

Policy Issue Brief

Optimizing State Financial Aid for Student Success



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Introduction

Financial aid was designed to equalize the opportunity to enroll in higher education for students graduating from high school. While the first aid programs provided resources primarily to institutions for this purpose, federal support turned to supporting students directly in 1935 with the creation of supported jobs for college students (Mundel, 2014). The federal government continues to provide the largest source of financial aid to students in the form of federal grants (the largest of which is the Pell Grant) and federal loans. The second largest source of financial aid is institutional grants, followed by state grants and private and employer grants (Scott-Clayton, 2017). Despite these various sources of aid, student demand exceeds the resources available. As a result, policymakers are seeking various strategies to increase the effectiveness of financial aid as continually increasing the amount of aid available is not sustainable.

This policy brief focuses on state grant aid and provides a review of what is known about leveraging aid to promote student success and an overview of the features that research suggests matter in the design and implementation of financial aid programs. Characteristics of state grant aid programs are then provided along with several state case studies to illustrate various ways states have tried to increase the effectiveness of their aid policy. The brief then concludes with specific recommendations for North Carolina. An annotated bibliography of selected research is provided in Appendix A.

Leveraging Aid to Promote Student Success

College matriculation has increased dramatically since the enactment of the Higher Education Act of 1965, which first extended financial aid to students to pursue a postsecondary education. The number of students matriculating has increased every decade since statistics have been tracked (NCES, 2017). For example, college enrollment increased by 40 percent between 1995 and 2015 alone.¹ However, completion outcomes continue to be correlated with socioeconomic status (SES) independent of college preparation: among students in the highest math achievement quartile while in high school, only 42 percent in the low SES category obtained a bachelor's degree or higher 11 years later as compared with close to 79 percent of similar students in the high SES category.²

A. Research on financial aid: Access versus success

Studying the impact of financial aid on college access or college completion is difficult because there are numerous reasons why students apply for aid or perform at a certain level in college. In order to understand the unique impact of financial aid, a study needs to rule out all other explanations. For example, students who apply for merit scholarships are likely to matriculate and succeed in college based on their academic strengths as well as other factors, so one cannot attribute these outcomes to the scholarship alone.

As a result, most research on the effect of financial aid is correlational, providing indications of the direction and strength of the relationship between financial aid and college outcomes, but not a causal

¹ An increase from 14.3 million students to almost 20 million students. Authors' calculations based on NCES (2017), Table 303.10.

² NCES (2017), Table 104.91. Socioeconomic status is based on parental income during the sophomore year of high school. College attainment is assessed as of 11 years after the sophomore year of high school.

interpretation. Researchers attempt to account for many factors that may be related to college going or college success as a way to isolate the relationship between financial aid and outcomes. However, these approaches are often only a partial solution, as some factors may be difficult or impossible to measure, such as motivation and resilience.³

The earliest correlational studies of college access find an additional \$1,000 reduction in costs is associated with a 3 to 5 percentage point increase in college attendance (Leslie and Brinkman, 1988). Using more rigorous methods, a number of later studies found that an additional \$1,000 cost reduction may increase college enrollment between 3 to 6 percentage points.⁴ Studies also show that financial aid affects school choice, or where to matriculate; a recent experimental evaluation of the Buffett Scholarship program in Nebraska found that the additional aid induced students to enroll in four-year universities instead of two-year colleges (Angrist et al, 2015). However, studies of higher education tax benefits have not found that this form of financial assistance affects college enrollment or enrollment intensity (Hoxby and Bulman, 2016; Bulman and Hoxby, 2015).

In recent years, research has turned to the question of how financial aid affects academic success (such as credit accumulation) and degree attainment. The closest study to evaluating the effect of need-based aid on college completion is the evaluation of the Wisconsin Scholars Grant (WSG). This grant provided an additional \$3,500 (renewable up to five years, for a total of \$17,500 per student) to Pell Grant recipients enrolled full time with unmet need (excluding loans). Given that the grant was randomized among the eligible population that was already enrolled in college, the evaluation was able to assess the causal effect of additional aid on persistence and completion. The evaluation found that the WSG increased retention rates by 1-3 percentage points per term and increased on-time graduation by 4.7 percentage points (Goldrick-Rab et al, 2016).

B. Features of financial aid that matter

The rising cost of attending college combined with higher enrollment has increased the demand for financial assistance beyond the level of resources available. Federal aid programs have almost tripled in size between 1995 and 2015 and state aid slightly more than doubled.⁵ However, these amounts are not sufficient to meet demand as many eligible students are unable to obtain needed financial assistance (Sarubbi and Pingel, 2018). While more financial aid dollars would help, increasing aid alone is an inadequate policy response, as budgets are limited and the number of students attending college is projected to further increase.⁶ As a result, a number of policy experts and researchers have called for

³ While there are survey instruments that attempt to assess these concepts and others, they are proxies at best for internal psychological states. The only way to assure balance on all factors (measured and unmeasured, as well as internal psychological states) is to randomly assign students to receive aid or not, thereby distributing all factors evenly between the randomized groups. Experimental studies, or randomized controlled trials (RCTs), are the gold-standard methodology in program evaluation because a well-designed experiment definitively rules out alternative explanations for findings, allowing findings to be interpreted causally. However, random assignment is difficult to implement and not possible in certain situations.

⁴ See Dynarski and Scott-Clayton (2013) for a list of studies and Deming and Dynarski (2010) for a detailed review.

⁵ Federal aid programs increased from \$52.6 billion in 1995 to \$156 billion by 2015. State aid increased from about \$4.5 billion to \$10.5 billion over this period. Amounts are presented in 2015 dollars. Authors' calculations based on data from Table 2 of *Trends in Student Aid* by The College Board.

⁶ See NCES (2017), Table 303.10.

alternative solutions such as addressing the way higher education is administered to decrease costs (Selingo, 2013), implementing incentives for institutions through performance funding to make institutions more efficient (Martin, 2013; Synder, 2015), and making the first two years of college free to fundamentally alter the cost structure of higher education.

Other experts have called for more incremental changes, such as improving current financial aid policies to focus on those students with the greatest financial need and redesigning financial aid policies to encourage academic success beyond matriculation. Research suggests several design considerations for financial aid that may improve its effectiveness, including changes to eligibility, simplification of the application process, transparency of future aid for planning, messaging to students informed by behavioral science, and strategic use of incentives.⁷

Eligibility. Eligibility rules largely reflect the needs of students age 18-22 who are dependent on their parents for financial support. While students are graduating from high school and attending college directly in ever-higher proportions (Richburg-Hayes, 2018), matriculation does not guarantee college completion. For nontraditional students such as older working adults who are pursuing their undergraduate degrees, financial aid eligibility provisions do not fully meet their needs.⁸ For example, post-high school eligibility time limits, enrollment intensity requirements, and reduced focus on financial need all contribute to barriers to matriculation and completion for nontraditional students (Taliaferro and Duke-Benfield, 2016; Akers, 2013). However, such students are estimated to represent about 55 percent of all undergraduates in 2011, and this proportion is likely to increase given the economic pressures to increase skill acquisition among older workers.⁹ Altering eligibility policies to recognize that the average college student has changed would permit a broader number of students to be eligible for assistance.

Such an increase in eligibility could be paired with greater focus on serving those students with the greatest needs. There is a growing concern about the spread of aid programs to families higher in the income distribution, as aid awarded to students in such families has less chance of altering behavior or improving college completion rates given that these students are likely to attend and complete without the additional aid (Brookings, 2012). Research suggests that lower-income students are most sensitive to the price of college (Heller (1997) as cited in Brookings (2012)) and therefore efficiency would likely improve from limiting aid to low-income students.

Simplicity. A significant amount of research and policy recommendations focus on the need to simplify the financial aid system, which is regarded as onerous and overly complicated (Brookings, 2012); Dynarski and Scott-Clayton (2007, 2013)). A randomized control trial (RCT) demonstrating the impact of simplifying completion of the Free Application for Federal Student Aid (FAFSA) on matriculation (Bettinger et al, 2012) was a contributor in moving the U.S. Department of Education to partner with the

⁷ Note that the research that follows varies in rigor, with most studies being descriptive or correlational. For ease of exposition, we do not detail the methodology used in studies unless the research findings are derived from a RCT.

⁸ Nontraditional students are defined as those over the age of 24. This definition is often used as a proxy for the behaviors associated with different patterns of postsecondary attendance (including delayed enrollment or part-time attendance), familial responsibilities, financial independence, and work constraints (Horn, 1996).

