

# A Student Level Analysis of Financial Aid

*Tennessee Higher Education Commission*

## Contents:

<b>Introduction</b> .....	<b>1</b>
<b>Higher Education Finance in Tennessee: A Primer</b> .....	<b>2</b>
<b>Student Level Financial Aid Analysis</b> .....	<b>3</b>
<b>The Primary Focus: Unfunded Tuition Need</b> .....	<b>8</b>
<b>Framing the Policy Problem and Proposing a Solution</b> .....	<b>8</b>
<b>Modeling Policy Change</b> .....	<b>9</b>
<b>Observations and Conclusion</b> .....	<b>13</b>

---

*This paper is one in a series of reports funded by Lumina Foundation. The series is designed to generate innovative ideas for improving the ways in which postsecondary education is paid for in this country—by students, states, institutions and the federal government—in order to make higher education more affordable and more equitable. The views expressed in this paper—and all papers in this series—are those of its author(s) and do not necessarily reflect the views of Lumina Foundation.*

# A Student Level Analysis of Financial Aid

The last decade has given rise to extraordinary creativity and innovation in higher education public policy across the U.S. Among the most reform-minded states has been Tennessee, where two landmark initiatives centered around the need for a more educated citizenry have provided scaffolding for a series of public policy reforms and aggressive educational goals. These initiatives, the Complete College Tennessee Act (CCTA) of 2010 and Governor Bill Haslam's current Drive to 55 (D55), lay claim to the central role postsecondary education and training can play in reshaping the economic future of Tennessee and its residents. Numerically, the goal of D55 is to significantly increase the share of working-aged adults in the state that hold postsecondary certificates or college degrees, enabling Tennessee to meet future requirements for workforce and workplace development. The animating principle embedded in each of these landmark initiatives is that our future as a citizenry and our economic well-being depend on the excellence of our education system.

*Among the most reform-minded states has been Tennessee, where two landmark initiatives centered around the need for a more educated citizenry have provided scaffolding for a series of public policy reforms and aggressive educational goals.*

The CCTA was a comprehensive reform agenda that sought to transform public higher education through changes in academic, fiscal and administrative policies at the state and institutional level. Among the reforms ushered in by the CCTA were: establishment of an outcomes-based funding formula; a new higher education Master Plan focused on educational attainment and workforce preparation; and well-defined transfer pathways for degree-seeking students transferring from a community college to a university. The D55 initiative, while still evolving, is Tennessee's challenge to increase postsecondary credential attainment from the current 36% to 55% by the year 2025. It includes strategies to: reduce students' remedial math needs; make universally accessible and affordable within state boundaries; and establish meaningful and durable linkages with workforce partners.

Throughout, the policy dimension which has proved most trenchant, yet intransigent, is that of student financial aid. This paper focuses on gaining an in-depth understanding of individual student financial aid packages and offering policy options to mitigate existing financial barriers for Tennesseans. A student unit record financial aid database, combined with demographic and academic information for over 80,000 public university students and nearly 100,000 students in Tennessee's thirteen community colleges, allows for deeper understanding of what college affordability means to different student sub-populations, and for investigation of the roles played by federal government, Tennessee state government, and the institutions themselves in providing a postsecondary experience that is both accessible and affordable. Additionally, our data analysis sheds light on student borrowing and the interplay between grant funding and student loan burden, disaggregated by student academic and demographic characteristics.

## Higher Education Finance in Tennessee: A Primer

The student financial aid landscape of today differs greatly from the one that existed in 1965, when the Higher Education Act established an array of grant and loan programs to benefit low- and middle-income Americans. Recent trends in higher education finance in Tennessee have mirrored those across the nation: significant state divestment, leading to the lowest operating state appropriations per student in two decades, with concomitant tuition increases that have strained affordability and strained state and federal financial aid programs. Several states have made significant investments to leverage the resources provided through federal programs, but states' student aid programs vary widely in nature and scope. Some states have large, stable, and widely accessible need-based state grants that supplement the foundation laid by the federal Pell Grant. Others, including many in the South, have chosen to complement federal aid programs, which are almost exclusively need-based, by developing state grant programs based primarily on merit or a combination of merit and need.

College affordability is a function largely of both tuition costs and financial aid, and the equation changes depending on the student's income profile. Macro level analyses of tuition and fee rates and financial aid programs provide a launching point for the affordability discussion; however, student level data provides a more complete understanding of where financial barriers are most likely to exist for students with varying income profiles.

Community college tuition in Tennessee averages about \$3,800 per year for a full-time student. While this figure is well below the state's average university tuition of \$7,800, Tennessee's community college tuition rates are higher, relatively speaking. Average community college tuition in Tennessee is 20% higher than the average for Southern Regional Education Board (SREB) member states, while average public university tuition in Tennessee is virtually identical to SREB peer averages. Furthermore, the income profile of Tennessee students indicates that the vast majority of Tennessee community college students are low-income. At community colleges, approximately three-fourths of students who completed the Free Application for Federal Student Aid (FAFSA) were eligible for the federal Pell grant. About half of students had an Expected Family Contribution (EFC) of zero, indicating no financial wherewithal to pay for college. University students had a similar but less dramatic income profile; over half of students were eligible for the Pell grant, and nearly a third had an EFC of zero. These factors suggest that affordability issues may be more severe than is commonly perceived by public policymakers.

Macro level financial aid data for community colleges indicates that the impact of tuition has been mitigated by significant levels of state and federal grants, which amounted to more than \$233 million in 2011-12, versus gross tuition revenue of \$290 million. Of the \$233 million in total grants to community college students, two state programs<sup>1</sup> fund \$41 million in financial aid: Tennessee's largest program, the Tennessee Education Lottery Scholarship (TELS) provides \$33 million, and the need-based financial aid program, the Tennessee Student Assistance Award (TSAA) provides \$8 million. The remaining \$192 million in grant aid is via the Pell grant, highlighting the federal government's predominant role in promoting affordability at the community college sector.

