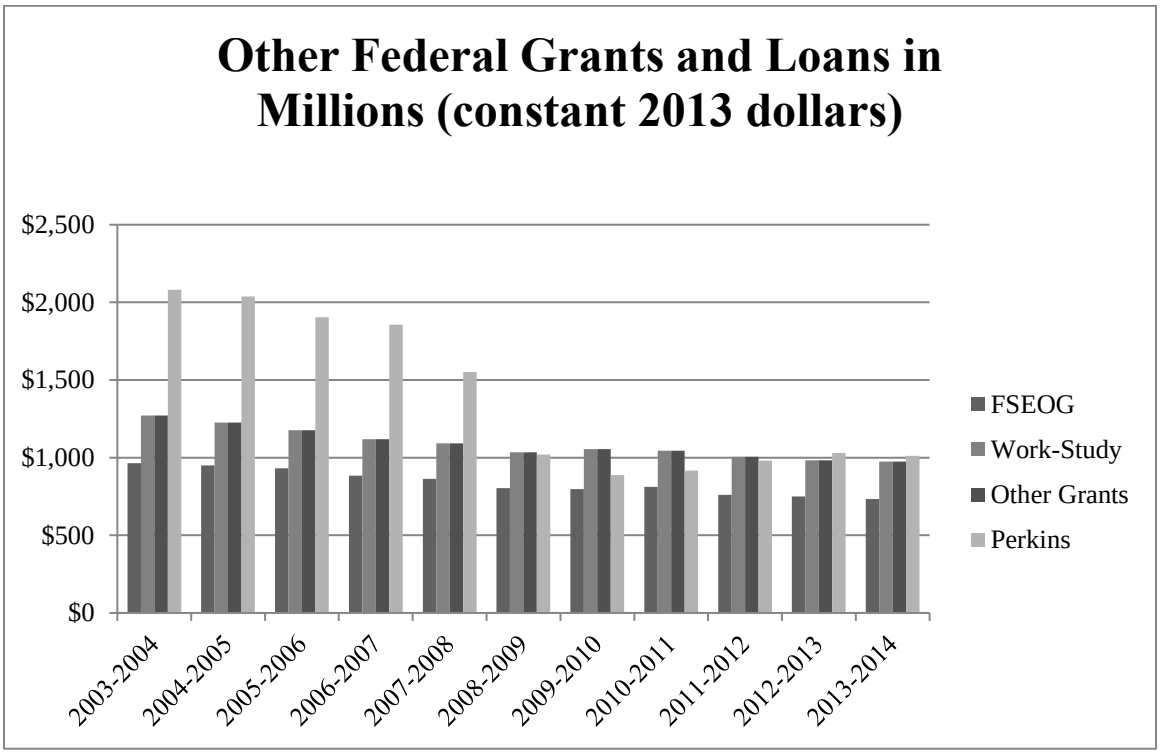
Other Programs and New Developments

Although Pell grants, along with subsidized and unsubsidized loans, and increasingly tax benefits, comprise the largest shares of federal funding to higher education, several other federal programs help students access higher education. Though 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. Based on the information presented in Figure 3, it would appear that though typical of federal aid policy, these other programs make up only a tiny fraction of aid.

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

Figure 3

Other Federal Aid Programs, 2003–2004 through 2013–2014



Source: The College Board (2014).

In a related vein, two new policies may have longer-term impacts on college-going and access for low-income students. First, is the *College-Scorecard,* which seeks to mitigate the information asymmetries that exist for students from low-income backgrounds and provide information to students regarding the costs and benefits of attending a particular institution (Kelchen & Li, 2017; U.S. Department of Education, 2015). Second, is a change in the Free Application for Federal Student Aid (FAFSA) filing procedures that allows *Prior-prior year income,* which will allow families to automatically transfer IRS data to the FAFSA, apply earlier, and determine their level of eligibility sooner (National Association of Student Financial Aid Administrators [NASFAA], 2015b). The effectiveness of these policy changes will take some time to determine; though studies have already begun (Kelchen & Li, 2017). Nonetheless, given that complexity has been a major obstacle for low-income students (Furquim, Glasener, Oster, McCall, & DesJardins, 2017; Perna, Kvaal, & Ruiz, 2017; Rosinger, 2017), providing more transparent application procedures and information about eligibility earlier might help this group access higher education in larger numbers.

A final noteworthy point is the impacts the federal budget being proposed by the new Trump Administration and Secretary of Education, Betsy DeVos. The impacts of these proposals, which include the elimination of the Public-Service-Loan-Forgiveness Program, Stafford Subsidized Loans, and discontinuation of some grant programs altogether (Harris, 2017a, b), are yet to be seen. However, a policy shift such as this will certainly impact federal programs aimed at serving underrepresented groups.

