Cicero Institute

Paying for Performance in the Pell Grant Program

Joey Torsella and Joe Lonsdale

In 2017, the federal government disbursed more than $29 billion in Pell grants to students across the country, up from 10 billion in 2000.[1,2] To put this in context, the cost to taxpayers of a single year of Pell grants now roughly equals the CBO-projected cost of the entire federal student loan program over the next decade.[3]

Despite ballooning costs which have far outpaced the rate of inflation, outcomes have worsened. Every dollar of increase in a school's average Pell grant[4] is now associated with an increase in Pell student debt of more than a dollar. According to the most recent data, 70% of Pell students who attended majority-Pell schools had made no progress towards repaying their debt 5 years after exiting school.[5]

Student earnings, the most obvious indicator of educational success, has stagnated or gotten worse over time. In 1997, a student matriculating at one of the most Pell-heavy[6] schools could expect to earn nearly $30,000 after 6 years; by 2008 this had fallen to $26,000.[7]
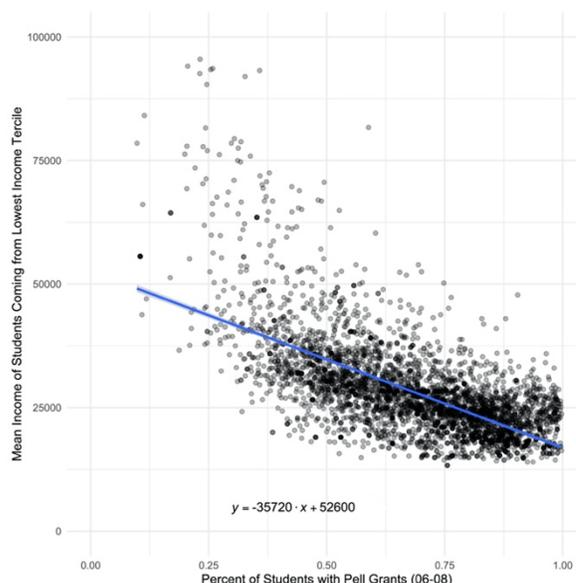

$$y = -35720 \cdot x + 52600$$

Figure 1: Median Student Income 6 years after graduation (measured in 2013-14), 2006-2008 entry cohort. Source: College Scorecard Data

How can the Pell program have grown so dramatically during such a long-term decline in student outcomes? Part of the problem, surely, is the growing cost of postsecondary education (although the purchasing power of a maximum Pell grant has been stable since 1996).[8] But an urgent problem for policymakers is that the Pell program neither rewards success nor punishes failure. In 2017, for example, the federal government gave both Hampshire College and Bellarmine University about $4,400 per student in Pell grant funds.[9] But while students from these

---

1 Cassandria Dortch, "Federal Pell Grant Program of the Higher Education Act: Primer," Federal Pell Grant Program of the Higher Education Act: Primer § (2018), https://fas.org/sgp/crs/misc/R45418.pdf, p. 19.

2 "Pell Grants: Recipients, Maximum Pell and Average Pell – Research – College Board," College Board, November 1, 2019, https://research.collegeboard.org/trends/student-aid/figures-tables/pell-grants-recipients-maximum-pell-and-average-pell.

3 The CBO projection does not use a fair-market valuation method, according to which the taxpayer costs of the loan program are much higher.

Andrew Kreighbaum, "CBO: Federal Student Loan Program Will Run Deficit," Inside Higher Ed, May 8, 2019, https://www.insidehighered.com/quicktakes/2019/05/08/cbo-federal-student-loan-program-will-run-deficit.

4 That is, as more dollars are spent per Pell student at a school, not as more total dollars are spent. As the average Pell amount goes up, so does the average Pell student debt.

In fact, an increase of a dollar in a school's average Pell grant is associated with an increase of about 7 dollars in Pell student debt, depending on the year in question. Since the number of (full-time) yearly grants received by a student falls somewhere between 0.5-6, the increase in Pell student debt per dollar of Pell grant is some amount greater than 1.