A similar calculus applies to Tennessee's public universities, which collectively received over \$884 million in gross tuition revenue from undergraduates in 2011-12. This was offset by \$454 million in grant aid. Within the university sector, the state's role in financial aid is more prominent due to the large expenditure of lottery scholarship funds, at \$205 million,

versus \$226 million in Pell grants and \$22 million from Tennessee's need-based grant. State financial aid has largely peaked, with the merit-based TELS program growing at an incremental pace, while the need-based TSAA program is modestly funded at best. In fact, the TSAA grant funds only one-fourth to one-third of the eligible students, leaving a large pool of low-income students not served by the program.

Taken in total, this brief overview leads to the central research issue and the quest to gain a more nuanced understanding of student financial aid as currently packaged. As Tennessee learns more about which students receive certain types and amounts of financial aid, whether from Federal, state or institutional grants, then a more accurate portrait of affordability can emerge.

## Student Level Financial Aid Analysis

### Data

The dataset utilized for this study contains demographic, academic, and financial aid information for over 98,000 students across the Tennessee Board of Regents' (TBR) thirteen community colleges and nearly 81,000 students across TBR's six universities. There are three other public universities in Tennessee, governed by the University of Tennessee system, for which data were not available. The data consists of information regarding every disbursement of financial aid to every student in the fall 2010 semester, including all federal, state, institutional, and private grants, scholarships, and loans. This information was combined with student-level academic and demographic information, including age, race, gender, high school GPA, ACT score and EFC. Regarding race, the subsequent analysis focuses on white and black students since they comprise the vast majority of Tennessee students.

*This suggests that there is a positive relationship between family income and academic preparation and that the students prone to have the most acute financial need are also the most prone to have academic preparation issues.*

### Academic Preparation and Financial Need

The descriptive findings in this section include a breakdown of EFC by academic and demographic characteristics as well as student loan borrowing rates and amounts by student characteristics. Furthermore, it includes an analysis of unfunded tuition needs, defined as total tuition and mandatory fee charges less all grant aid (Pell, TELS, TSAA, institutional aid).

Figures 1 and 2 demonstrate how median Expected Family Contribution (EFC) varies by high school GPA and ACT composite score for all full-time university and community college students. While full-time university students are generally wealthier than their community college peers, their EFCs display similar patterns of variation across academic profiles. Higher EFCs are found among students with a higher GPA and ACT. This suggests that there is a positive relationship between family income and academic preparation and that the students prone to have the most acute financial need are also the most prone to have academic preparation issues. The least prepared students are often the ones for whom college is least affordable.

### Community College Demographics

In our data, 47.8% of all community college students attended full-time; the remaining 52.2% attended part-time. Though many (66.1%) part-time students attended at least half-time—therefore meeting enrollment eligibility for most state and federal grant aid—59.0% of part-time students did not complete a FAFSA. Potential reasons for this are varied: some part-time students may already have a bachelor’s degree; they may have defaulted on a loan; or they may feel a FAFSA is unnecessary because they can pay for their course-load out-of-pocket. More than one-third (38.4%) of full-time students at community colleges have an EFC of zero. Furthermore, black students generally have lower EFCs than their white peers. This is especially true among black females: for this subpopulation, any non-zero EFC is a statistical outlier.

### Community College Borrowers

Figure 3 shows the proportion of community college students with a valid EFC that borrow, by institution and demographic. There is significant variation across institutions in the proportion of students that borrow, but less variation across student demographics. Since all community colleges serve a majority low income population, differences across institutions in the proportion of students that borrow may be due to institutional practices and capacities, rather than characteristics observed in the student population. Perhaps institutions have

**Figure 1:**  
*Median EFC by Academic Profile, Full-Time University Undergraduates*

GPA/ACT	I-12	13-15	16-18	19-20	21-24	25-27	28-36	Overall
0 - 2.49	\$0	\$0	\$0	\$999	\$2,902	\$3,420	\$3,675	<b>\$330</b>
2.50 - 2.74	\$0	\$0	\$0	\$1,649	\$4,558	\$5,032	\$3,166	<b>\$1,569</b>
2.75 - 2.99	\$0	\$0	\$402	\$1,855	\$5,503	\$5,685	\$8,288	<b>\$2,499</b>
3.0 - 3.49	\$0	\$0	\$1,366	\$3,738	\$5,792	\$6,776	\$7,898	<b>\$4,225</b>
3.50 - 3.74	\$0	\$0	\$1,769	\$4,223	\$6,128	\$8,684	\$8,685	<b>\$5,916</b>
3.75 - 4.00	\$0	\$858	\$941	\$4,709	\$6,786	\$9,426	\$10,989	<b>\$7,892</b>
<b>Overall</b>	<b>\$0</b>	<b>\$0</b>	<b>\$603</b>	<b>\$3,131</b>	<b>\$5,695</b>	<b>\$7,966</b>	<b>\$9,410</b>	<b>\$4,285</b>

**Figure 2:**  
*Median EFC by Academic Profile, Full-Time Community College Students*

GPA/ACT	I-12	13-15	16-18	19-20	21-24	25-27	28-36	Overall
0 - 2.49	\$0	\$0	\$0	\$0	\$333	\$347	\$95	<b>\$0</b>
2.50 - 2.74	\$0	\$0	\$0	\$2	\$409	\$1,867	\$2,242	<b>\$0</b>
2.75 - 2.99	\$0	\$0	\$0	\$177	\$2,292	\$1,801	\$1,352	<b>\$0</b>
3.0 - 3.49	\$0	\$0	\$1,197	\$2,584	\$2,661	\$2,786	\$3,984	<b>\$1,344</b>
3.50 - 3.74	\$0	\$1,565	\$2,056	\$2,490	\$3,482	\$3,636	\$2,757	<b>\$2,344</b>
3.75 - 4.00	\$50	\$473	\$1,870	\$4,107	\$4,571	\$4,439	\$5,625	<b>\$3,198</b>
<b>Overall</b>	<b>\$0</b>	<b>\$0</b>	<b>\$603</b>	<b>\$1,134</b>	<b>\$2,488</b>	<b>\$2,880</b>	<b>\$3,380</b>	<b>\$0</b>