Discussion: Issues of Equity and Effectiveness

Pell Grants

The effectiveness of grant aid has been widely studied in the research literature. For example, in a comprehensive review, Mundel (2008) carefully outlines the role of Pell grants in the college-going and enrollment decision-making processes of students and families. Overall, he finds that larger grant-aid awards are positively related to enrollments of price-sensitive students, who again are generally from low-income backgrounds and whose enrollment choices are highly responsive to list, rather than net, price changes. These results are supported by more recent evidence provided by Dynarski & Scott-Clayton (2013). Using data from The College Board during 1996–2011, they found that increases in Pell grant awards have closely tracked increased enrollments. Since this funding is directed at students from lower socioeconomic families, this suggests that Pell grant aid has had its intended effect for those who apply. However, definitive causal effects of grant aid on enrollments have yet to be found. A likely rationale is cited by Kinzie et al., (2004) who state 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" (p. 47). In other words, financial aid systems and policies are not well coordinated (Baum et al., 2015; Hossler, Ziskin, Kim, Cekic, & Gross, 2008; Kinzie et al., 2004; Perna, 2010), thus making it difficult to isolate the impacts of Pell grants specifically. Nonetheless, the student price-response literature provides a great deal of guidance in this instance.

Research on student price-responsiveness has shown that reductions in list-price tuition and fees are related to increased enrollments of between 3–5 percentage points for every $1,000 price decrease (Dynarski & Scott-Clayton, 2013; Heller, 1997; Leslie & Brinkman, 1987; Manski & Wise, 1983; Mundel, 2008). Because this research focuses on overall enrollment response and places an emphasis on list price, one can draw at least one conclusion: the fact that low-income students generally use list price to make decisions (Mundel, 2008) would indicate that an increase in grant aid to these individuals should result in their increased enrollments. Moreover, if the goal is not only to increase access but retention and persistence rates for this population, Pell grants have an important role to play. For example, Hossler et al., (2008) and Hossler, Dundar, and Shapiro (2013) provide compelling evidence that as compared to loans, grants are more effective at enhancing persistence. Based on the available evidence, to help incentivize enrollment and lower barriers to access and persistence, grants are a powerful policy tool.

While the research literature provides a good rationale for funding low-income students with grants, it also highlights at least three major problems with the current system: decreasing purchasing power of Pell grants, complexity of aid application processes, and increasingly inflexible program structures coupled with changing demographics.

The first issue to consider is the purchasing power of Pell grants. More recently, Baum, Elliott, and Ma (2015) revealed that though Pell grant awards have increased by 12% in inflation adjusted total dollars during the past 10 years, they cover only 63% of average public university tuition and fees; this is down from 79% in 2004–05. Hence, the increases in total Pell awards have not kept pace with the upsurge in public college and university tuition and fee levels. Because 66% of Pell grant recipients attend public institutions, (30% 4-year, 36% 2-year) Pell grants' diminishing purchasing power is noteworthy, if not worrisome (NASFAA, 2015a). Still, this says nothing about the social and economic context of the information available to students (Perna, 2010, 2013; Perna, Kvaal, & Ruiz, 2017).

For instance, even with the maximum Pell award, a first-generation and/or low-income student may not have sufficient knowledge about the college-going process to understand that the list-price is just a starting price, and that the final amount is determined by a complex set of interrelated policies. When only one-third

of total student costs are covered by Pell grants, and 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 has shown that the complexity of student aid application and program alignment can serve as a major deterrent for first-generation, and underrepresented students (Baum et al., 2015; Baum & McPherson, 2008; Bowen, Chingos, & McPherson, 2009; Deming & Dynarski, 2010; Dynarski & Scott-Clayton, 2013; Dynarski, Scott-Clayton, & Wiederspan, 2013; Furqium et al., 2017; Heller, 2013; Hillman & Orosz, 2017; Hossler et al., 2008; Mundel, 2008; Rosinger, 2017). By and large, the research shows a great deal of support for simplifying the FAFSA and making the process more transparent. To illustrate, a recent study by Bettinger, Long, Oreopolous, and Sanbonmatsu (2012) used a sophisticated quasi-experimental approach to draw causal conclusions regarding simplification of the application process. They showed that on average, those students from families who were provided assistance filling out the FAFSA were 8 percentage points more likely to have completed at least 2 years of college than those who were simply provided information but no assistance. Rosinger (2017), in a study of community colleges, found that an "information intervention" was effective, if limited, in terms of student borrowing and enrollment choices. Another good example comes from Deming and Dynarski (2010) who found that targeted aid such as Pell grants can help, but that the amount of paperwork imposed on these lower-income individuals is substantial and often an impediment to college access.

Finally, the rise in non-traditional student numbers and changing demographics were also cited as a limitation to the current Pell grant and other federal aid programs (Baum et al., 2015; Dynarski & Scott-Clayton, 2013; Tinoco, 2014/2015). In a recent policy brief from the Lumina Foundation (Baum et al., 2015), experts noted that the rising number of independent, older, diverse students would require a rethinking of the current Pell program so as to respond more effectively to the needs of this growing student demographic. For instance, a major hindrance to the current system is its reliance on previous years' income as a measure of financial need which can result in a student receiving much less aid than required to attend college. For those with families or other major responsibilities, this can clearly serve as a barrier to access.

Loan Effectiveness and Related Issues

While the research literature on the effects of grant aid is rather robust, the same cannot be said of loan-based aid. Nevertheless, a few central themes emerge from this 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 (2009) note that loans were likely responsible for a portion of increasing enrollments that were realized following the policy's adoption. The importance of loans can also be seen in Figure 1, where in 2013–14 subsidized loans made up $25.4 billion of aid, while unsubsidized loans totaled around $51.9 billion. When taken together, loans provided $77.3 billion in student aid; by far the largest proportion. Still, research has not been able to determine whether loans provide a better return for the investment.