⁹ This percentage is based on a student having more than three of the nontraditional student characteristics listed in footnote 8. Using the definition of “moderately nontraditional” by Horn (1996), in which a student has two or three characteristics, the proportion decreases to 31.3 percent of nontraditional undergraduate students in 2011. See Table 1 of Radford et al (2015).

Internal Revenue Service (IRS) to facilitate automatic completion of FAFSA questions using information from IRS tax records for the prior year (and the year prior). While the elimination of questions and automatic importation of tax information are significant changes in the right direction, researchers suggest that more work needs to be done to simplify the process, such as providing students with advance notice of their financial aid eligibility (discussed further in the section on transparency) and eliminating other barriers such as conflicting application deadlines. Application deadlines and award disbursement timing can affect diversity, year-to-year persistence, and graduation rates through differential application rates. For example, low-income students and nontraditional students may not be aware of early and firm state deadlines for application—typically March 1st for many states—and therefore such students are more likely to apply after all aid has been disbursed (Pingel, Sponsler, and Holly, 2018).

Simplification can also involve making eligibility requirements clear. For example, the Georgia HOPE (Helping Outstanding Pupils Educationally) Scholarship is available to all students graduating from a high school in the state with a high school GPA of at least 3.0.¹⁰ The eligibility criteria are unequivocal and tax information is not needed. Parents can use this information for planning (including providing their children with additional support to meet the GPA benchmark) and students know what is required years in advance of applying to college. However, a tension exists between this type of simplicity and targeting as this type of program serves a large number of students, including those without the greatest levels of financial need. Targeting limited financial aid to those who can benefit the most requires more information on familial resources, which in turn increases complexity (Dynarski and Scott-Clayton, 2008).¹¹

Transparency. The current financial aid system makes it difficult for families to plan for the cost of higher education as estimated aid amounts are unavailable until shortly before they are actually needed (Brookings, 2012). Evidence from several “large, predictable, and easy to understand grant programs,” such as the Social Security, GI Bill, and Georgia HOPE programs, suggests that transparency increases college enrollment (Mundel, 2008; Barr, 2017). In addition to simplifying eligibility requirements, several ideas have been presented to increase transparency, such as reporting estimated Pell Grant and tax credits for undergraduates on a postcard based on information obtained from the IRS (Dynarski and Scott-Clayton, 2007). This strategy would allow families to anticipate the amount of aid that they would receive years prior to the college-going decision so that they can develop strategies for this milestone event. Another idea is the construction of estimated grant tables based on income ranges to provide a straightforward calculator for parents (Brookings, 2012). Such tables can be produced for both the Pell Grant (College Board, 2008) as well as state grants and could support the success of students throughout their entire educational career by permitting advance planning. The early information could also increase awareness and help close the disparities between vulnerable or underserved populations and their peers through revealing the levels of support that such students can anticipate in the future (Brookings, 2012; Akers, 2013).

Messaging. Messaging is a central feature to all financial aid programs, although some of the evidence of this is indirect. For example, framing a lottery as a “scholarship” in one set of studies resulted in

¹⁰ Georgia HOPE is provided as an illustration of the general idea. Other programs, such as Indiana’s 21st Century Scholars Program and Oklahoma’s Promise, are additional examples.

¹¹ Some research suggests that this concern may be state-specific and a greater issue in states with high income inequality. As the difference in income decreases between the families in the top 20 percent of the income distribution and those in the bottom 20 percent of the income distribution, targeting may be less of a concern (Scott-Clayton, 2017).

students regarding themselves as “scholars,” despite the fact that the merit requirements were no higher than expected of any enrolled college student and selection to the program was determined independent of academic achievement (Richburg-Hayes, 2014; Patel and Richburg-Hayes, 2012). Another study found matriculation effects from Indiana’s 21st Century Scholars program for students who participated in middle school and high school, but failed to meet the criteria to earn the financial aid support (Toutkoushian et al, 2015). Higher enrollment for these participants relative to nonparticipants is suggestive that messaging may have played a role in altering their behavior.

There are a number of direct studies of the importance of messaging and many have focused on completion of the FAFSA. One study reports that about 15-20 percent of students who are in good academic standing and received a Pell Grant their freshman year do not re-file their FAFSA, and application completion rates are lower for students enrolled in community colleges (Bird and Castleman, 2014 as cited in Castleman and Page, 2016).¹² As the FAFSA serves as the primary gateway for higher education access among low- and middle-income students, interventions that target these students through assistance programs, mailers with financial aid information, or reminder systems have been found to generally be successful and cost-effective (ideas42, 2018). For example, in order to increase retention rates and degree attainment, a Boston nonprofit initiated an intervention that reminded community- and four-year college students about financial aid resources and deadlines via a set of 12 text messages. Based on the results from an RCT, community college students who received the reminders were found to be 12 percentage points more likely to return their sophomore year. The study found no overall effect for students in four-year colleges, likely because the persistence rate among such students was already very high (Castleman and Page, 2016). These types of interventions have the potential to diversify the student body on college campuses and reduce inequality in degree attainment.

Loans. While most of the above grant considerations also apply to loans, the requirement to pay back money later creates additional considerations. For example, the concern about under- or overborrowing and repayment plans that exist with loans do not pertain to grants.

The consensus among policymakers and researchers is that borrowing terms should be made more transparent, with students understanding the terms of the loan clearly and receiving updates on the amounts that they owe periodically. For example, one program sent tailored messages to students containing their cumulative amount borrowed to date, projected payments, and a comparison of the amount already borrowed to the average amount borrowed by their fellow University of Missouri students. An RCT found that the likelihood of meeting with a financial aid officer increased two percentage points and the likelihood of borrowing declined three to four percentage points for students with either a low GPA or a high debt load (Darolia, 2016). Thus, the updating of outstanding balances could help prevent overborrowing and a lack of awareness of loan balances and the corresponding monthly payments (ideas42, 2018). Messaging of repayment options can also matter. For example, when Valencia College students were presented with a table, instead of a lengthy text description, that showed the four repayment options with their monthly payment, length of repayment, and amount of interest, along with wording changes, the percentage of students who chose the standard plan decreased by 28 percentage points (ideas42, 2016). Researchers also advocate for programs that help students choose the correct repayment plan initially but then continue to remind students throughout

¹² This estimate is derived from an analysis of the Beginning Postsecondary Students Longitudinal Study (BPS:04/09), which is a survey of a nationally representative sample of first-time students enrolled in postsecondary education institutions of all types during the 2003-2004 academic year.

the repayment process that other plans are available. Note that while the above solutions have large potential effects on students, many of them do not come with a large price tag (ideas42, 2018).

Incentives. Incentive theory posits that there is a need to align desires between actors when involved in a transaction for which the parties do not have access to the same information (Laffont and Martimort, 2001). This is the situation that exists in financial aid: the federal government and states provide aid on the condition that students perform the task of obtaining education and skills, but the aid agencies cannot perfectly monitor whether the required level of effort went into the task. A correct incentive scheme can address this issue, as it may be possible to change student behavior without costly monitoring, benefitting both students and aid administrators.

Most need-based grant programs have embedded financial incentives such as the requirement to maintain satisfactory academic progress (SAP) in order to maintain the grant. However, these incentives are often quite weak because of the low benchmark (at many schools SAP amounts to maintaining a GPA of 2.0 after two semesters), various credit levels that will trigger SAP, and the lack of information about the requirement until a student is in violation. These factors result in the incentive not being known to the student in advance, and therefore unlikely to affect behavior (Richburg-Hayes, 2014). In contrast, well-designed financial incentives based on meeting clear academic performance benchmarks (such as a GPA of 2.0 over a minimum of six credits per semester with periodic monitoring checks) have been shown through RCTs to increase persistence and academic performance among community college students (Barrow et al, 2014; Richburg-Hayes et al, 2015; Richburg-Hayes, 2014), though a similar RCT among students attending a four-year college shows mixed results (Angrist, Lang, and Oreopoulos, 2009). In West Virginia, students registered for only 12 credits per semester (24 credits per year) prior to the implementation of the PROMISE scholarship, which required students to maintain a minimum GPA and complete 30 credits per year while in college in exchange for free tuition and fees for up to four years (Scott-Clayton, 2015). Implementation findings from other clearly designed incentive structures (such as those in Georgia HOPE and Indiana’s 21st Century Scholars Program) suggest that students respond to incentives embedded in program rules (Condon, Prince, and Stuckart, 2011; Toutkoushian et al, 2015).