5 "College Scorecard Institution-Level Data," College Scorecard (Department of Education, 1996-2018), https://collegescorecard.ed.gov/data/, 2016-17 5yr Repayment Rate (weighted by # of students in repayment cohort) x 2011-12 Pell Percent.

6 By "Pell-heavy," we refer to schools 75% of whose Title IV students receive some amount of Pell grants. Note that College ScoreCard data only includes a school's Title IV-receiving students, and students who do not receive aid are excluded from all metrics.

7 "College Scorecard Institution-Level Data," College Scorecard (Department of Education, n.d.), https://collegescorecard.ed.gov/data/, Pell attendance data from 97/98 and 07/08 files; Mean 6yr income from 03/04 and 13/14 files; mean weighted by number of working students at 6yrs.

8 Cassandria Dortch, "Federal Pell Grant Program of the Higher Education Act: Primer," Federal Pell Grant Program of the Higher Education Act: Primer § (2018), https://fas.org/sgp/crs/misc/R45418.pdf, p. 15.

9 "Distribution of Federal Pell Grant Program Funds by Institution and Award Year," US Department of Education (ED), September 30, 2019, https://www2.ed.gov/finaid/prof/resources/data/pell-institution.html, 2017 dataset.

schools had near-identical socioeconomic backgrounds, Bellarmine's student incomes were twice as large as Hampshire's 6 years after matriculation ($42,000 to $20,000).[10] The Pell program equally rewarded Hampshire and Bellarmine even though Hampshire provided a significantly worse return both for taxpayers and for the students themselves.[11] If we want to incentivize good performance, improve student outcomes, and get what Pell grants are paying for, this indiscriminate compensation must end.

The university has traditionally been a place within which the competition of ideas is free and productive. We propose extending this feature of the university to the postsecondary education industry more broadly. Ideas about how to educate students should be in open and productive competition, and institutions should be rewarded based on the value they add to their students' lives. A number of stakeholders from across the political spectrum have argued in favor of performance-based compensation in the Pell grant program.[12,13] Our program operates broadly along these lines. But while other proposals have operated on process-based, self-reported, or indirect measures of success (like completion rates, default rates, and graduation rates), we support an outcome-based measurement.

Specifically, we propose the Pell for Progress reform: a program which would tie the amount of institutional Pell compensation to the amount a school increases a given student's future income. This reform – like an income-share agreement with public dollars – would make schools

stakeholders in their students' future success. By risk-adjusting the returns to these stakes, government can equally incentivize schools to do well by all Pell students, regardless of their level of advantage. This reform would reward good schools, improve student incomes, and expand access to education for the most disadvantaged.

Pell in Practice

Let's take a look at how the Pell Grant program works right now for a typical Pell student (call her Jane):

1. Application: For every year in which Jane wants aid, she has to submit a Free Application for Federal Student Aid (FAFSA) to the Department of Education.
2. Classification: The DoEd uses Jane's FAFSA form to determine how much she or her family (if she is a dependent) is expected to contribute to her education. Based on this and the total cost of her education, the department determines the size of Jane's award.[14]
3. Award: Jane's college is given access to federal funds to cover upcoming authorized disbursements (which include Jane's 1st semester Pell grant). The school applies most of these funds on Jane's behalf as a credit to her student account to cover tuition and fees.[15]

[10] "College Scorecard Institution-Level Data," College Scorecard (Department of Education, n.d.), https://collegescorecard.ed.gov/data/, Median Student Income, 2014-15 dataset.

[11] In addition to evidence that about 20% of each Pell grant is captured by the institution via a reduction in institutional aid (http://econweb.umd.edu/~turner/Turner_FedAidIncidence_Jan2017.pdf), Pell grants necessarily increase institutional revenue. By "rewarded," we mean these two effects.

[12] Wesley Whistle, Tamara Hiler, and Michael Itzkowitz, "Sharing the Risk for Students' and Taxpayers' Pell Grant Investment ," Third Way, June 6, 2018, https://www.thirdway.org/report/sharing-the-risk-for-students-and-taxpayers-pell-grant-investment.