The second major theme is that loans are not as effective as grants when it comes to college access, persistence, and attainment among students from low-income families (Dynarski & Scott-Clayton, 2013; Heller, 2008; Hossler et al., 2008; Hossler, Dundar, & Shapiro, 2013). This is not necessarily a novel conclusion given that grant aid is worth more to students than borrowed funds since the former does not require repayment. Still, on the one hand, though loans are relatively cheap to provide, they may not provide enough incentive for low-income, first-generation, and underrepresented students to attend college. On the other hand, though grants are more effective at helping students get into, staying, and completing college, they are a more resource intensive investment relative to 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, first-generation, and underrepresented backgrounds, are debt averse (Baker & Doyle, 2017; Boatman & Evans, 2017; Perna, Kvaal, & Ruiz, 2017). Given that 59% of those who obtained a degree from a public 4-year institution in 2012–2013 accumulated on average of $25,600 in debt, 20% more than those who obtained a degree 10 years earlier (Baum, Elliott, & Ma, 2015, p. 22), an individual or family that is debt-averse will likely see this as another barrier to access. Often this has to do with lack of experience with credit and debt (Boatman & Evans, 2017; Bowen, Chingos, & McPherson, 2009). In other words, lack of information and experience with college-going or social/cultural values result in an unwillingness from some students to borrow. For example, Boatman and Evans (2017) found that increased financial literacy and knowledge of the student loan system is associated, in some samples, with a 30–50% decrease in loan aversion. These studies again highlight the important intersection of social and economic forces in the college-going process in that finances, though important, are not the only factor at play in a student's decision-making process. It also underscores the problem with complexity around aid processes and application with regard to grant aid. That is, the complexity of the program may undermine the incentives related to making subsidized and even unsubsidized borrowing more attractive to low-income students and families (Dynarski & Scott-Clayton, 2013; Furqium et al., 2017; Hillman & Orosz, 2017; Perna, Kvaal, & Ruiz, 2017).

Finally, the data show that student borrowing continues to rise (Heller, 2008). Evidence of this is clear in Figure 1 that shows that of the last 5 years, 4 saw unsubsidized borrowing reaching levels more than $50 billion. In fact, a recent report from The College Board indicates that in 2012–2013, 59% of those who graduated from public institutions left with debt (Baum, Elliott, & Ma, 2015, p. 7). And though it is likely the case that this has resulted in increased participation, it is also cause for concern. The data presented in Figure 1 are only for student borrowing. This does not include parent PLUS loans, which takes the burden of a student's education and places it upon the family. In any event, loans provide a needed source of financing for students when federal grant aid cannot cover the entirety of student costs. Nonetheless, a looming question is whether there are more effective or better ways to make these programs more comprehensible (Dynarski & Scott-Clayton, 2013; Heller, 2008). Alternatively, there are modifications that can be made in the structure, which makes it less risky for both students and taxpayers (Perna, Kvaal, & Ruiz, 2017), especially for those who might incur debt and wish to enter public service. Because many low-income, often underrepresented, and first-time students are fairly inexperienced when it comes to finances and credit (Bowen, Chingos, & McPherson, 2009) this question is an important one.

Tax Benefits

Generally speaking, the literature on tax benefit effectiveness returns mixed results. For example, Dynarski, Scott-Clayton, and Wiederspan (2013), Reschovsky (2008), and Turner (2012b) showed that tax benefits are positively related to enrollment increases. However, Bulman and Hoxby (2014) found no evidence that tax benefits incentivize enrollment in higher education though they recognize myriad reasons for this finding. Still, the research suggests that tax benefits favor wealthier families and in fact, tends to work against equality of financial opportunity (McKeown-Moak & Mullin, 2014). Researchers provide evidence that this type of funding goes to families and students who would have gone to college anyway. To illustrate, a few recent studies, Reschovsky (2008) and Turner (2012a, b) suggested that tax incentives are ineffective tools for increasing enrollments of low-income students, and at least in one case (Turner, 2012b) tax benefits came at a steep cost. Turner (2012b) indicated that if tax benefits are fully taken up, that is everyone that is eligible takes the benefit, then 93% of this funding would go to students who would have attended or enrolled in college even without these benefits. Comparing this to a scenario where full uptake of tax benefits is not present, Magg and Rohally (2007, as cited in Turner, 2012b) estimated that only 1 low-income student would be subsidized for every 7 middle-income students who would have attended anyway.

Bulman and Hoxby (2014) also found little evidence that tax benefits were effective at income cutoff levels for the AOTC. Citing the complexity of the application process, timing of payments, and salience of tax credits in the college-going process, they noted 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 (Reschovsky, 2008), particularly because they favor those at the higher end of the income spectrum who are college-bound in any case. In general, the higher education tax credit, similar to most tax credits, is not a cost-effective policy. This is because it changes the decision of few families to enroll their sons or daughters in college who would otherwise not enroll. Most of the credits become bonuses to families who would have enrolled without the credit.