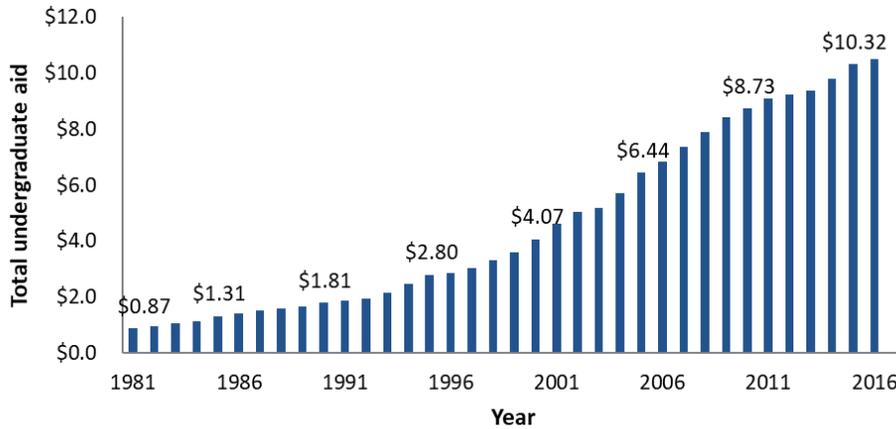
In general, research suggests that for the incentives underlying financial aid programs to be effective: 1) students must be aware of the incentive benchmarks; 2) the requirements must be within reach; and 3) the award must be provided close in time to the performance (Richburg-Hayes, 2014). For the most part, merit programs meet the first and third conditions and largely fail in the second. The Pell Grant, which has mixed findings on effectiveness (Page and Scott-Clayton, 2016), meets the second condition, but fails in making the incentive structure clear and connecting the award to performance.

Overview of State Financial Aid

While state financial aid levels are substantially lower than federal support to students and have not kept pace with the rise in college costs (Scott-Clayton, 2017), state aid levels have substantially increased over time. Figure 1 shows that between 1981 and 1989, state grant aid increased from \$871 million to \$1.67 billion dollars—almost doubling by the end of the decade. State financial aid continued

to follow a pattern of average yearly increases of about 8 percent, resulting in a doubling of resources by the end of each decade.¹³

Figure 1. Undergraduate state grant aid (in billions): 1981-2016

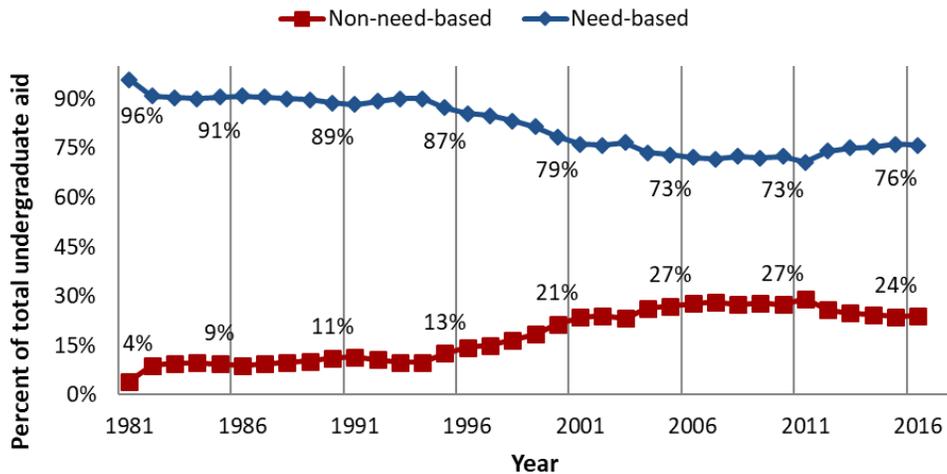


Source: National Association of State Student Grant & Aid Programs (NASSGAP) Annual Survey, Grant Aid by State 1974-2016, in nominal dollars.

These increases reflect both additions of need-based aid as well as non-need based aid. Funding not purely based on need increased more quickly after 1996 as shown in Figure 2. The increase in non-need-based aid likely reflects the movement by states to implement large merit-based programs through lottery-funded scholarship programs (such as in Arkansas, Florida, Georgia, Kentucky, New Mexico, South Carolina, Tennessee, and West Virginia) (Lebioda, 2014). These programs were likely driven by the success of Georgia HOPE, the first merit-aid program of this type, but also by the political support for a new revenue stream to fund postsecondary education that would not result in additional taxation. However, some research suggests that these programs may not be as promising as they initially appear as lottery-funded programs are expensive to operate (Covert, 2014) and the amounts are unstable over time (Land and Alsikafi, 1999).

¹³ Between 1990 and 1999, state grant aid for undergraduates increased from \$1.8 billion to \$3.6 billion and between 2000 and 2010, it increased from about \$4.1 billion to \$8.4 billion. Authors' calculations based on NASSGAP historical tables of state grant aid from 1974 to 2016.

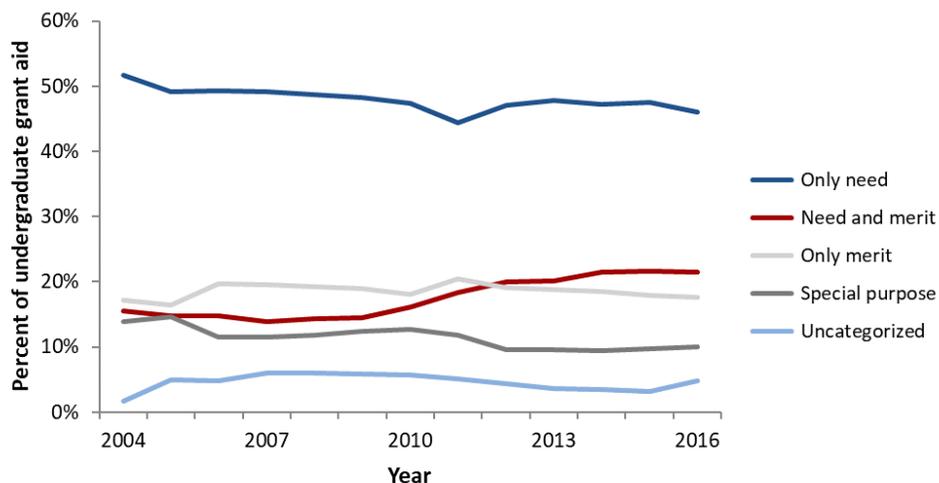
Figure 2. Distribution of undergraduate state grant aid, by need: 1981-2016



Source: Authors' calculations using the National Association of State Student Grant & Aid Programs (NASSGAP) Annual Survey, Grant Aid by State 1974-2016.

Figure 3 provides a more detailed snapshot of the types of state grant aid provided between 2004 and 2016. The figure shows the decline in need-based aid illustrated in Figure 2, but it also shows that aid focused on a combination of need and merit increased, along with a growing proportion of merit aid programs, during this time period. This movement likely contributes to inequality in both access and college success as research shows that merit aid programs disproportionately serve wealthier white families, whose children would go to college independent of the merit aid (Ness & Tucker, 2008).

Figure 3. Undergraduate state aid expenditures, by need, merit, or special purpose of award: 2004-2016



Source: Authors' tabulations using NASSGAP Expenditures for Undergraduate Student Aid Programs by Need, Merit, or Special Purpose for Award, by State. Table 8 History, 2004-2016.

In 2016, the latest year available, 46 percent of undergraduate state aid was based on need only, 22 percent based on a combination of need and merit, and 18 percent based on merit alone. Over the

period 2004 to 2015, the distribution of aid was 48 percent, 17 percent, and 19 percent, for need only, need and merit, and merit only, respectively.

What underlies these trends? State financial aid programs vary greatly in funding awarded (from virtually nothing in New Hampshire and Wyoming to a maximum of \$1.9 billion dollars in California), program design features, and requirements. State aid programs have few commonalities beyond the majority using data collected from FAFSA to determine aid eligibility and disbursing aid directly to the higher education institutions on behalf of the student on a first-come, first-served basis (Sarubbi and Pingel 2018). Further, aid programs are designed to meet a number of different goals, though these goals are often not clearly defined (Pingel, Sponsler, and Holly, 2018) and many states have multiple small grant programs that overlap in purpose and targeting, adding to the complexity of the landscape (Brookings, 2012).