[13] Ben Miller and Beth Akers, "Designing Higher Education Risk-Sharing Proposals," Center for American Progress, May 22, 2017, https://www.americanprogress.org/issues/education-postsecondary/reports/2017/05/22/432654/designing-higher-education-risk-sharing-proposals/.

[14] Cassandria Dortch, "Federal Pell Grant Program of the Higher Education Act: Primer," Federal Pell Grant Program of the Higher Education Act: Primer § (2018), https://fas.org/sgp/crs/misc/R45418.pdf, p. 2.

[15] Cassandria Dortch, "Federal Pell Grant Program of the Higher Education Act: Primer," Federal Pell Grant Program of the Higher Education Act: Primer § (2018), https://fas.org/sgp/crs/misc/R45418.pdf, p. 11.

4. Record-Keeping: The DoEd routinely collects data on Jane, including her post-collegiate income data, and pairs it with the demographic data from her FAFSA and other sources.[16]

Our reform makes two simple changes to the existing program.[17] First, the DoEd predicts each student's future income at the time he or she enters college. Second, the DoEd rewards schools whose students did better than this prediction and sanctions schools whose students did worse. In short, schools are compensated based on how much they improve (or harm) their students' future prospects.

Measuring Success

In the current system, the Department of Education uses each student's submitted FAFSA forms to keep track of his or her demographic information. Together with income data from the IRS, a picture emerges of how a student's family background and postsecondary education combine to influence his or her future earnings.

Under Pell for Progress, the DoEd would use this data to predict a student's future income at the time he or she enters college. In any given year, the DoEd would examine its most recent retrospective data for student incomes at 6, 7, 8, 9,

and 10 years after matriculation. It would then separate this data out by the demographic categories of race, gender, status as a dependent or independent, and family income.[18] For each distinct category of student, it would then take the median income in each post-entry year, adjust it for inflation, and thereby produce the Expected Income (EI) of a student falling into the category in question. In addition to determining each risk-category's expected income, the DoEd shall also determine the Minimum Acceptable Income (MAI) as the weighted mean of the expected income and the poverty level, with the poverty level receiving twice the weight of the expected income.[19] The student's Actual Income (AI) will be compared to these predictions to determine whether the school was successful in educating the student (and how much the school will be compensated for doing so).

Let's return to Jane, who will enter school in 2020 under the Pell for Progress program. Stipulate that Jane is a dependent white female student whose family earns between $30,000 and $40,000. To determine her 6-year expected and minimum incomes, the DoEd will look at the most recent 6-year earnings data from the group of white female dependent students with Jane's family background. If the median income of this group (adjusted for 6 years of expected inflation) is, say, $30,000, then this will stand as Jane's 6-year post-entry expected income. Together with the poverty

---

[16] "Technical Documentation: College Scorecard Institution-Level Data," College Scorecard (Department of Education, November 2019), https://collegescorecard.ed.gov/assets/FullDataDocumentation.pdf, pp. 34-5.

See appendix for a discussion of the level of access that the Department of Education has to individualized student earnings data and the implications this has for the proposal.

[17] Besides the fact of indiscriminate compensation, there are several practical reasons that the Pell program – as opposed to the loan program or state-level funding programs – is the right policy lever for institutional accountability. First, the Pell program constitutes a larger direct federal expenditure than the student loan program, and its larger proportional effect on student demand makes institutional acceptance of any risk-sharing scheme more likely. Second, outcomes are poorer for the Pell student population than for the Title-IV receiving population in general, and there is more room for institutional improvement. Finally, the Pell program has a broad impact on nearly every traditional IHE. In short, the program is a good fit because it impacts students whom accountability would most help and it impacts institutions broadly and powerfully enough to effect serious change.

[18] It may also be necessary to adjust for other demographic characteristics, but the public data is insufficient to say so.

Depending on the existing practice (see appendix), this process may involve submitting a list of students in each demographic category to the Treasury Department. This may entail constructing new student cohorts.