**Figure 3:***Proportion of Community College Students Borrowing, by Institution and Demographic*

	Black Female	Black Male	White Female	White Male	Overall
Chattanooga	62.3%	60.9%	37.0%	29.8%	<b>39.0%</b>
Dyersburg	59.6%	62.4%	36.7%	25.3%	<b>39.0%</b>
Northeast	55.1%	65.2%	43.0%	30.9%	<b>38.0%</b>
Pellissippi	69.4%	51.6%	35.6%	25.4%	<b>32.7%</b>
Nashville	52.4%	40.6%	28.7%	21.7%	<b>32.0%</b>
Cleveland	50.9%	40.3%	35.5%	25.2%	<b>31.9%</b>
Volunteer	51.7%	46.5%	32.0%	22.7%	<b>29.9%</b>
Roane	47.0%	50.0%	32.1%	21.7%	<b>28.4%</b>
Columbia	48.3%	42.3%	20.7%	16.6%	<b>21.4%</b>
Walters	43.2%	26.5%	22.1%	13.3%	<b>18.7%</b>
Motlow	30.1%	34.1%	16.4%	12.4%	<b>16.1%</b>
Southwest	2.4%	0.9%	0.2%	0.1%	<b>0.9%</b>
Jackson	1.1%	0.0%	0.6%	0.6%	<b>0.7%</b>
<b>Overall</b>	<b>42.5%</b>	<b>33.8%</b>	<b>29.1%</b>	<b>21.1%</b>	<b>27.5%</b>

**Figure 4:***Mean Debt Incurred by Community College Borrowers*

	Black Female	Black Male	White Female	White Male	Overall
Chattanooga	\$3,845	\$3,498	\$3,714	\$3,593	<b>\$3,691</b>
Nashville	\$3,209	\$2,986	\$3,343	\$3,104	<b>\$3,202</b>
Pellissippi	\$3,390	\$3,106	\$3,195	\$3,021	<b>\$3,150</b>
Roane	\$3,097	\$2,627	\$3,145	\$2,952	<b>\$3,076</b>
Cleveland	\$2,730	\$2,963	\$3,062	\$2,946	<b>\$3,007</b>
Northeast	\$1,816	\$1,913	\$1,954	\$1,963	<b>\$1,952</b>
Walters	\$1,810	\$1,690	\$1,905	\$1,915	<b>\$1,902</b>
Columbia	\$1,791	\$1,706	\$1,876	\$1,767	<b>\$1,827</b>
Volunteer	\$1,737	\$1,992	\$1,800	\$1,752	<b>\$1,790</b>
Dyersburg	\$1,724	\$1,624	\$1,854	\$1,767	<b>\$1,781</b>
Motlow	\$1,563	\$1,576	\$1,698	\$1,775	<b>\$1,701</b>
<b>Overall</b>	<b>\$3,078</b>	<b>\$2,857</b>	<b>\$2,762</b>	<b>\$2,690</b>	<b>\$2,798</b>

different capacities for financial aid counseling, or they may have different policies regarding how loans are disbursed. Additionally, Jackson and Southwest have virtually no students borrowing, because of those schools' non-participation in the federal loan program. Figure 4 displays the mean loans for the fall 2010 semester among full-time borrowers by institution and demographic. Borrowers incurred mean debt of \$2,798. As was the case with the proportion of students borrowing, we observe in this figure wider variation across institutions than across student demographics.

### University Demographics

For comparison, the same analysis was conducted for university students. The income profile of full-time university undergraduates differs in crucial aspects from that of full-time community college students. The share of full-time university undergraduates in the >20,000 EFC bin is almost three times the size of similar students in the community college sector (14% versus 5%). This suggests, perhaps unsurprisingly, that wealthier students are relatively more likely to attend a university than a community college.

**Figure 5<sup>2</sup>:**

*Proportion of University Students that Borrow, by Institution and Demographic*

	Black Female	Black Male	White Female	White Male	Overall
TSU	82.9%	78.7%	59.8%	46.0%	<b>75.7%</b>
ETSU	89.6%	84.8%	72.8%	65.4%	<b>69.8%</b>
UM	87.1%	82.9%	57.2%	49.9%	<b>67.4%</b>
APSU	78.1%	66.4%	60.4%	49.2%	<b>59.2%</b>
MTSU	79.8%	75.7%	50.4%	49.1%	<b>54.1%</b>
TTU	72.2%	72.5%	47.4%	45.2%	<b>49.6%</b>
<b>Overall</b>	<b>83.7%</b>	<b>77.9%</b>	<b>56.6%</b>	<b>51.1%</b>	<b>60.7%</b>

**Figure 6:**

*Mean Debt Incurred Among University Undergraduate Borrowers in Fall 2010*

	Black Female	Black Male	White Female	White Male	Overall
ETSU	\$5,071	\$5,877	\$5,519	\$5,698	<b>\$5,600</b>
TSU	\$4,935	\$4,646	\$4,303	\$4,557	<b>\$4,772</b>
UM	\$4,518	\$4,439	\$4,392	\$4,379	<b>\$4,429</b>
APSU	\$4,250	\$4,403	\$4,107	\$4,339	<b>\$4,222</b>
MTSU	\$4,069	\$4,377	\$4,041	\$4,289	<b>\$4,134</b>
TTU	\$3,307	\$3,487	\$2,977	\$3,032	<b>\$3,024</b>
<b>Overall</b>	<b>\$4,530</b>	<b>\$4,508</b>	<b>\$4,306</b>	<b>\$4,395</b>	<b>\$4,394</b>