To analyze the variation in state aid programs, the Education Commission of the States (ECS) constructed a 50-state database of the 100 largest state financial aid programs (two per state). These programs collectively expend \$8.6 billion in financial aid (or about 87.5 percent of all state grant aid across the 50 states), with the remaining 265 programs providing 12.5 percent in aid (Pingel, 2016). Of the 100 largest state aid programs in the ECS database (Pingel, Sponsler, and Holly, 2018):

- ▶ nearly half (48) are merit-based;
- ▶ nearly half (43) are constrained to a pre-determined set number of years or terms (e.g., four years);
- ▶ one third (33) determine eligibility from SAT/ACT scores or high school GPA;
- ▶ nearly one third (30) require students be enrolled full time;
- ▶ just over one quarter (26) are linked to high school graduation dates; and
- ▶ nearly one fifth (19) exclude two-year institutions.

The above characteristics suggest that these state financial aid programs prioritize the traditional 18-year old student matriculating to a four-year institution directly from high school—a group that represents less than 45 percent of college enrollees.¹⁴

Lessons from State Efforts

Given the variability in state financial aid programs and the limited information that can be gleaned from examining averages across a diverse set of 100 programs, we provide more detailed snapshots of policies in a selected number of states. The snapshots are provided for a subset of the states listed in Table 1, which were selected for their moderate levels of state aid expenditures in 2015-2016.

¹⁴ Ibid, footnote 9.

Table 1. Characteristics of selected state undergraduate grant aid programs: 2015-2016

State	Total state aid (in millions)	State rank for need-based UG grant dollars/UG FTE	Full-time, part-time, or both	Aid Type Distribution			Other	Directed to students or institutions	Control of money
				Need only	Merit only	Need & merit			
Georgia	\$688.3	50	Both	0%	76%	0%	24%	Students	SAL
Virginia	\$455.8	8	Both	53%	0%	15%	32%	Institution	SAL
Florida	\$413.5	32	Both	29%	44%	0%	27%	Students	SAL
New Jersey	\$410.4	1	Both	64%	1%	0%	35%	Students	SA
Tennessee	\$395.3	18	Both	16%	62%	7%	15%	Students	SAL
North Carolina	\$318.4	9	Both	93%	0%	0%	7%	Students	SA
Indiana	\$296.9	5	Both	89%	0%	0%	11%	Students	SAL
Kentucky	\$218.5	12	Both	32%	50%	0%	18%	Students	SAL
Ohio	\$130.9	33	Both	71%	0%	0%	29%	Students	SAL
Wisconsin	\$125.7	16	Both	98%	2%	0%	0%	Students	SAL
Michigan	\$104.4	29	Both	74%	<0.1%	25%	1%	Students	SAL
West Virginia	\$100.1	17	FT	0%	34%	28%	38%	Students	SAL
Oregon	\$64.7	20	Both	99%	0%	0%	1%	Students	SAL
Total 13 states	\$3,723.0	--	--	55%	22%	6%	18%	--	--
Total	\$10,738.3	--	--	46%	18%	22%	15%	--	--

Source: NASSGAP 47th Annual Survey Report on State-Sponsored Student Financial Aid, Table 1, Table 8, and Table 12 for 2015-2016. Enrollment coverage, directed aid, and control of money from Education Commission of the States 50-State Policy Database.

Notes: Other aid includes special programs and uncategorized programs. Directed to students or institutions refers to where the awards are made. Control of money refers to the level and type of legislative authority over the state financial aid program. SA = state agency and SAL = state agency and legislature.

Collectively, the 13 states provided more than \$3.7 billion in grant aid in 2016, or about 35 percent of the total of \$10.7 billion in grant aid provided across all 50 states. The states differ dramatically in their generosity relative to their full-time equivalent (FTE) enrollment (not shown in Table 1), as indicated by their relative state ranking for need-based undergraduate aid per FTE. New Jersey is the top-ranked state, providing \$1,345 in need-based aid per undergraduate FTE, while Georgia ranks last given that the state does not provide a need-only grant.¹⁵ Most of the states provide aid to both full-time and part-time students, with the exception of West Virginia, which does not provide a grant to part-time students. The next three columns in Table 1 provide the distribution of undergraduate student aid by type, showing quite a bit of variation across the states. States such as North Carolina, Indiana, Oregon, and Wisconsin provide the majority of state financial aid to undergraduates based only on need. In contrast, Georgia and Tennessee provide the majority of their aid through merit only. No state provides the majority of aid using a combination of merit and need; this option is usually a supplement.

¹⁵ North Carolina is ranked 9th with \$818.50 per student in need-based aid. NASSGAP 47th Annual Survey, Table 12.

A. Georgia

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
49%	44%	59%	#1 Georgia HOPE Scholarship	54%	N	Lottery
			#2 Zell Miller Scholarship	22%	N	Lottery

Notes: In this table and the tables that follow, Pell Grant eligibility by sector and the top two grant programs are from the Education Commission of the States state profiles (Parker, Sarubbi, and Pingel, 2018) accessed from <https://www.ecs.org/how-students-use-federal-state-and-institutional-aid-to-pay-for-college-a-primer-for-state-policymakers/>. Data on the percent of aid are derived from NASSGAP State Data Quick Check, accessed from https://www.nassgapsurvey.com/survey/state_data_check.asp. Data on whether the program is need-based and how it is funded are obtained from NASSGAP Program Quick Finder, accessed from https://www.nassgapsurvey.com/survey/program_finder/program_finder.asp. “Gen” refers to General Fund appropriation.

Program description. In 1993, Georgia introduced the HOPE scholarship, which uses the state lottery to provide large merit-based grants to Georgia’s public institutions for students with at least a high school 3.0 GPA. For students to receive full tuition, they must maintain a 3.7 GPA and score at least a 1200 on the SAT or a 26 on the ACT (Condon, Prince, and Stuckart 2011). The HOPE Scholarship, distributed to 95,874 students in the 2015-2016 academic year, is Georgia’s largest financial aid program. This scholarship was created with the aim of increasing the number of students who remain in-state for higher education and incentivizing high school students to increase their GPAs and standardized test scores (Condon, Prince, and Stuckart, 2011).

Aid expended. As a merit-based, HOPE has been criticized for diverting funds towards middle- and high-income students. For example, during the 2007-2008 academic year, more than two-thirds of high-income students received a state-based grant, averaging \$2,900. In comparison, only 54 percent of low-income students received a state-based grant, averaging \$1,800 (Brookings, 2012).

Findings. As a result of this program, Georgia has significantly increased college attendance and completion for all students, most significantly for women of color (Dynarski and Scott-Clayton 2008). The merit-based nature of this program has also led to an improvement of GPAs and SAT/ACT scores of high school students (Condon, Prince, and Stuckart, 2011). Since the addition of a minimum SAT/ACT score, the average SAT score of black students has increased by over 20 points (Condon, Prince, and Stuckart, 2011).

Unintended consequences. Analyses of those paying for lottery tickets and those benefiting from HOPE scholarships show that households that are non-white and lower-income tend to spend a larger percentage of their income on lottery tickets than that of higher-income white households. At the same time, non-white, lower-income households receive fewer and less generous HOPE scholarships (Ness & Tucker, 2008). The Georgia Lottery has also proved to be a problematic funding source as lottery revenues have remained stagnant over the years (Condon, Prince, and Stuckart, 2011). In order to save money, Georgia has reduced the generosity of their original funding and added more stringent eligibility requirements, disproportionately affecting lower-income households (Brookings, 2012).

The addition of more stringent requirements has had many ramifications. With increased eligibility requirements, researchers have found evidence of grade manipulation in high schools to increase the number of HOPE-eligible students (Condon, Prince, and Stuckart, 2011). In communities that are predominantly poor and black, this technique to inflate grades is used to return scholarship money to

the communities from which it came (Condon, Prince, and Stuckart 2011). In addition, two-thirds of Georgia’s merit-based aid recipients lose their scholarships after being unable to maintain the minimum GPA required freshman year (Brookings, 2012). Researchers have found that to avoid losing their scholarships, many students opt for “easy” majors. For example, STEM majors were significantly more likely than their peers to lose their HOPE funding. Of the original freshman HOPE recipients, only 13 percent maintained their scholarship all four years (Condon, Prince, and Stuckart, 2011).