[19] The goal of "minimum acceptable income" is to determine the level at which the student can be said to have gained no advantage by attending college instead of entering the workforce. At this level, the public had no business rewarding the college for its role in the student's education. Under Pell for Progress, at this level the government would claw back all of the Pell amount from the institution. This income level changes in concert with changes in demographic characteristics, accounting for the use of expected income in the average. The poverty level is a standard baseline income measure. A simple average of these two figures would also work but might unacceptably increase the risk level of students with a lower expected income.

level (stipulate $12,000) this is sufficient to calculate Jane's MAI - $18,000.

This method has three advantages. First, it fits with the existing data-collection practices of the Department of Education and would not force it to upend decades of practice to support a reform affecting only one of the programs it administers. Second, since the expected income of a given student will serve as the baseline for educational success, the demographics-based prediction acts as a risk-adjustment, preventing colleges from benefitting by selecting students who are already likely to succeed. Third, since the success measure is prospective and not retrospective, success is not zero-sum: if all institutions get better at educating students, all institutions will be rewarded for it.

Paying for Performance

We propose tying the amount of a school's compensation for educating a Pell student to the value it adds to that student's education. Under Pell for Progress, the DoEd would determine award amounts as normal according to a student's EFC and cost of attendance. It would distribute these awards differently: each dollar disbursed by a school will incur for the institution five separate 20¢ debts, each of which will come due in one of the five years in which the student's income is to be recorded (6, 7, 8, 9, and 10 years post-entry). In each of these years, the government will use the student's earnings results to determine how much the school is to repay the government. If the student's earnings exactly equal his or her expected income, the program behaves just like the existing grant program: none of the 20¢ is due and this portion of the total debt is forgiven entirely. If the student's earnings equal his or her Minimum Acceptable Income (1/3 of the way between the poverty level and the expected

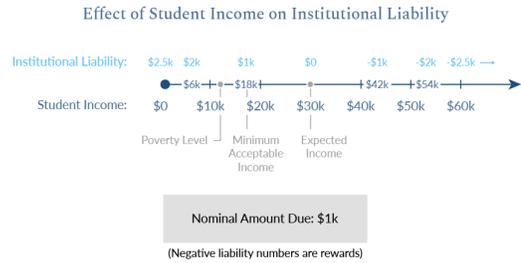income), then the school will be required to repay all of the 20¢ due.

Figure 2: Determination of institutional liability in one income measurement year of a student with an expected income of $30,000 and a total Pell grant amount of $5,000.

These two fixed points determine the rewards and punishments for all other income values. Say, for example, that Jane's expected income in the first measurement year is $30,000, she received a total of $5,000 in Pell grants, and the individual poverty level is $12,000. If Jane earns $30,000 in the first of the five income-measurement years, then the institution's $1,000 debt for that year is forgiven. If Jane earns $18,000 (the Minimum Acceptable Income), the school must repay the entire $1,000 debt. Since the amount repaid decreases by 100% of the $1,000 due between these two points, a decrease of $3,000 in student income corresponds to an increase in institutional liability equaling 25% of the amount due ($250) and vice-versa. If Jane earns $0, the school will therefore pay 250% of the debt or $2,500. This shall itself determine the upper bound: at $60,000 in student income and above, the school will get a $2,500 reward.

In this way, while the Pell award still accrues to students as normal, an additional financial instrument accrues to the disbursing institution. The value of this instrument fluctuates depending on the underlying value of the student's

education. If the student does better than expected, the instrument is an asset. If he or she does worse than expected, the instrument is a liability. Since the expected income controls for qualities of the student which preexist his or her educational experience, the instrument's value should directly depend on how much the school improves the student's human capital. For an institution at which each student earns exactly his expected income, then, the Pell program will work effectively as normal: though authorized disbursements incur interest-free debt, the debt is completely forgiven as the student earns his or her EI.