Military/Veteran Benefits

Military and veteran benefits for higher education have been shown to be a highly topical issue for active-duty service members (Gonzalez et al., 2015). The salience of higher education to those on active-duty and veterans, along with increased funding, has allowed many more service members and veterans to access higher education. While evidence shows that as of 2007–2008 most have chosen public 2- and 4-year institutions (Radford, 2011), misgivings have arisen around the role of the for-profit sector in educating those receiving these and other federal financial aid benefits (Perna, Kvaal, & Ruiz, 2017; Tinoco, 2014/2015). In fact, the Department of Defense barred one of the largest for-profit universities, the University of Phoenix, from certifying VA educational benefits to active-duty service member (Kelderman, 2015; Thomason, 2015). However, the impacts of these decisions on military and veteran enrollment decisions are yet to be seen.

Regarding the demographics of this group, several of the same questions around changing demographics apply here. This group of students tends to be first-generation, have dependents, and is older than traditional, non-military students (Gonzalez et al, 2015; Radford, 2011; Tinoco, 2014/2015). Hence, a prominent concern for this group has to with its 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 often recommended as a way to help them navigate higher education.

Another impediment to access for this group lies in the complexity of aid policies and programs. 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. Since service members and veteran beneficiaries are increasing in number, 1 million are estimated to have taken advantage of their benefits as of 2014, thus determining the best ways to support their transition and the effective use of funds is clearly a significant policy matter (Gonzalez et al., 2015; Tinoco, 2014/2015). Overall, however, the research literature on the effectiveness of these benefits has been sparse.

Nexus of Policy and Practice I: New Proposals for the Current System

In this section, a number of new proposals are made that preserve current aid policy and structure but make it better targeted and cost effective based on the research literature and policy.

Proposal 1: Restrict All Pell Grants to Families Earning Under $ 40,000

Arguably, an important consideration regarding the efficiency of resource allocation decisions is related to the effectiveness of such decisions. In other words, does aid policy direct subsidies in an efficient and effective manner such that, those who most need incentives to attend college are provided them? As was noted in previous sections, Pell grants have been relatively well targeted. In fact, one simply need review recent data from The College Board (Baum, Elliott, & Ma, 2015) to see that in 2013–14, 77% of Pell grant monies went to those earning less than $40,000 per year. However, even with more generous grants, students and families are borrowing at an increasing rate. While there are certainly complexities that must be accounted for in making the proceeding recommendation I present a first alternative.

Since most Pell grants already go to individuals in this part of the income distribution, the idea would be to fully fund these students through a direct subsidy. This would simplify the process of means testing while maintaining the FAFSA as the primary vehicle to determine need. Additionally, this alternative would help alleviate some of the concerns that arise when individuals from lower middle- and low-income families graduate since they will have no debt to repay. At present, 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 (Gross, Cekic, Hossler, & Hillman, 2009; Kelchen & Li, 2017). Since the research literature clearly shows that family income and background closely correlate with student loan default, this policy would also potentially ease anxieties related to debt default.

Proposal 2: Provide a Mix of Pell Grants and Subsidized Loans to Families Earning $40,000–$80,000

Next, provide a more typical aid package that includes subsidized loans and grants to those individuals earning more than $40,000 but less than $80,000. If these individuals were included, this would effectively set the limit on Pell grants to the upper threshold. It would also provide these individuals with incentives for college-going and provide a direct subsidy to lower the effective price. Additionally, this would mean relying on the FAFSA and estimated family contribution for this group and would again provide the largest grants to those nearer the lower threshold. For example, an individual from a family earning $55,000 might receive a package that is approximately 35–40% subsidized loans and 60–65% grants. Another example would be of an individual closer to the $80,000 mark. An individual from a family earning $75,000 would receive 85–90% aid as subsidized loans and 10–15% as grants. Of course, this would require some retooling but based on the information already collected by the federal government, 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 those discussions.

Proposal 3: All Unsubsidized Loans to Families Earning $80,001–$160,000 Through Public-Private Partnerships

The final recommendation would provide a mix of subsidized and unsubsidized loans to those from families earning $80,001–$160,000, based on current AOTC thresholds, similar to the manner in which Pell aid would be distributed where those at the lower end receive a majority of subsidized loans and those at the upper end mostly unsubsidized loans. This group of

individuals already makes up the smallest group of Pell grant recipients and are usually in the group of the top one-third of earners according to the U.S. Census Bureau's FactFinder for 2013.[1] Hence, they likely have a much more substantial financial "safety net." Another possibility with the portion of unsubsidized loans is that there exists an opportunity to create public-private partnerships, similar to those already in place, such that the private sector could administer and provide these loans. However, there policies or agreements would have to be created to address appropriate interest rates on these loans and the proper role of the public sector. If the federal government guarantees these loans, then a portion of the interest earnings could go to funding this new process and to provide enhanced policy protection if these loans are guaranteed.

In adopting a policy structure like the preceding one, an arguably more fair and progressive system would arise where those who most need assistance accessing higher education are those receiving aid. This would allow a more efficient, simple, equitable, and effective targeting of this funding. This recommendation arguably aligns with, and could easily incorporate, state aid, particularly if state aid is moved from a merit-based structure to one that places greater emphasis on need-based aid. Indeed, a possible configuration could include a similar structure for state aid such that state aid is aimed at those who exhibit high-ability with low-income, receive the most financial support.