Lessons for student success. Georgia’s HOPE program demonstrates the importance of transparency and simplicity. Both the eligibility for the program and the requirements to maintain the scholarship are very clear, which likely contributes to the positive impact on students’ academic record in high school and decision to matriculate. The program also demonstrates how barriers to applying can be removed, as one critical difference between federal financial aid and this state-based program is the length of the application; while the FAFSA includes 108 questions, the half-page HOPE application contains only a few general questions (Dynarski and Scott-Clayton, 2008). Finally, the program offers a cautionary tale: research findings suggest that post-enrollment GPA requirements may have unintended consequences that result in students moving away from STEM fields, a pattern that is not well aligned with state workforce goals.

B. Indiana

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
34%	27%	49%	#1 Frank O’Bannon Grant	42%	Y	Gen
			#2 21st Century Scholars Program	47%	Y	Gen

Program description. The Frank O’Bannon grant is a need-based grant for students pursuing an associate degree or their first bachelor’s degree. The grant requires full-time enrollment and the program serves the largest number of low-income students in Indiana (about 46,000 recipients in 2015-2016). Indiana’s 21st Century Scholars Program, the second largest in the state, is an “early commitment” program for middle school students who are eligible for free and reduced price lunch. To receive the grant, students must graduate from an Indiana high school with more than a general diploma, maintain a GPA of 2.5, and adhere to a pledge to avoid drugs and crime.

Aid expended. The Frank O’Bannon grant is based on a student’s estimated family contribution (EFC) and the type of institution attended. The maximum grant for the 2018-2019 is \$9,000 and the average grant in 2015-2016 was \$3,336. Students are eligible for more than \$2,900 in additional aid through student performance incentives geared to increase the speed of credit accumulation and academic performance.¹⁶ Recent changes permit aid use during the summer. The 21st Century Scholars program is

¹⁶ Students can earn an additional \$800 in the first year if they graduate with an Academic or Technical Honors diploma. They can earn \$800 if they earn at least a 3.0 cumulative GPA the prior year in college or they earn an associate degree before enrolling in a baccalaureate program. If they accelerate their schedule to complete at least 39 credit hours during the year, they can earn an additional \$1,300; if they complete 30 credits in the current award year and attempt at least 6 more credits, they can obtain up to 50 percent more aid for the current award year.

a last-dollar grant that provides tuition and fees coverage for up to four years at any postsecondary institution in the state (including private and for-profit institutions).

Findings. Longitudinal studies of the 21st Century program show that it has significantly increased college preparation, access to higher education, and college persistence for low-income students who meet all of the program requirements (St. John et al, 2002; St. John et al, 2004). Later analyses show that matriculation for those who are eligible in middle school (including those that later failed to meet all of the program requirements) is about 2.4 percent higher than that for non-participants (Toutkoushian et al, 2015). That is, while college going effects are higher for those receiving the scholarship (termed “Affirmed Scholars”), there are still college outcome effects from participating in the program through middle and high school without the benefit of actually receiving aid from the program in college.

Unintended consequences. There is evidence that disparities between high schools, specifically between schools with and without honors programs, affected the college preparation and college enrollment rates of their students (St. John et al, 2002). Further, roughly half of students eligible for the 21st Century Scholars program fail to fulfill the requirements of graduating from high school, applying to at least one college, and applying for financial aid (Toutkoushian et al, 2015).

Lessons for student success. Realizing that low-income students need support beyond tuition and that inequity also exists in preparation, the 21st Century Scholars program has been augmented to include systematic guidance on how to reach the minimum milestones to qualify for the grant. This guidance is explained in clear infographics about the three items that need to be completed in each high school grade along with the student being appointed to receive support from program centers based on their geographic location.¹⁷

The program, along with the supplemental components, effectively leverages several evidence-based behavioral science concepts shown to influence behavior, including commitment (Festinger, 1957) through the use of pledges, identity priming through the use of “scholar” terminology (Richburg-Hayes, 2014), and normative feedback of social norms (Allcott, 2011) through the use of student scorecards. The program is also notable for its one-time measure of income—at the point of middle school enrollment—and this income measure is assessed by another agency lowering barriers for students (Pingel, 2016).

C. Oregon

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
39%	34%	44%	#1 Oregon Opportunity Grant	99%	Y	Gen
			#2 Student Child Care Grant	1%	Y	Gen

¹⁷ See <https://scholars.in.gov/> for the infographic and <https://scholars.in.gov/resources/> for a repository of resources targeted to different stakeholder groups. As part of this system of support, students are provided with Scholar Scorecards that provide timely information about their readiness, performance, and completion relative to other low-income students and all Indiana students.

Program description. The Oregon Opportunity Grant is the state’s largest need-based aid program open to Oregon residents meeting EFC limits. The next largest-need based aid program is the Oregon Student Child Care Grant, which is limited to Oregon residents with a child in need of child care (either under the age of 12 or a child with special needs). Both programs are limited to students pursuing their associate degree or their first bachelor’s degree. The state’s most visible program may be the relatively new Oregon Promise Program (ORP). Developed in 2015 and implemented in 2016, ORP was at the forefront of the “free college movement” in providing tuition-free community college to qualified recent high school graduates.

Aid expended. The Oregon Opportunity Grant is provided to about 40,000 students each year. The maximum grant is \$2,600 at community colleges and \$3,200 for four-year universities. One of the unique aspects of Oregon’s financial aid programs is that all of the state aid is need-based. This changed with the Higher Education Coordinating Commission’s decision to remove the EFC limit for ORP for the 2018-2019 academic year, making tuition-free community college open to all students (although an EFC limit may be imposed in the future when state funding levels are insufficient).

Unintended consequences. While ORP was designed to serve students with relatively small amounts of financial need, preliminary analyses suggest that nearly two-thirds of state funding will flow to the top 40 percent of the most affluent students (Cannon and Joyalle, 2016). However, this prediction has not yet materialized as an analysis of the inaugural year of the program finds that less than one percent of applicants had an EFC of \$30,000 or higher (Cannon and Joyalle, 2016).

Lessons for student success. While other states have firm deadlines for financial aid applications and deny otherwise eligible students who miss the deadline, Oregon bases its Oregon Opportunity Grants on EFC regardless of application date (Pingel, Sponsler, and Holly, 2018). As a result, eligibility is truly based on need, rather than knowledge of arbitrary deadlines (Sarubbi and Pingel, 2018) and does not unintentionally disadvantage nontraditional students who are not on the same enrollment schedule (Taliaferro and Duke-Benfield, 2016). Oregon’s system is also flexible enough that they are able to move funds between programs year-to-year when demand requires it. For example, there may be an excess of funds earmarked for one program that goes unused while aid for another program is quickly disbursed (Pingel, Sponsler, and Holly, 2018).

D. Tennessee

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
43%	42%	44%	#1 Tennessee HOPE Scholarship	60%	N	Gen
			#2 Tennessee Student Assistance Award	16%	Y	Gen

Program description. Based on Georgia’s HOPE scholarship, Tennessee’s HOPE scholarship is the largest financial aid program in the state. Unlike Georgia HOPE, Tennessee HOPE broadens eligibility to include students who have a minimum GPA or SAT/ACT score (Georgia HOPE requires both conditions). Students still must remain full-time, maintain a 3.0 GPA in college, and must have graduated high school within the past 18 months. Tennessee also offers a nontraditional HOPE scholarship for students that are 25 years or older. The Tennessee Student Assistance Award is a need-based grant for students with an EFC

less than \$2,100 who enroll or are accepted for enrollment at a public or an eligible non-public postsecondary institution in Tennessee at least half time.

Tennessee Promise and Tennessee Reconnect are new state aid programs that began in the 2015-2016 academic year. Both programs are examples of the “free college” trend; if a student has remaining tuition costs after other aid has been applied, the Tennessee programs will cover the remaining balance. Tennessee Promise is targeted to students who graduate within one year from an eligible high school and provides tuition and mandatory fees as a last dollar grant. College students must attend full-time, continue to participate in the mentoring program, and perform 8 hours of community service prior to each term the award is received. Tennessee Reconnect specifically aims to promote the success of older, low-income nontraditional students who attempted but did not complete an associate degree by providing them with flexibility, requiring enrollment in only six credits and maintenance of a 2.0 GPA.

Aid expended. Students who meet the base requirements of Tennessee HOPE receive \$3,800; if students have a household income of less than \$36,000, they receive an additional \$1,500. However, unlike Georgia’s program, Tennessee HOPE awards larger scholarships to low-income students (Ness and Noland, 2007).