This program provides a powerful incentive for colleges to invest in their Pell students' futures. Institutional financial aid will become more than a tool for attracting students: for the best schools, spending more money on Pell students may become a profitable investment. Further, this program provides a reason for colleges to invest in their students' success for more than the time they remain in attendance. Some schools may even find it beneficial to offer vocational programs or training to Pell alumni. Others may offer more night classes or partner with corporations to tailor instruction to workforce needs. Schools will be forced to reexamine old models and adopt new ones insofar as they are successful, and the Pell for Progress program, by allowing schools to reap the benefits of their own innovations, would set up a competition of ideas in education that would benefit students of all backgrounds.

This program would also enable the best schools to expand their Pell student populations while forcing the worse schools to do the opposite. Let's return to the case of Hampshire and Bellarmine. While the public doesn't have access to the individualized student data underlying the institution-level data, let's stipulate that each of both schools' Pell students received the schools'

average award ($4,400) and that all the Pell students have identical socioeconomic backgrounds. Assume also that the expected income of this risk category is $27,000, and that Hampshire Pell incomes remain at $20,000 for the five measurement years while Bellarmine's stand at $42,000. What are the consequences for each school of taking a single class of 100 Pell students?

Both schools spend the four years during which the class is in attendance with equivalent cashflows from the federal government of $440,000. Once the class leaves, however, things change quickly. Bellarmine ends up with a reward of $660,000 a year for the five years in which the class's income is being measured. This reward will allow successful schools like Bellarmine to improve the quality of their education, provide more generous institutional aid to those students for whom the current Pell grant is insufficient, and expand the size of their Pell student population.

Hampshire, on the other hand, would lose money in yearly loan-repayments of nearly $250,000 over that same time period. Although Hampshire ends up disbursing more in Pell grants than it repays to the government (for a total balance of around $530,000), this amounts to only around $1,300 per student-year (a far cry from the $4,400 spent). This financial penalty alone will be enough to disincentivize bad schools from targeting the Pell population over time. Schools will no longer be able to enroll Pell students, pocket the revenue, and remain indifferent to student outcomes.

As the program matures, regulators should also restrict the ability of badly performing schools to swell the ranks of their student bodies with Pell students. A cap on Pell student numbers for those schools with established track records of underperformance would further prevent manipulation of the system.

Conclusion

Beyond the institutional advantages of Pell for Progress, there are serious consumer benefits. Because the government will begin to make the fullest use of the individualized data to which it now has access, it can provide much more powerful metrics to college students and parents. In particular, it should publish an institutionally-aggregated measure of student performance relative to expected income in the recent past.[20] This value-add measure would further drive students away from bad schools and towards schools that can improve their prospects. Second, the amount of institutional aid a college offers will become a better signal of the school's underlying quality. Since the Pell package is worth more to a good school than to a bad one, a good school can spend more out-of-pocket on its Pell students than a bad one. Strong financial aid packages will be more than incentives for students to attend: they'll be signals that students' prospects are better if they do attend.

It is time to pay for performance in the Pell program before we see another decade of declining outcomes and rising costs. Our reform would encourage a competition of educational ideas which would jointly benefit students, businesses, and institutions of higher education. It would give each institution a share in students' futures without compromising the existing program's progressive needs-based structure or threatening the broader FSA regulatory framework. It should be supported by liberal and conservative policymakers alike.

---

[20] Jonathan Rothwell, "Using Earnings Data to Rank Colleges: A Value-Added Approach Updated with College Scorecard Data," Brookings (Brookings, August 25, 2016), https://www.brookings.edu/research/using-earnings-data-to-rank-colleges-a-value-added-approach-updated-with-college-scorecard-data/. Brookings has already produced a version of such a measure from the aggregated data publicly available, finding it to be fairly stable over time.

Appendix: FAQs

How exactly would this program impact an institution over the lifecycle of a Pell student's education and subsequent entry into the workforce?

Let's return to our example student, Jane. Assume that Jane matriculates in 2020 and attends classes full-time for four years, receiving $5,000 in Pell disbursements for each year of attendance. Let the individual poverty level remain at a constant $12,000.