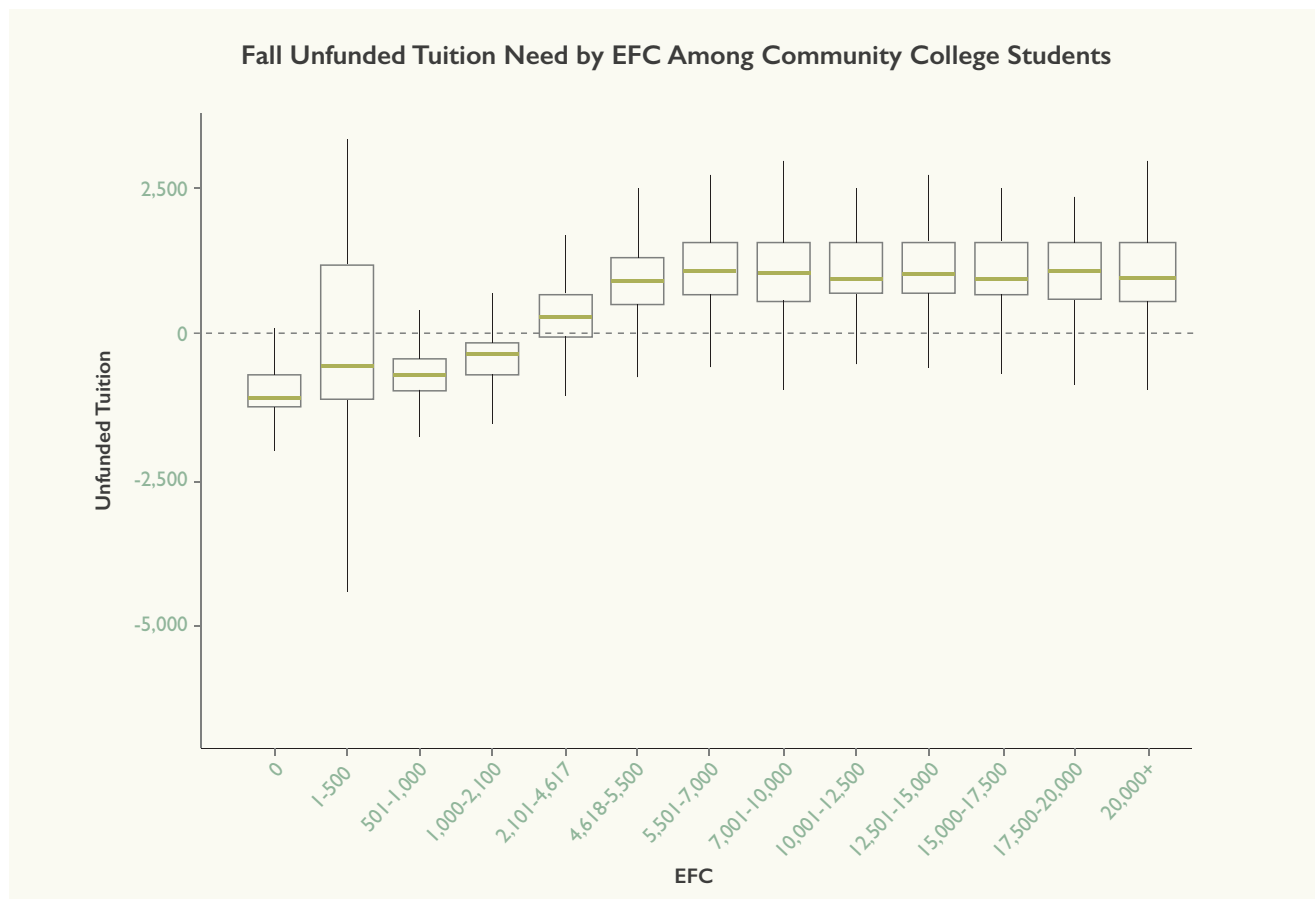


Similarly, the family income profile of university undergraduates differs greatly from that of community college students by race and gender. Whereas, among community college students, any black female with a positive EFC was an outlier, the EFCs of black females who attend a four-year school shows considerable variance. The same can be said for black males who attend a four-year school full-time. Overall, black university students have a higher income profile than their community college counterparts.

### University Borrowers

Borrowing among university students is more extensive than for community college students. Figure 5 demonstrates how the proportion of university undergraduates borrowing varies by institution and demographic. There is substantial variation across institutions with respect to the proportion of students borrowing. Variation among the universities seems less likely to be due to differences in institutional capacity for financial aid counseling. Rather, unlike at community colleges, the observed variation is likely due to differences in preparation and income across schools' respective student populations. Figure 6 shows the variation in mean debt incurred by those who borrow by university and demographic. Though there is much variation across individual subpopulations, there is less variation across institutions. Also, not only are students at Tennessee Tech University (TTU) less likely to borrow at all, they are also likely to borrow lesser amounts than their peers at other universities.

**Figure 7:**  
*Fall Unfunded Tuition Need by EFC Among Community College Students*



## Defining the Issue and Proposing a Solution

### *Unfunded Tuition Need*

Of primary concern to this inquiry is the inequitable distribution of unfunded tuition need across students and institutions. For this paper, unfunded tuition need is defined as tuition and mandatory fees charged to students minus their total grant and scholarship receipts. Thus, “negative unfunded tuition” actually means that a student receives grant money in excess of mandatory tuition and fees, while “positive unfunded tuition need” implies that the student must borrow, work, or pay out-of-pocket to cover excess expenses. If unmet tuition needs could be reduced or eliminated among a targeted set of students, access could be enhanced and the need for borrowing would decline.