Findings. Tennessee HOPE was found to have a small positive effect on retention of continuing students (as reported by Gross, Bell, and Berry 2016). Unlike the Georgia HOPE scholarship for which the effects were greatest among black students, Tennessee’s HOPE increased the ACT scores of black students only marginally (Pallais, 2007). As Tennessee Promise began with the graduating class of 2015, and Tennessee Reconnect began the following year, longitudinal studies of graduation rates have not yet been feasible. However, Tennessee Promise is based on the Knox Achieves program, for which studies have been published. Knox Achieves, like Tennessee Promise, provided last-dollar support to community college students enrolling directly from high school (Page and Scott-Clayton, 2016). Evidence shows that the Knox Achieves program improved college enrollment rates; awardees were nearly 25 percent more likely to enroll in community college than their ineligible peers. The increase in enrollment rate was most significant for lower-income students with poorer academic performance.

Unintended consequences. Similar to patterns with Georgia HOPE, black students and low-income students are most likely to lose their scholarships in the second year (Gross, Bell, and Berry 2016).¹⁸ While it is too early to have findings on the impact of Tennessee Promise, the hard cut-off date of November 1st during the fall of a student’s senior year may create inequities in the pool of applicants. In addition, the coverage of only tuition and mandatory fees (to reserve funds established by lottery revenue) will likely place an unequal burden on poorer students for all other expenses (Leboida, 2014).

One large possible unintended consequence of Tennessee Promise is a shift from students enrolling in traditional four-year programs to students enrolling in community colleges. This shift was most apparent among higher-income students with higher academic performance in Knox Achieves and is therefore a concern for Tennessee Promise (Carruthers and Fox, 2015). Students who substitute attending a four-year institution for a community college with the intention of transferring later on have been shown to have lower graduation rates (Leboida, 2014). Another potential shift resulting from the program is an increase in enrollment at eligible colleges. While this could be deemed as a positive outcome, research

¹⁸ It is unclear from the research whether this loss is due to the post-enrollment requirements to remain full-time and maintain a 3.0 GPA or other considerations. Factors associated with academic success (such as academic preparation, academic momentum variables such as declaring a major, semester GPA and transferring to another institution) are often not accounted for in studies of merit aid programs (Gross, Bell, and Berry 2016).

suggests that private, ineligible institutions increased recruitment efforts and admittance of out-of-state students to keep their enrollment rates steady (Bell and Place, 2018). In line with previous research, this study found that enrollment rates of black students in ineligible institutions declined, potentially impacting the racial and ethnic diversity of those institutions (Bell and Place, 2018).

Lessons for student success. Tennessee Promise recognizes that students may need support and awardees are assigned a mentor during the fall of their senior year in high school. During mandatory meetings, the mentor helps students file their FAFSA and enroll in community or technical college. To keep their scholarships once enrolled, students continue these meetings and in addition, complete eight hours of community service each semester (Carruthers and Fox, 2015). Tennessee Reconnect illustrates the importance of considering nontraditional students in financial aid. However, the enactment of these recent programs creates a proliferation of programming that may be confusing for parents and students as there are more than 11 different grant programs available to students.¹⁹

E. Wisconsin

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
31%	27%	37%	#1 Wisconsin Grant (University of Wisconsin System)	44%	Y	Gen
			#2 Wisconsin Grant (Private Nonprofit)	21%	Y	Gen

Program description. Wisconsin’s state financial aid programs are predominantly based on need (97.7 percent of all state aid is disbursed on need as shown in Table 1). Wisconsin’s largest financial aid program, the Wisconsin Grant, provides need-based aid to students attending schools in the University of Wisconsin System, a Wisconsin technical college, or a Wisconsin tribal college. Wisconsin’s second largest financial aid program, the Wisconsin Grant – Private Non-Profit, provides need-based aid to students enrolled at least half time in non-profit colleges or universities that are not in the University of Wisconsin System.

Aid expended. Students receive a minimum of \$250 or a maximum of \$3,150 per semester under the Wisconsin Grant. Students must be enrolled at least half-time, and can receive the award for a maximum of ten semesters. The Wisconsin Grant – Private Non-Profit has a minimum of \$250, but the maximum award is set annually by the State of Wisconsin Higher Educational Aids Board.

Unintended consequences. To be eligible for Wisconsin’s grants, students must file the FAFSA. They are encouraged to do this as soon as possible, as funds are distributed on a rolling basis until all are depleted. Prior research suggests that funds that are disbursed in this manner have a greater chance of running out earlier and earlier each year (Cannon and Goldrick-Rab, 2016). In addition, such deadlines have the effect of benefitting those with institutional knowledge, thereby creating a disparity as the policy disadvantages students without this information, typically low-income students (Pingel, Sponsler, and Holly, 2018).

¹⁹ See the Tennessee focused student aid list at <https://collegefortn.org/open/finaid/scholarshipsGrants>.

F. West Virginia

Pell Grant Eligibility by Sector			Top Two Grant Programs	Percent of all aid	Need-based?	Funding source
All institutions	Public 4-year	Public 2-year				
39%	37%	44%	#1 PROMISE Scholarship	34%	N	Gen, Lottery
			#2 West Virginia Higher Education Grant	3%	Y	Gen, Fees

Program description. West Virginia’s Providing Real Opportunities to Maximize In-State Student Excellence (PROMISE) program, the largest financial aid program in the state, requires students to submit both the FAFSA and the PROMISE application by March 1st, be within two years of high school graduation, have at least a 3.0 high school GPA, a minimum SAT/ACT score, and not yet be enrolled in higher education. Once enrolled, the program requires students to complete 30 credits per year and maintain their 3.0 GPA (Brookings, 2012). This program was designed to reduce the cost of college for West Virginia students, incentivize academic achievement in both high school and college, and keep high-achieving West Virginia students from leaving the state for higher education (Ness and Noland, 2007; Scott-Clayton and Zaar, 2016). Like many of the 16 states with similar programs, West Virginia’s PROMISE program secures funding from the regulation and taxation of the state lottery, specifically video lottery games.

Findings. Research finds that PROMISE increases college GPA, credits earned, and four-year graduation rates (Brookings, 2012). The academic incentive was critical to the program; during students’ final year, when they received aid, but no longer had an incentive to maintain their GPA, the “program’s effect nearly disappeared” (Dynarski and Scott-Clayton, 2013).

Unintended consequences. In 2004, it became apparent that lottery funding would not be sufficient to cover the cost of PROMISE scholarships. In response, the PROMISE Board of Control put more stringent eligibility requirements in place. However, these new requirements disproportionately disqualified low-income students. After learning of these issues, the original eligibility requirements were restored.²⁰

Like many merit-based financial aid programs, a number of other unintended consequences have emerged since the enactment of West Virginia’s PROMISE scholarship, specifically surrounding the initial eligibility requirements and the significant percentage of students who lose their scholarships. PROMISE recipients are more likely to have higher, more consistent credit scores and live in wealthier areas (Scott-Clayton and Zafar, 2016). An analysis of West Virginia’s PROMISE scholars shows that half (49.3 percent) lost their scholarship before graduation, with a quarter (25 percent) losing their scholarship after their first year (Gross, Bell, and Berry, 2016). Similar to Georgia’s HOPE, students who lost their PROMISE scholarship were more likely to be STEM majors. When comparing students who lost their scholarships to their peers who were able to retain them, students who lost their scholarships were more likely to be male, a racial or ethnic minority, lower-income, and enrolled at a large institution (Gross, Bell, and Berry, 2016). Furthermore, while the program was shown to reduce undergraduate debt, “it significantly increased graduate borrowing, such that overall student borrowing was no different at the end of the follow-up period” (Scott-Clayton and Zafar, 2016).

Lessons for student success. Researchers point to the combination of GPA and credit-hour requirements as the chief catalyst for increased four-year graduation rates. Programs without the credit-hour

²⁰ West Virginia Higher Education Policy Commission, n.d.

requirement, like Georgia’s HOPE scholarship, encourage students to take fewer classes or withdraw from particular classes when they are performing poorly in order to maintain a high GPA (Brookings, 2012). However, these more stringent requirements decrease access to higher education for underserved populations and may generally increase socioeconomic divides in degree attainment (Scott-Clayton and Zafar, 2016).