Proposal 4: Last-In Aid for Federal Loans

A second alternative using 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. This alternative would work similarly to the current structure for the allocation of institutional aid. To help illustrate, currently, most institutional aid typically works as a sort of "top-up" for financial aid packages. That is to say, it fills the very last portion of aid that is not covered by other funding including Pell grants, state merit- or need-based aid, and loans. Hence, I suggest a small change where loans make up the very 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. While this might not change the structure of financial aid for every student, it could serve to ensure that those who are most price-sensitive obtain the fewest aid dollars as loans. Therefore, it might be expected that this alternative would serve to limit the amount of debt by requiring that all other aid is included first. And though there would likely be some resistance from public colleges and universities since institutional aid is often used as an enrollment management/competitive tool, this alternative would likely broaden the applicant pool of low-income students since many see debt as a problem. Additionally, it would make institutional and state aid a more prominent feature of aid packages since these two aid programs plus Pell grants would be included prior to any form of loans.

Proposal 5: Invert Tax Benefit Structures

A common thread in research literature on this topic clearly shows that tax expenditures go to more wealthy students and 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. A possible alternative is one that would take the AOTC, which is partially refundable and instead make these tax credits (refundable in cash) to those in the middle- and low-income ranges for higher education.

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

As shown in Figure 2, these expenditures totaled more than $18 billion in 2013–14. 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 proposals 1 and 2, this would provide a significant new source of funds; funds which it should be noted, are due the federal government but which are not collected. This approach would shift a subsidy that goes to families who would have sent their children to college anyway to those who are on the margin and where finances are a major impediment. That is, this approach would provide targeted aid and result in possibly more effective and more efficient use of resources; namely due to the fact that those going to college from high-income families would be going anyway, and it is unlikely that these policies make a great deal of difference in terms of the college-choice process. Moreover, this policy proposal could be combined with the current FAFSA and provide tax benefits/credits in a similar fashion to that presented previously.

However, this is not to suggest that this would be easy to implement. Those in higher income groups often prize benefits given through the tax code, and this same group is generally a powerful political force. And though 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, to implement such a policy, a great deal of political will would have to accompany discussions of this possibility.

The proceeding section presents two alternatives that substantially increase federal funding to help support access to public higher education. In providing these alternatives, it is recognized that there exist limitations to each proposal. Still, the recommendations provided here clearly take up the topic of higher education financing for low-income, first-generation, and underrepresented students through a more equitable, efficient, and effective lens.

Nexus of Policy and Practice II: New Proposals, New Structures, New Incentives

Here I present two alternatives that employ new financing structures or some expansion of current structures to help support access to public higher education. In providing these alternatives, I also recognize that there exist limitations to each proposal. Still, the recommendations provided here arguably take up the topic of higher education financing for low-income, first-generation, and underrepresented students from a more equitable, efficient, and effective lens.

Proposal 6: Create a New Federal Higher Education Operating Grant Program to States

A reality facing many public institutions is that state funding has diminished drastically, as a proportion of operating funds, during at least the past twenty years. What this means is that institutions are now more reliant upon revenues from other sources particularly tuition and fees. A central concern, however, is that as states withdraw support, public colleges and universities are relying upon students and families to pay higher tuition and fees. This alternative would mean that the federal government enacts a new grant program to states to be used for direct 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 be directly related to enhanced capacity and/or hold down tuition rates for low-income students specifically at each institution. The reason for this is it makes little sense to provide more funding if the price a low-income student faces continues to rise. The hope is that this type of policy will reduce the costs of higher education for low-income students over the long run. A second caveat has to do with the implementation of other efficiency and effectiveness enhancing policies

mentioned previously, and hence, such a program would likely best come after the system has determined how it will enhance effectiveness and efficiency of its core programs.

It could be phased in starting as early as fiscal year 2020–21, which would include an amount aimed at offsetting state cuts during the past seven to ten years and increase over five years using a base that grows by at least 50%. For future years it would be increased in line with the Consumer Price Index (CPI) and the program would be an entitlement to the states and not go through the appropriations process to maintain stability. For states to receive the funding, they would have to meet three conditions.

First, states would have to increase higher education funding in line with the CPI and the base year would be an average of 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 in which ways they can decrease total costs, which hopefully results in a lower price (tuition and fees) for students; however, this must be done with careful thought and an eye toward effectiveness rather than simply increasing efficiencies. Finally, states would have to incentivize increasing graduation rates with input from their colleges and universities. Indeed, intermediate measures would be very helpful in this instance. That is, a system of this sort would incorporate not only output metrics, but rather would take into consideration institutional mission, inputs, and intermediate outcomes such as retention and persistence. Such a system is inline with current state efforts of accountability (Dougherty, Jones, Lahr, Natow, Feat, & Reddy, 2014; McLendon, Hearn, & Deaton, 2006; Rabovsky, 2012; Tandberg & Hillman, 2014; Zumeta & Kinne, 2011). This system could also easily align with Proposals 1 and 7 to incentivize enrollment of students eligible for Pell grants.