Figure 7 displays the full distribution of unfunded tuition need for community colleges by EFC, with negative unfunded tuition needs reflecting net grants (Pell, TELS, TSAA) in excess of tuition and mandatory fee charges. The EFC cutoffs for program eligibility during the 2010-11 academic year for the Pell and TSAA grants were 4,617 and 2,100 respectively. Tennessee community college students eligible for both Pell and TELS generally receive net grant overpayments or refunds. This is unsurprising, as a full Pell grant covers more than the cost of full-time tuition and fees at community colleges in the state. Students who are eligible for Pell but not TSAA generally have modest unfunded tuition need. Those who are beyond Pell eligibility have median unfunded tuition need for a single semester of just under \$1,000. For students with very high EFCs (15,000 and greater), unfunded tuition need represents a modest out-of-pocket expense.

*These findings suggest that the issue of tuition affordability, once grant funding is accounted for, is most acute for lower-to-middle class students.*

The takeaway is that for students who are not wealthy but are ineligible for Pell, unfunded tuition need may actually exceed their means or that of their family, driving them to borrow. Relatively few students who are eligible for both Pell and TSAA have unfunded tuition need, while a preponderance of those with EFCs greater than the Pell cutoff have unfunded tuition need.

These findings suggest that the issue of tuition affordability, once grant funding is accounted for, is most acute for lower-to-middle class students. These students represent the “forgotten middle” that is often overlooked in state higher education policy discussions. Students with very low EFCs generally face little to no unfunded tuition need, while those with very high EFCs have resources sufficient to absorb tuition costs. Students in the middle of the EFC distribution (from just beyond Pell eligibility to an EFC range of 8,000 to 10,000) qualify for neither Pell nor TSAA, and they may not qualify academically for the merit-based lottery scholarship.

### *A Tennessee-Specific Pell Grant Schedule*

One possible policy response to address the issue of college affordability is crafting a unique, or Tennessee-specific, payment schedule for the Pell Grant. Between grants and loans, the Federal government is by far the largest financier of most individuals’ higher education. Furthermore, the Pell Grant comprises the vast majority of all grant money disbursed to community college students. Because this analysis shines light on where unfunded tuition needs exist, a state specific payment schedule would more effectively distribute Pell dollars in light of the state’s unique array of state aid programs and provide the state with the flexibility

to address unfunded tuition need among lower to moderate EFCs, improving affordability for these students. As currently constituted, the Pell grant program provides all 50 states with the same one-size-fits-all payment schedule. A Pell payment schedule uniquely developed for Tennessee would better suit its demographic, economic and social idiosyncrasies, while most importantly aligning the major financial aid resources in Tennessee in a manner that serves more students more effectively. A state specific Pell grant schedule, constructed in a revenue-neutral manner, would provide institutions and policymakers the tools to target financial aid where known unfunded tuition gaps exist.

***A state specific payment schedule would more effectively distribute Pell dollars in light of the state’s unique array of state aid programs and provide the state with the flexibility to address unfunded tuition need among lower to moderate EFCs, improving affordability for these students.***”

**Modeling Policy Change**

Figures 8 and 9 summarize three hypothetical models for a Tennessee specific Pell award schedule, each less incremental than the one that precedes it. As in Figure 8, none of these increases the Federal government’s total cost to fund the Pell program for Tennessee community colleges whatsoever. Please note that aggregate measures presented below (Total Pell and Unfunded Tuition Need) pertain only to students with EFCs up to 15,000. Students with EFC’s beyond this threshold are outside our target population and are thus not considered subject to any changes regarding Pell eligibility. The Pell program featured a maximum grant of \$2,775 in 2010-11 for a single semester; in a single semester, this award declines \$0.50 for every \$1 increase in EFC. Small reductions in the maximum Pell grant allow each model to extend eligibility into the middle of the EFC distribution.

The three models differ slightly in two respects: 1) their maximum Pell grant and 2) the stepwise reduction in award by EFC. Furthermore, Figure 8 includes the largest percentage reduction in any student’s Pell grant (“Max Negative % Change”) as well as the average percent reduction in existing awards. As indicated, the aggregate unfunded tuition need would decline from \$9.1 million per semester to \$6.6-\$7.8 million per semester.

**Figure 8:**  
*Pell Model Summary*

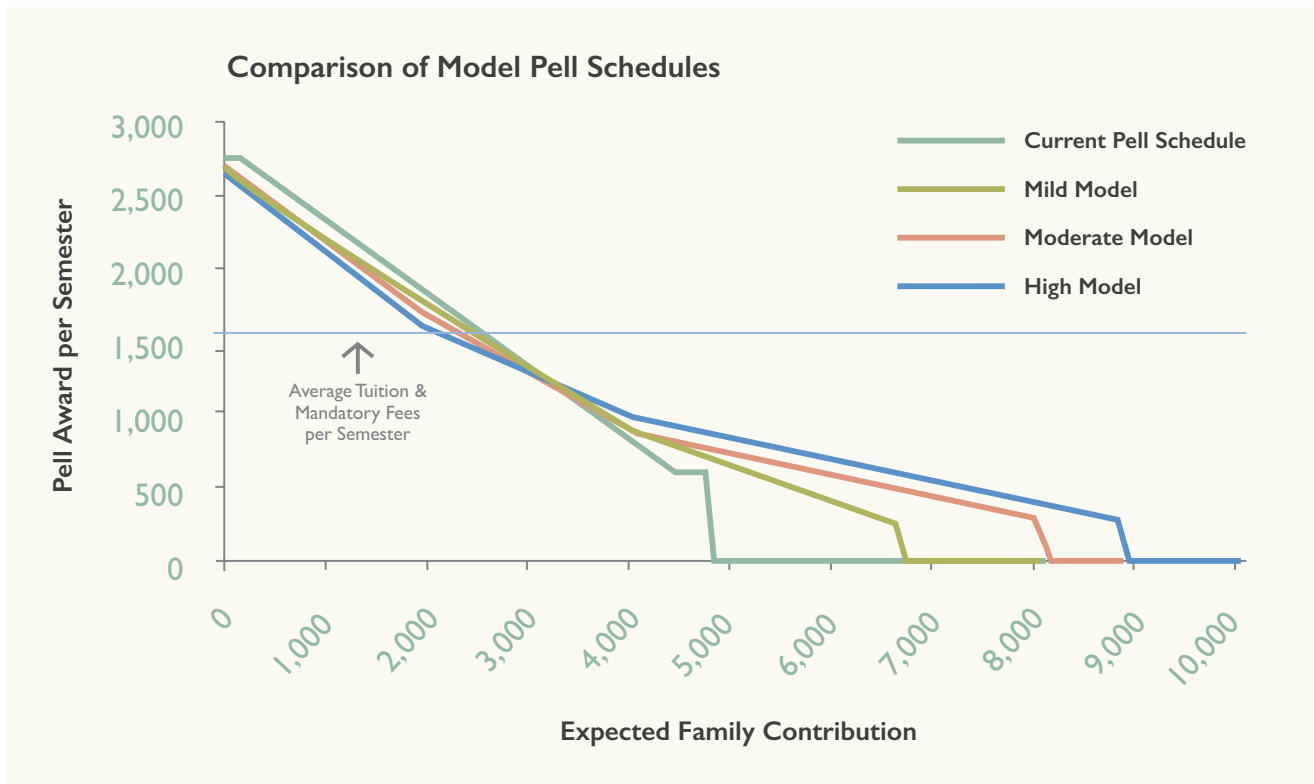
Model	Max Pell (Single Semester)	Total Pell	Avg. Negative % Change	Max Negative % Change	Highest EFC Reached	Total Unfunded Tuition Needed
Mild	\$2,700	\$53,273,000	-1.8%	-5.4%	6,600	<b>\$7,855,000</b>
Moderate	\$2,700	\$53,516,000	-2.1%	-8.0%	8,000	<b>\$7,298,000</b>
High	\$2,650	\$53,426,000	-3.7%	-13.2%	8,800	<b>\$6,660,000</b>
<b>Actual</b>	<b>\$2,775</b>	<b>\$53,563,000</b>	<b>----</b>	<b>----</b>	<b>4,617</b>	<b>\$9,100,000</b>