Discussion and Summary of Recommendations for North Carolina

Nationally, there are more student applicants for state financial aid than dollars for aid. In 2017, more than 905,000 low-income students who applied for and were determined to be eligible for state financial aid never received funding because their state ran out of funds. This number is likely much higher since some states do not track the number of eligible students denied due to lack of funding. Moreover, of the states that do track these students, ten denied more than half of eligible students because of underfunding (Pingel, Sponsler, and Holly, 2018). Solutions are needed as educated workers are in high demand by employers and for both state and national competitiveness. In addition, higher education provides other effects that benefit states such as increased tax revenues via higher lifetime incomes (Carnevale, Jayasundera, and Gulish, 2016), reduced use of public benefits (Lochner and Moretti, 2003), improved health (Deaton and Paxson, 2001), and greater civic engagement (Dee, 2004).

Many states are attempting to make their funding go farther through more effective financial aid programs. One mechanism frequently used to accomplish this is the elimination of need-only aid in favor of merit-based aid or a combination of need and merit aid as illustrated by the growth in Figure 2. Others are trying to create last-dollar scholarship programs with components and behavioral features to encourage better performance in high school and higher FAFSA application rates, which combined may lead to greater retention and success in college. A few, like Indiana, are augmenting aid with other services in recognition that money alone will not dramatically increase degree attainment for low-income students.

North Carolina is well ahead of many states in being clear about its goals, narrowing the number of state financial aid grant programs that are offered, and focusing limited resources on the neediest students. Moving forward, there are five recommendations North Carolina may consider to better align its financial aid program with the research literature and lessons from other states:

1. Increase transparency of estimated aid.
2. Examine the interplay between state appropriations to public institutions and financial aid demand.
3. Focus on completion in addition to access.
4. Consider unintended consequences of incentives.
5. Test strategies (as possible) before implementing at scale.

Recommendation 1: Increase transparency of estimated aid.

North Carolina could improve transparency by sharing a summary table of aid levels (but replacing EFC with family income levels), using tax information to make predictions of aid eligibility (and disseminating this information to students well before application deadlines), and simplifying the University of North Carolina Need-Based Grant, perhaps through using the EFC formula instead of a separate formula (for ease of calculation).

A more complex change would be to alter the flow of financial aid. Currently, most state financial aid flows from the state to the higher education institution. The institution then has discretion to allocate funds based on their determination of student eligibility. A reorganization of this flow, which would provide eligible students with aid, rather than their schools, would diversify the student body on college campuses and reduce inequality in degree attainment. However, it would also involve re-designing the schedule of financial aid applications. As institutions currently determine financial aid eligibility, students are provided with financial aid information after admittance to a specific institution. Therefore, moving to a system where states determine eligibility would require eligibility information to be devised from state income tax data or another similar data system. This would allow North Carolina to notify students of their eligibility before beginning the application process. It would also transition the financial aid process from a schedule built around the start of traditional, four-year semester programs. Changing the timing of the financial aid process would be beneficial to nontraditional students (Pingel, Sponsler, and Holly, 2018).

Recommendation 2: Examine interplay between state appropriations to public institutions and financial aid demand.

The “Bennett Hypothesis” posits that as the volume of aid grows, institutions increase tuition even faster. The concern is that institutions will raise prices or otherwise reduce institutional grant aid to students, thereby “clawing back” any increase in state aid (Scott-Clayton, 2017).

Since financial aid is intended to cover the cost of attendance, it seems necessary to consider both state appropriations to public institutions and state allocations towards financial aid, as these elements are intertwined.

Recommendation 3: Focus on completion in addition to access.

A focus on completion includes: encouraging or supporting year-round attendance through the provision of summer funding; placing reasonable limits on the duration of aid (understanding that nontraditional students take longer to complete); allowing for educational models outside of the two- and four-year structure, such as online learning models and short-term competency-based certificates (based on an analysis of workforce demand); and incentivizing institutions to serve students well through the provision of academic supports shown to increase the likelihood of completion.

North Carolina may also consider changing the incentive structure on credit accumulation. Research in West Virginia, Tennessee, and several states as part of the Performance-Based Scholarships Demonstration suggests that minimum credit levels matter (Scott-Clayton, Dynarski and Scott-Clayton, Richburg-Hayes, 2014). Currently, the federal definition of “full-time” enrollment is 12 credits, yet it seems that everyone—with the exception of college students and perhaps their parents—understands that this pace will not lead to on-time graduation. While there are messaging

campaigns to address this,²¹ a structural change is likely to be more effective, as students may be reacting to the incentives stemming from financial aid. Providing full aid on the basis of 15 credits, and prorating aid for a lower number of credits, may change this dynamic.

Recommendation 4: Consider unintended consequences of incentives.

Incentives are intended to align behavior with desired outcomes in situations where the underlying behavior (such as effort and compliance) cannot be easily and frequently observed. The recommendation here is for North Carolina to identify all potential unintended consequences of a change in policy and set out to measure or monitor those most egregious to the intention of the program. For example, changing the target group from low-income students as defined by EFC levels to some broader measure may have the unintended consequence of giving less aid to the neediest students. Conversely, targeting aid to the neediest students may result in increasing program complexity and reducing reapplication rates. When considering benchmarks (such as the minimum number of credits to be earned or a GPA benchmark), setting a benchmark that students are less likely to achieve will result in lower aid paid per student—all else equal. Conversely, with a set amount of money available, a higher benchmark will allow the state to *offer more students the opportunity* to earn the grant, which may have behavioral effects beyond grant receipt.

Recommendation 5: Test strategies (as possible) before implementing at scale.

As the findings and unintended consequences from the state case studies demonstrate, implementing policies will have outcomes that are unexpected. As a result, it is worth considering policy changes through a pilot and then tweaking prior to full implementation. This includes evaluating/assessing the impact of a change through implementation on a small scale, such as with a change in calculation strategy for the UNC Need-Based Grant. While such a pilot will not completely replicate what will occur with full field implementation, it can highlight needed fixes before being launched in prime time. For example, Illinois piloted a change to their Monetary Assistance Program (MAP), which provides grant aid to low-income, part-time students. The pilot revealed that students who were enrolled less than half time or for less than six credits had the same profile as students who were eligible for MAP. The study also found that students often dropped into the ineligible status as a result of work, family, and personal commitments that were temporary. As a result of the pilot, policymakers implemented reforms that permit students attending less than half time (who are often nontraditional students) to continue to receive aid and stay continuously enrolled (Taliaferro and Duke-Benfield, 2016).

²¹ For example, see Complete College America’s “15 to Finish” campaign.

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Appendix A – Selected Annotated Bibliography

Akers, Beth. 2013. "The Next Steps: Building a Reimagined System of Student Aid." *Brown Center for Education Policy at Brookings Institution*.

Many of the problems we are facing in higher education—limited access for low-income and underserved students, sky-rocketing tuitions, students defaulting on an ever-increasing number of loans—are exacerbated by the current financial aid system. As policymakers were preparing for the reauthorization for the Higher Education Act, a group of organizations consolidated recommendations for them to consider. Among others, the recommendations included simplifying the financial aid process by eliminating the FAFSA and enrolling all loan borrowers into one, income-based payment plan and increasing household and student awareness of their financial aid eligibility *before* they begin applying for college. Students who fail to submit the FAFSA, unwittingly take out private rather than public loans, or struggle to repay their loans, unaware of their eligibility for loan forgiveness, face costly consequences. Transitioning away from FAFSA, instead using the IRS to determine eligibility, would eliminate a significant barrier to higher education. The IRS could provide students with their aid eligibility far earlier. Not only would students have a better understanding of the cost of their education as they are entering the college application process, but students who had previously thought that they could not afford a degree would have time to change their mind after seeing their eligibility. In order to increase access to nontraditional students, the report also suggests changing the timeline that aid is delivered, reinstating summer Pell Grants, and monitoring outcomes for these students.

Barr, Andrew. 2017. "Fighting for Education: Financial Aid and Degree Attainment." *Journal of Labor Economics*: 1-41.

Each year, millions of students are awarded financial aid. While this aid increases access to higher education, few studies have considered the effects of financial aid on degree attainment, specifically by older, nontraditional students. This study used enrollment data for veterans to analyze the effects of the 2008 GI Bill expansion on educational outcomes. The expansion, known as the Post-9/11 GI Bill, increased the tuition and fee coverage and also provided veterans with a monthly housing voucher. Researcher Andrew Barr established that this expansion is responsible for a 25 percent increase in degree attainment by veterans. While the effect of financial aid on degree attainment is greater for traditional students, higher year-to-year persistence rates for veterans should not be overshadowed. As many veterans use higher education as a transition between careers or re-entry into the workforce, the benefits to the individuals as well as society marks this as a positive investment.