Year	Actual Income	Exp. Income	Min. Income	Debt Due	Amount Paid
2027	$24K	$24K	$16K	$4K	$0
2028	$0K	$24K	$16K	$4K	$12K
2029	$32K	$24K	$16K	$4K	($4K)
2030	$36K	$30K	$18K	$4K	($2K)
2031	$12K	$30K	$18K	$4K	$6K

Out of a total of $20,000 loaned to Jane's College to cover its Pell disbursements to her, it will have repaid $12,000 to the government by 2031 (the final year of debt maturity in Jane's case). The college could repay a maximum of $56,000 and could earn a maximum of $56,000 in this case.

Would this program punish liberal arts schools and other similar institutions?

Only if these institutions do worse for their students' future earnings. The earnings of many liberal arts majors are strong over the medium and long term. But if schools do not help their

students find stable and fruitful employment, they will face sanctions under this program. Outcomes of students from low-income backgrounds have consistently declined over time, and many schools now produce students who earn less on average than the typical non-college attendee. Pell for Progress will sanction schools which produce students who struggle to earn a living and cannot repay their debts, but these schools – if the education is worthwhile – can just as well survive without federal subsidy. And any institution – regardless of whether it is a liberal arts school – will be rewarded for securing its students' economic future.

How would this program deal with multiple years of awards given to a single student (and the concomitant FAFSA data)?

Under the current Pell program, a student is eligible for up to twelve full-time semesters (or six years) of grants. In each of the years in which the student is applying for an award, he or she must submit a new FAFSA form. We envision all Pell dollars disbursed to a student at a single institution accruing to the five institutional debts whose maturity dates are determined by the student's entry year. A school educating a student who enters in 2020 and receives four years of $5,000 grants would incur in each of those years five $1,000 debts maturing in 2027-2031. Changes in the student's grant amount are straightforwardly dealt with in this way; changes in the student's demographic background over time will require more careful attention. To start, the program may simply have to rely on each student's entry-year demographic information to determine his or her expected income. As the program matures, regulators should match retrospective student incomes with demographic data taking into account all available years of information and

should likewise determine the risk category any student falls into.

What about smaller schools, for which year-to-year performance variance is more likely to be random?

Although this will even out over time, we support a minimum Pell class size for participation in the evaluation program – any entering class with fewer than 30 Pell students should not participate in this program (for these schools, the program will behave as normal). This is a small portion of the total number of schools, and a smaller portion of the total amount of Pell students attends them. It is also the standard minimum number of individuals chosen to protect privacy according to DoEd's existing data practices.

How would this program avoid violating the unit record ban?

It is not clear whether DoEd has direct access to a record of each individual student's earnings paired with his or her FAFSA demographic data. If it does, then the Pell for Progress program is straightforwardly implementable without changing existing practice. If it does not, mandating such access would violate the unit record ban enacted in 2008. The ban prevents the sharing of FSA recipients' Personally Identifiable Information (PII) across agencies except when part of a system in use prior to the date of the ban's enactment and when necessary to implement an FSA program.[21] So how can Pell for Progress go forward if the department cannot link an individual's earnings data to his or her Expected Income? A solution to this problem cannot require the transmission of PII across agencies without violating the unit record ban.

Fortunately, there is a way to implement the program as designed without transmitting PII. If DoEd does not have direct access to earnings, the

---

[21] Ben Miller and Beth Akers, "Designing Higher Education Risk-Sharing Proposals," Center for American Progress, May 22, 2017, https://www.americanprogress.org/issues/education-postsecondary/reports/2017/05/22/432654/designing-higher-education-risk-sharing-proposals/, 1.

current practice to obtain earnings data is to submit a list of student names and social security numbers to the Treasury Department and receive the mean and median earnings of that list.[22] If this is the case, then Pell for Progress would have the Treasury Department calculate institutional liability and return this information to DoEd as an aggregated measure based on individualized student earnings.