Before proceeding however, a caution is necessary with regard to this particular recommendation. As far as the research literature has shown, there is little evidence that accountability models have been effective when looking across the states (Hillman, Tandberg, & Gross, 2014; Tandberg & Hillman, 2014). Still, some evidence exists supporting the notion that early outcomes-based models may have had intermediate effects, but have not necessarily resulted in improved student outcomes. This could be due to several factors, but a likley one has to do with the nature and variability of such policies from state to state. In fact, noted higher education scholar James Hearn (2015) 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 (p. 18).

Still, this is not to suggest that these structures are useless. Instead, 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, Tandberg, and Fryar (2015) noted that while graduation rates at four-year institutions showed no relationship to the implementation of this policy, two-year certificate rates were robustly related to policy reform. The final caution is related to the blunt measures used in the assessment and evaluation of these outcomes-based policy. Again, reiterating Hearn (2015), if

careful attention is not paid to policy elements, states run the risk of decreasing access and equity and rendering higher education into production outputs. Policies aimed at simply increasing the number of degrees or the number of degrees per dollar should consider this warning from Hearn (2015), who reminds those associated with the decision-making process that degrees are not simply production outputs and that treating them as such is too simplistic at best and harmful to the goals of higher education and society at worst.

Nevertheless, what is clear is that the relationships between the states and their institutions of higher education have been altered by accountability efforts (Dougherty & Reddy, 2013). In the context of accountability and outcomes-based funding, state support is only one factor of many that relates to higher education finance (Hearn, 2015; Toutkoushian & Shafiq, 2010). As a result, increased funding to this area by the states, with the help of the federal government, would mean that these resource intensive efforts (Hearn, 2015) might 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, along with a clear understanding of where cost-savings might be found from both the student and institutional perspective should help keep effective prices lower for this group.

Returning to federal policy, in other policy areas where federal grant funding is significant, such as special education, or as part of an economic stimulus program that included substantial education and Medicaid, federal funding increases mandate that states provide funding to these programs and related areas and that funding remain consistent year-to-year. This Maintenance of Effort (MOE) requirement effectively provides an incentive for states to continue to fund public programs but should do so with an acknowledgment of a state's ability to generate tax revenues.

In the case of higher education, a similar case could be made for funding public colleges and universities. If federal funds were tied to a MOE stipulation, then it might be possible for the federal government to incentivize continued state funding. As Alexander (2011, p. 446) 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." A limitation of this approach, however, is that it does little to respond to the specific needs of low-income and underrepresented students. Much like current state funding to institutions, the subsidy lowers the price for every student regardless of need. To be sure, this is not necessarily a bad thing; however, if the goal is to target funding to low-income students, then this limitation should be acknowledged.

Proposal 7: Provide Additional Incentives for Enrolling Low-Income, First-Generation, and Underrepresented Students

A central duty of public colleges and universities is to serve and educate a 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 since these students often "full-pay" or need only small amounts of institutional aid to incentivize their enrollment. This is undoubtedly related to the economic pressures facing higher education and the need to generate revenues. However, this focus places low-income students at a disadvantage both in terms of their competiveness for admission and as related to their ability to pay. Furthermore, environmental factors play a central role in both signaling to these students that they belong and helping them reach graduation (Serna, 2015b). This means that not only must policy seek to remove or lower barriers to access but should also seek to make campus environments more receptive and supportive of students from low-income, first-generation, and

underrepresented backgrounds.

To accomplish this would require taking a page from the playbook of Alexander (2011), who suggests providing funding for increased support services and general revenues if institutions raise the number of Pell grant eligible students that enroll, persist, and graduate. Again, because public institutions' missions are related to serving a state's populace, this has particular salience for them. Under this alternative, institutions would receive a sort of performance funding, or reward, that was directly related to enrolling Pell eligible students, who incidentally are normally 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. And, in an implicit way, the support services could help make college campuses feel more inviting for students who are often viewed, and may view themselves, as outsiders (Serna, 2015b). This would obviously mean an increased investment by the federal government and should entail buy-in and participation from state governments. Hence, this would require either an increase in funding or reallocation of existing funds. A possible and quite workable solution to this concern would simply be to substantially increase Pell grants along the lines mentioned in Proposal 1 and coupling it with the extra incentives laid out in this recommendation.

Nexus of Policy and Practice I: New Proposals for the Current System

In this section, a number of new proposals are made that preserve current aid policy and structure but make it better targeted and cost effective based on the research literature and policy.

Proposal 1: Restrict All Pell Grants to Families Earning Under $ 40,000

Arguably, an important consideration regarding the efficiency of resource allocation decisions is related to the effectiveness of such decisions. In other words, does aid policy direct subsidies in an efficient and effective manner such that, those who most need incentives to attend college are provided them? As was noted in previous sections, Pell grants have been relatively well targeted. In fact, one simply need review recent data from The College Board (Baum, Elliott, & Ma, 2015) to see that in 2013–14, 77% of Pell grant monies went to those earning less than $40,000 per year. However, even with more generous grants, students and families are borrowing at an increasing rate. While there are certainly complexities that must be accounted for in making the proceeding recommendation I present a first alternative.