Bettinger, Eric P., Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2012. "The role of application assistance and information in college decisions: Results from the H&R Block FAFSA experiment." *The Quarterly Journal of Economics* 127(3): 1205-1242

Previous studies have shown the disparity between college attendance rates of low- and high-income students. Financial aid programs were enacted to undercut this disparity. However, recent works have demonstrated that the financial aid application (FAFSA) process is a barrier to many students, the majority of which are low-income, therefore contributing to the income gap. This research team studied the effects of multiple interventions that provided households with personalized information about aid, simplified FAFSA applications that were pre-populated with tax information, and assistance in the application process. Students who received information about aid eligibility and assistance filing the FAFSA were significantly more likely (40 percent) to submit the application and nearly a third more likely

to enroll in higher education. Critically, enrollment rates of low-income students also increased. In comparison to the control group, the group of students who only received information about FAFSA was just as likely to complete the FAFSA and enroll in higher education.

Brookings Institution State Grant Aid Study Group. 2012. "Beyond Need and Merit: Strengthening State Grant Programs." *Brown Center for Education Policy at Brookings Institution*. Washington: The Brookings Institution.

As state funding designated for higher education continues to decline, educational institutions are raising their tuitions to make up the difference. In order to afford increasing tuition, college students are relying more and more on state grant programs to step in. When redesigning state grant programs, the Brookings Institution State Grant Aid Study Group suggests that states focus on three things: concentrating state funding on those whose chances of enrolling in higher education and achieving academic success would be improved most by financial support from the state; simplifying programs so that students and their parents can more easily understand them; and designing programs that not only help students access higher education, but also encourage persistence and academic success once they've enrolled. By eliminating merit-based scholarships and consolidating those funds with the need-based grants, states would have a much larger impact on the students who are most likely to attend higher education but are constrained financially. While merit-based scholarships encourage academic success, they also siphon funds away from students who need them the most. For example, in Georgia in 2007-2008, more than two-thirds of high-income students received a state-based grant, on average of \$2,900. In comparison, only 54 percent of low-income students received a state-based grant, on average of \$1,800. Disparities are further entrenched by the onerous, overly complicated financial aid system. Many students and parents alike become disoriented while navigating the application process, which must be re-filed annually. Intricate financial aid calculators combined with the lack of transparency of the factors used by states to calculate financial aid makes it difficult for families to plan for the costs of higher education. A simplified, consolidated state grant program that provides a straightforward calculator for parents and is designed to support the success of students throughout their entire education would help close the disparities between vulnerable or underserved populations and their peers.

Castleman, Benjamin L. and Lindsay C. Page. 2016. "Freshman Year Financial Aid Nudges: An Experiment to Increase FAFSA Renewal and College Persistence." *The Journal of Human Resources* 51(2):389-415.

As the Free Application for Federal Student Aid (FAFSA) serves as the primary gateway for higher education access among low- and middle-income students, there are significant policy initiatives in place that aim to increase household awareness and assistance in the application process. Fewer interventions focus on supporting returning students as they re-file the annual application. Nationally, 15-20 percent of students who are in good academic standing and received a Pell Grant their freshman year do not re-file their FAFSA. These application completion rates are even lower for students enrolled in community colleges. FAFSA is not only a critical step when students initially enroll in higher education. Each year, students who do not re-file their annual FAFSA are less likely to return the following year. In order to increase retention rates and degree attainment, a Boston nonprofit initiated an intervention that reminded community and four-year college students about financial aid resources and deadlines. Community college students who received the reminders were 12 percent more likely to return their sophomore year. In comparison to the four-year institution control group, men enrolled in a

four-year institution who received the reminders were less likely to transfer to a community college, while women were more likely to do so.

Dynarski, Susan and Judith E. Scott-Clayton. 2008. "Complexity and Targeting in Federal Student Aid: A Quantitative Analysis." *Tax Policy and the Economy* 22(1):109-50.

While there is a considerable amount of evidence demonstrating the efficacy of financial aid programs in increasing college enrollment, the same cannot be said about Pell Grants or Stafford Loans. Researchers Susan Dynarski and Judith E. Scott-Clayton conclude that the complexity of these financial aid programs discourages low-income students from enrolling in higher education. Furthermore, this convoluted system burdens the households that complete the 127-question Free Application for Federal Student Aid (FAFSA), costing the country roughly \$1.75 billion dollars per year in lost time, and costing the colleges that must review and audit these applications roughly \$2 billion in college staff salaries. While the financial and time costs of using such complex programs are high, the benefits are trivial. Resultantly, many states have established innovative policies to increase college enrollment. Georgia, in 1993, introduced the HOPE (Helping Outstanding Pupils Educationally) scholarship, which provides free tuition to Georgia public schools students with at least a 3.0 high school GPA. As a result of this program, Georgia has significantly increased college attendance for all students, most significantly for women of color. This study points to the half-page HOPE application as one critical difference between the state and federal programs. Guided by this shortened application, this research team found that when they eliminated more than 80 percent of the questions on the FAFSA, Pell Grant eligibility and loan offers changed only slightly. Considering that the complexity of federal financial aid programs serves as an obstacle to the increasing number of students entering colleges, this research team recommends that FAFSA be eliminated completely, and instead a checkbox be added to income tax forms so that the IRS can forward parental income information to the U.S. Department of Education.

ideas42. 2018 "Nudges, Norms, and New Solutions: Evidence-based Strategies to Get Students to & Through College."

Throughout the entire process, paying for higher education proves to be a barrier to many. When applying to colleges, many students fail to submit their FAFSA application due to lack of awareness of the application entirely, their eligibility, or its firm deadlines. Students who do submit their FAFSA are often offered loans, and they may over- or under-borrow, not understanding the extent of debt they are taking on. After leaving school, many students struggle to repay. Millions of students are currently behind on their repayment, scarring their credit history. While income-based payment plans and loan forgiveness are options, changing payment plans can be complicated, confusing, and underutilized by eligible students. "Nudges, Norms, and New Solutions" suggests that programs be enacted that increase awareness of FAFSA and its deadlines and help students through the application process by sending messages via texts, email, or mail, advertising apps that educate students, and in-person FAFSA assistance for students. To mitigate the negative impact that under- or over-borrowing can play, programs that provide financial advising to students who are unsure if and how much they should borrow should be bolstered. One such program sent tailored messages to students containing their cumulative amount borrowed to date, projected payments, and a comparison of the average amount borrowed by their fellow University of Missouri students. This report also advocates for programs that help students choose the correct repayment plan initially but then continue to remind students throughout the repayment process that other plans are available. When Valencia College students were presented with a table, instead of lengthy text description, that showed the 4 repayment options with their monthly payment, length of repayment, and amount of interest and removed potentially

misleading language like “Standard Plan,” the percentage of students who chose the standard plan decreased by 28 percent. Most notably, while these interventions have a large impact, many of them do not come with a large price tag.

Scott-Clayton, Judith. 2017. *Undergraduate Financial Aid in the United States*. Cambridge, MA: American Academy of Arts & Sciences.

There is plethora of evidence demonstrating that state need-based and merit-based scholarships have a positive impact on students’ college choices, their year-to-year persistence, and degree completion rates. Financial aid continues to help students even after they graduate, improving enrollment rates in graduate programs, salaries, and homeownership rates. Evidence also shows that the design features of financial aid programs, specifically complexity and timing, greatly affect these outcomes. Lack of transparency and frequent misconceptions of the true price of a degree, in addition to a complicated and arduous application process with firm deadlines, undermine the efficacy of financial aid programs to increase access to education. While awareness of the FAFSA and completion rates have risen over time, only 70 percent of students in 2011-2012 filed an application. Notably, one-third of the students who failed to complete their FAFSA would have qualified for a Pell Grant. Interventions that target these students through assistance programs, mailers with financial aid information, or reminder systems are incredibly successful and cost-effective. These interventions, sometimes costing as little as a few dollars per student diversify the study body on colleges campuses and reduce inequality in degree attainment. Other design features, such as including academic performance incentives, have shown to improve persistence and graduation rates. Critically, like FAFSA, there must be awareness of these programs, their deadlines, and requirements, for their benefits to be felt.