\*\*\*\*The numbers presented apply only to students with EFCs less than or equal to 15,000

Figures 9, 10 and 11 provide a fuller comparison of the prevailing Pell schedule and the three alternative models. A graphical representation of Pell awards compared to EFC is presented in Figure 9, with an accompanying summary table in Figure 10. Students at the lowest EFC would experience a decline in Pell awards of \$75-125 per semester or 3-4%. As stated earlier, because these award amounts are greater than tuition and mandatory fees of \$1,605 per semester, the effect is a slight reduction in the refund received that can be applied to books, travel and other costs of attendance. As the model Pell schedules ‘flatten’ and reach further out the EFC scale, students previously ineligible for a grant become eligible. For instance, a student with an EFC of 6,000 becomes eligible for a Pell grant of \$675 per semester or about 40% of the tuition and mandatory fees.

The student level financial aid analysis provided the opportunity to model the impact of these hypothetical Pell award schedules on individual students’ financial aid packages. Figure 11 displays the distribution of unfunded tuition amounts (tuition and mandatory fees minus grants) across the EFC spectrum from the actual distribution to the three model Pell schedules. The model schedules do not change the shape of any bin’s distribution, rather they shift the position of the distribution in predictable ways. As expected, there is a shift upwards in the distribution of unfunded tuition needs among students who are actually Pell eligible, indicating that they receive slightly smaller overpayments or refunds. On the other hand, students currently beyond the Pell eligibility threshold see their unfunded tuition need distributions shift downward dramatically, because their unfunded tuition is significantly reduced.

**Figure 9:**  
*Comparison of Model Pell Schedules*



**Figure 10:**  
*Comparison of Model Pell Schedules*

EFC	Existing Pell	Mild Model	Moderate Model	High Model
0	\$2,775	\$2,700	\$2,700	\$2,650
1,000	\$2,300	\$2,200	\$2,175	\$2,100
2,000	\$1,800	\$1,710	\$1,663	\$1,575
3,000	\$1,300	\$1,310	\$1,263	\$1,275
4,000	\$800	\$910	\$863	\$975
5,000	\$0	\$660	\$713	\$825
6,000	\$0	\$410	\$563	\$675
7,000	\$0	\$0	\$413	\$525
8,000	\$0	\$0	\$263	\$375
9,000	\$0	\$0	\$0	\$0

Note: Data is per semester from 2010-11; Community college tuition and mandatory fees in 2010-11 averaged \$1,605 per semester.