Since most Pell grants already go to individuals in this part of the income distribution, the idea would be to fully fund these students through a direct subsidy. This would simplify the process of means testing while maintaining the FAFSA as the primary vehicle to determine need. Additionally, this alternative would help alleviate some of the concerns that arise when individuals from lower middle- and low-income families graduate since they will have no debt to repay. At present, 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 (Gross, Cekic, Hossler, & Hillman, 2009; Kelchen & Li, 2017). Since the research literature clearly shows that family income and background closely correlate with student loan default, this policy would also potentially ease anxieties related to debt default.

Proposal 2: Provide a Mix of Pell Grants and Subsidized Loans to Families Earning $40,000–$80,000

Next, provide a more typical aid package that includes subsidized loans and grants to those individuals earning more than $40,000 but less than $80,000. If these individuals were included, this would effectively set the limit on Pell grants to the upper threshold. It would also provide these individuals with incentives for college-going and provide a direct subsidy to lower the effective price. Additionally, this would mean relying on the FAFSA and estimated family contribution for this group and would again provide the largest grants to those nearer the lower threshold. For example, an individual from a family earning $55,000 might receive a package that is approximately 35–40% subsidized loans and 60–65% grants. Another example would be of an individual closer to the $80,000 mark. An individual from a family earning $75,000 would receive 85–90% aid as subsidized loans and 10–15% as grants. Of course, this would require some retooling but based on the information already collected by the federal government, 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 those discussions.

Proposal 3: All Unsubsidized Loans to Families Earning $80,001–$160,000 Through Public-Private Partnerships

The final recommendation would provide a mix of subsidized and unsubsidized loans to those from families earning $80,001–$160,000, based on current AOTC thresholds, similar to the manner in which Pell aid would be distributed where those at the lower end receive a majority of subsidized loans and those at the upper end mostly unsubsidized loans. This group of individuals already makes up the smallest group of Pell grant recipients and are usually in the group of the top one-third of earners according to the U.S. Census Bureau's FactFinder for 2013.[2] Hence, they likely have a much more substantial financial "safety net." Another possibility with the portion of unsubsidized loans is that there exists an opportunity to create public-private partnerships, similar to those already in place, such that the private sector could administer and provide these loans. However, there policies or agreements would have to be created to address appropriate interest rates on these loans and the proper role of the public sector. If the federal government guarantees these loans, then a portion of the interest earnings could go to funding this new process and to provide enhanced policy protection if these loans are guaranteed.

In adopting a policy structure like the preceding one, an arguably more fair and progressive system would arise where those who most need assistance accessing higher education are those receiving aid. This would allow a more efficient, simple, equitable, and effective targeting of this funding. This recommendation arguably aligns with, and could easily incorporate, state aid, particularly if state aid is moved from a merit-based structure to one that places greater emphasis on need-based aid. Indeed, a possible configuration could include a similar structure for state aid such that state aid is aimed at those who exhibit high-ability with low-income, receive the most financial support.

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Proposal 5: Invert Tax Benefit Structures

A common thread in research literature on this topic clearly shows that tax expenditures go to more wealthy students and 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. A possible alternative is one that would take the AOTC, which is partially refundable and instead make these tax credits (refundable in cash) to those in the middle- and low-income ranges for higher education.

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Nexus of Policy and Practice II: New Proposals, New Structures, New Incentives

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It could be phased in starting as early as fiscal year 2020–21, which would include an amount aimed at offsetting state cuts during the past seven to ten years and increase over five years using a base that grows by at least 50%. For future years it would be increased in line with the Consumer Price Index (CPI) and the program would be an entitlement to the states and not go through the appropriations process to maintain stability. For states to receive the funding, they would have to meet three conditions.

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> 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 (p. 18).

Still, this is not to suggest that these structures are useless. Instead, 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, Tandberg, and Fryar (2015) noted that while graduation rates at four-year institutions showed no relationship to the implementation of this policy, two-year certificate rates were robustly related to policy reform. The final caution is related to the blunt measures used in the assessment and evaluation of these outcomes-based policy. Again, reiterating Hearn (2015), if careful attention is not paid to policy elements, states run the risk of decreasing access and equity and rendering higher education into production outputs. Policies aimed at simply increasing the number of degrees or the number of degrees per dollar should consider this warning from Hearn (2015), who reminds those associated with the decision-making process that degrees are not simply production outputs and that treating them as such is too simplistic at best and harmful to the goals of higher education and society at worst.

Nevertheless, what is clear is that the relationships between the states and their institutions of higher education have been altered by accountability efforts (Dougherty & Reddy, 2013). In the context of accountability and outcomes-based funding, state support is only one factor of many that relates to higher education finance (Hearn, 2015; Toutkoushian & Shafiq, 2010). As a result, increased funding to this area by the states, with the help of the federal government, would mean that these resource intensive efforts (Hearn, 2015) might 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, along with a clear understanding of where cost-savings might be found from both the student and institutional perspective should help keep effective prices lower for this group.

Returning to federal policy, in other policy areas where federal grant funding is significant, such as special education, or as part of an economic stimulus program that included substantial education and Medicaid, federal funding increases mandate that states provide funding to these programs and related areas and that funding remain consistent year-to-year. This Maintenance of Effort (MOE) requirement effectively provides an incentive for states to continue to fund public programs but should do so with an acknowledgment of a state's ability to generate tax revenues.

In the case of higher education, a similar case could be made for funding public colleges and universities. If federal funds were tied to a MOE stipulation, then it might be possible for the federal government to incentivize continued state funding. As Alexander (2011, p. 446) 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." A limitation of this approach, however, is that it does little to respond to the specific needs of low-income and underrepresented students. Much like current state funding to institutions, the subsidy lowers the price for every student regardless of need. To be sure, this is not necessarily a bad thing; however, if the goal is to target funding to low-income students, then this limitation should be acknowledged.

Proposal 7: Provide Additional Incentives for Enrolling Low-Income, First-Generation, and Underrepresented Students

A central duty of public colleges and universities is to serve and educate a 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 since these students often "full-pay" or need only small amounts of institutional aid to incentivize their enrollment. This is undoubtedly related to the economic pressures facing higher education and the need to generate revenues. However, this focus places low-income students at a disadvantage both in terms of their competiveness for admission and as related to their ability to pay. Furthermore, environmental factors play a central role in both signaling to these students that they belong and helping them reach graduation (Serna, 2015b). This means that not only must policy seek to remove or lower barriers to access but should also seek to make campus environments more receptive and supportive of students from low-income, first-generation, and underrepresented backgrounds.

To accomplish this would require taking a page from the playbook of Alexander (2011), who suggests providing funding for increased support services and general revenues if institutions raise the number of Pell grant eligible students that enroll, persist, and graduate. Again, because public institutions' missions are related to serving a state's populace, this has particular salience for them. Under this alternative, institutions would receive a sort of performance funding, or reward, that was directly related to enrolling Pell eligible students, who incidentally are normally 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. And, in an implicit way, the support services could help make college campuses feel more inviting for students who are often viewed, and may view themselves, as outsiders (Serna, 2015b). This would obviously mean an increased investment by the federal government and should entail buy-in and participation from state governments. Hence, this would require either an increase in funding or reallocation of existing funds. A possible and quite workable solution to this concern would simply be to substantially increase Pell grants along the lines mentioned in Proposal 1 and coupling it with the extra incentives laid out in this recommendation.

Final Comments on Federal Funding

For the U.S. to remain competitive in the world market, it will require that 60% of the new entrants into the workforce by 2025 have a college degree or certificate of postsecondary training. Currently the number is only about 40%. Due to demographic changes, it is also true that a large percentage of this 20% gap are low-income individuals and minorities, who tend to be first-generation as well and who in decades earlier did not receive the education. While it is true that the entire higher education system can become much more efficient, as indicated in the previous sections of this article, the system will still need substantially more funding to reach the 60% goal. One place those funds could be obtained is from the federal government. In the current political environment, however, it is difficult to decipher the effects of the Trump Administration's proposed policies and budgets (Harris, 2017a, b). The impacts that result from the elimination of the Public-Service-Loan-Forgiveness Program, cuts to subsidized loans, and federal work-study, could, based on the evidence presented here, certainly impact the ability of underrepresented groups to access higher education.

Limitations

This review has sought to examine and provide fruitful alternatives for the higher education finance system in the U.S. with special focus on federal aid policy for low-income, first-generation, and underrepresented groups by looking at recent trends, current issues, and new alternatives. As a result, it has focused primarily on those aspects of the system that are related to low-income, first-generation, underrepresented students, and college access, retention and persistence, and completion with regard to finance. Additionally, all of the alternatives are often treated here as discrete policy options, when in fact, they might produce better results in tandem with other recommendations made here or within current structures. Overall, what this means for the larger discussion in higher education policy in the 21st Century is that economic and finance policies at the state and federal levels must help support other policy domains. In this sense, this review sets the

groundwork for enhanced discussion around the ways in which finance policies can help to support each of these complementary areas. It also begins to set the stage for work on developing a cost-model that increases efficiency, effectiveness, and productivity over the long run so as to lower barriers to access for low-income, first-generation, underrepresented students while helping them reach the finish line.

Summary and Conclusions

Ultimately, this article has provided several possible policy alternatives to the current system for low-income, first-generation, and underrepresented students wishing to enter the public higher education system. Interestingly, though this review has sought to lay the groundwork for continued discussion on increasing access for underserved students, the reality is that research literature has clearly shown what matters and what works. That is, the federal role in financing 21st Century higher education is unlikely to diminish. Rather, it is more likely to grow as additional students attend college, and the realities of shifting demographics become apparent. In a similar fashion, it is unlikely that the adoption of only a single policy option presented above will help the country reach its goal. A major proviso for the adoption of any one or group of these policies is that careful attention must be paid to the context facing low-income, first-generation, and underrepresented students. Moreover, a detailed consideration and incorporation of the mission, values, and histories of the institutions is needed as such characteristics play a central role in the policy process as well as the incentives and funding that accompany any such decisions. Finally, research has shown us what works, an important question, however, is whether policy and politics can be made to align with what is known about lowering barriers for this important population of students, and those who often feel like outsiders to the college-going and choice process.

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