**Figure 11:**  
*Unfunded Tuition for Alternative Pell Schedules*

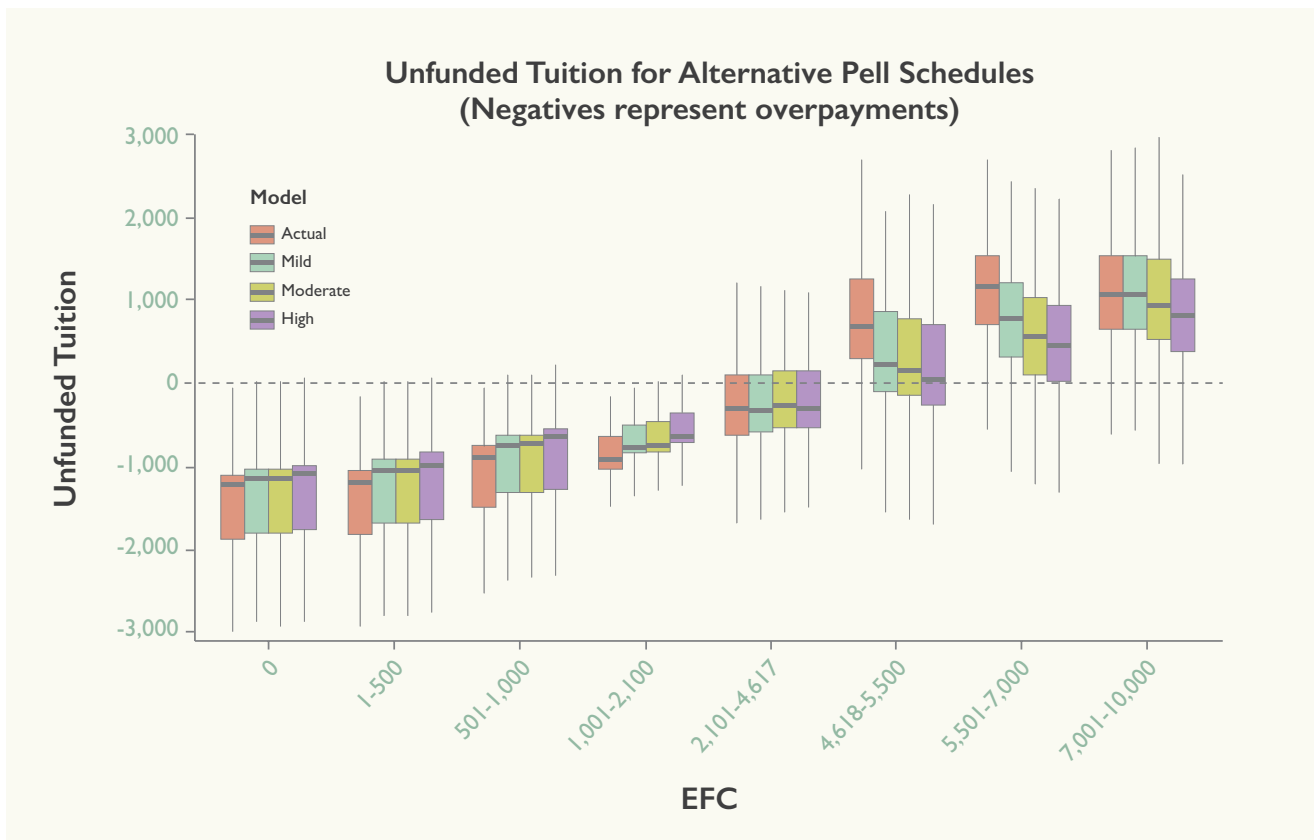
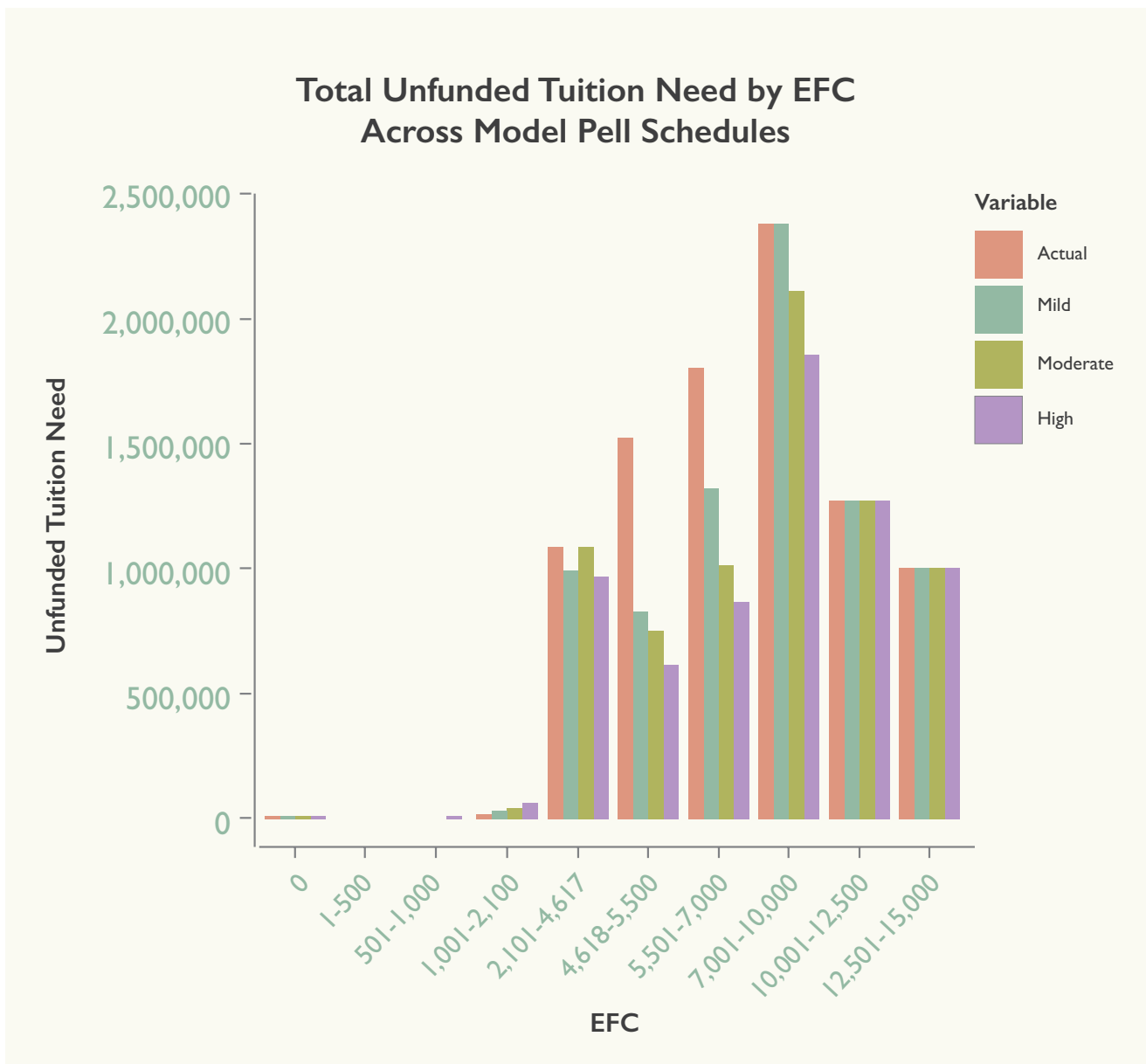


Figure 12 shows how each model schedule impacts aggregate unfunded tuition by EFC. This graph shows that, even in the Mild model, small reductions in the Pell grants received by the 0-2100 EFC population create space for significant reductions in unfunded tuition need among low-to- middle EFC students. The High model, for example, reduces unfunded tuition need among the 4618-5500 EFC population by over 60%. For all of the model schedules, students with EFCs between 4618 and 7000 would shoulder aggregate unfunded tuition burdens that are far more manageable than they are now. As reset by the model, these students' unfunded tuition burdens become equal to or considerably less than those shouldered by their high EFC peers.

**Figure 12:**  
*Total Unfunded Tuition Need by EFC Across Model Pell Schedules*



## Observations and Conclusion

Like all public policy decisions, the choice to substitute a newly crafted, state-specific Pell payment schedule for the existing one involves trade-offs. Several downsides are immediately apparent. First, a periodic recalibration of the Tennessee specific Pell payment would be necessary as unfunded tuition needs change over time across the student income and EFC distributions. Second, since this proposal would address only the Pell payment schedule for public community college students, the payment schedule for students attending any other institution type across another sector (e.g. private or public university) would not change. Whether maintaining multiple distinct Pell payment schedules is problematic or not deserves more deliberation and analysis. Third, the extent to which this proposal would impact borrowing decisions across different types of students is unknown.

*The disconnect between the FAFSA's EFC calculations and students' ability to pay was most glaring for students right at or just beyond the Pell eligibility threshold (or those in the 5,000 to 10,000 EFC range).*

Finally, the essence of the tradeoff this paper brings to the fore involves a flattening and broadening of Pell award amounts across students from higher EFC levels than are served by the current system. Effectively, this means reducing by small amounts current Pell awards for the lowest EFC students in order to expand eligibility and award amounts across lower to middle EFC students, where the gaps in unfunded tuition need are most readily observed.

Since full time community college tuition and fees in Tennessee are less than the current and proposed Pell grant amounts, the impact for a zero EFC student is a reduction in the refund she receives. In other words, all tuition and required fees would still be fully covered by the state-specific Pell payment schedule, but the refund to the student of the net Pell grant (the difference between direct tuition and fee costs and the Pell grant) slightly reduced. This small reduction then allows for a much broader expansion of the grant into the lower to middle EFC students where Pell funds a very small portion of direct tuition and fee costs, if the student is eligible at all.

In Tennessee's case, the state would be able to broaden access to the federal government's primary need-based grant because of the surfeit of community college students with EFCs of zero. The extension of significant amounts of Pell aid to heretofore unfunded students coupled with the need for states to analyze their own data and clearly identify the attendance costs they seek to cover, and to what extent, is the essence of the policy tradeoff and the mind change represented by the idea of a state-specific Pell payment schedule.

It is worth noting an anecdotal observation made during the course of this project. Members of the Higher Education Commission staff presented these findings to a small group of Financial Aid Directors across Tennessee public universities and community colleges. When asked for ideas to reform the Pell grant program, the Directors offered that the EFC calculation has become an ineffective proxy for a student's ability to pay. It was suggested that the EFC calculation be reformed which, while understandable and defensible, was beyond not only the scope of this paper, but our capacity to change.

With that understanding, the second observation made by the Financial Aid Directors was that the disconnect between the FAFSA's EFC calculations and students' ability to pay was most glaring for students right at or just beyond the Pell eligibility threshold (or those in the 5,000 to 10,000 EFC range). This was confirmed by a group of New England state aid program directors a few months later. In other words, the EFC calculations in that range suggest that the student has \$5,000 to \$10,000 in disposable income each year to contribute to college. This puzzled us and was at odds with the Aid Directors' professional experience. Instead, they observed that EFCs in that range often are indicative of independent students working in low wage jobs. Such students might have been eligible for a full Pell grant before they had the job, but their wages, though far from ample, pushed them beyond the eligibility threshold. If the current EFC calculations and Pell payment schedule are inappropriate for lower to middle income students, which are precisely where the observed unfunded tuition needs exist, then it seems prudent to focus public policy remedies on this population.

This paper conducted an in depth analysis of student level financial aid information across nearly an entire public higher education system, the sixth largest system in the nation. It revealed the composition of student financial aid packages and the extent of student borrowing. With new knowledge as to the family income levels at which current federal and state grant programs fall short of required tuition and fee costs there is potential to reform the distribution of Pell grants to address gaps in unfunded tuition need. Primarily observed in the lower to middle EFC distribution, these gaps point to the need for a slight flattening of the Pell payment schedule, which would significantly reduce unfunded tuition needs for many students. This could be done in a revenue neutral manner and would obviously require a waiver from the federal government. While not without tradeoffs that would require the careful consideration of each state, such a waiver would allow for the crafting of a data-driven, state- specific Pell grant schedule that would improve affordability for significant numbers of community college students. These ideas, while still under development and deserving of additional scrutiny, seem congruent with the broader goals espoused by leaders across the United States who have called for ambitious educational attainment goals and in the process have expressed an appetite for engaging the "third rail" national college completion agenda, a fundamental revamping of higher education finance.



## Endnotes

- 1 These two state financial aid programs, the Tennessee Education Lottery Scholarship (TELS) and the Tennessee Student Assistance Award (TSAA), will be referenced repeatedly throughout the paper.
- 2 Austin Peay State University (APSU); East Tennessee State University (ETSU); Middle Tennessee State University (MTSU); Tennessee State University (TSU); Tennessee Tech University (TTU); University of Memphis (UM).





**Russ Deaton**

Chief Financial Officer  
Tennessee Higher Education Commission  
(615) 532.3860  
*Russ.deaton@tn.gov*

**David L. Wright**

Chief Policy Officer  
Tennessee Higher Education Commission  
(615) 532.3862  
*David.l.wright@tn.gov*