To determine the mean and median earnings of a group of students, the Department of Education submits a list of names and SSNs to Treasury. Treasury responds with both the number of students who did not match submitted tax returns and the mean and median earnings measures for those that matched.[23] Ignoring the 30-name minimum, in a given year the Department of Education might submit the following list:

1. John Smith, 123-45-6789
2. Jane Doe, 987-65-4321
3. Mark Cicero, 010-30-0106

Each of these students is a member of an entry-year cohort at a given institution: all three attended the same school, and all three entered that institution at least 6 years ago and within one year of each other (given a 2-year pooled entry cohort, two of the students may for example be 6 years post-entry and the third 7 years). In response to this list, Treasury returns to the Department of Education the following information: (Mean: $40,000; Median: $30,000; Did Not Match: 0). This signifies the mean and median earnings for our list of three students and says that all three were matches for submitted tax returns.

Pell for Progress would require the DoEd to add two additional non-PII elements to the existing list. The first is expected income:

1. John Smith, 123-45-6789, $30,000

2. Jane Doe, 987-65-4321, $30,000
3. Mark Cicero, 010-30-0106, $40,000

This element is each student's expected income for the year in question, based on his or her demographic background.

The second element is essential, but more difficult to understand. Stipulate that all three students received four years of Pell grants. John Smith and Jane Doe received $20,000 each, or $5,000 per year. Mark Cicero received $10,000 – $2,500 per year. Remembering that institutional Pell debt is to come due in each of five income measurement years, the current year will see the maturity of a total of $10,000 dollars in institutional debt. Of this amount, $8,000 relates to the performance of Smith and Doe, or $4,000 each. $2,000 relates to the performance of Cicero. The amount of influence each student's performance has over the institution's debt is directly determined by this share – however badly Cicero does, his performance does not affect $8,000 of the $10,000 institution debt. Put another way: Cicero's impact on the institution's liability accounts for 1/5 of the final picture, with Smith's and Doe's accounting for 2/5 each. This measure, the share of the institution's yearly debt which was accrued in disbursing Pell dollars to the student in question, is the final element of the new list:

1. John Smith, 123-45-6789, $30,000, 2/5
2. Jane Doe, 987-65-4321, $30,000, 2/5
3. Mark Cicero, 010-30-0106, $42,000, 1/5

DoEd then sends this list to Treasury. The addition of Expected Income allows Treasury to use each student's Actual Income to calculate the outcome of the institution's risk-share. Assuming a $12,000 poverty level:

[22] Ben Miller and Beth Akers, "Designing Higher Education Risk-Sharing Proposals," Center for American Progress, May 22, 2017, https://www.americanprogress.org/issues/education-postsecondary/reports/2017/05/22/432654/designing-higher-education-risk-sharing-proposals/, 14-15.

[23] Ben Miller and Beth Akers, "Designing Higher Education Risk-Sharing Proposals," Center for American Progress, May 22, 2017, https://www.americanprogress.org/issues/education-postsecondary/reports/2017/05/22/432654/designing-higher-education-risk-sharing-proposals/, 14-15.

1. John Smith (EI: $30,000, AI: $30,000, MAI: $18,000): 0% due
2. Jane Doe (EI: $30,000, AI: $18,000, MAI: $18,000): 100% due
3. Mark Cicero (EI: $42,000, AI: $72,000, MAI: $22,000): -150% due

Since John's income equaled his expected income, the school's debt is forgiven. Since Jane's income equaled her minimum income, the school must repay the entire debt. Since Mark's income exceeded his expected income, the school is rewarded. Paired with the relative weights of each student, this information is sufficient for Treasury to calculate the school's total debt obligation as a percentage: Total % Due = Due_S * $Weight_S$ + Due_D * $Weight_D$ + Due_C * $Weight_C$. (0% * 2/5) + (100% * 2/5) + (-150% * 1/5) = 10%. Since Cicero had only half of Doe's weight, his performance does not fully compensate for hers: the institution will have to return 10% of the nominal debt amount to the government. After making this determination, Treasury returns the following aggregated data to the DoEd: (Mean: $40,000; Median: $30,000; Did Not Match: 0; Liability: 10%)[24]. The Department of Education can then determine that the school owes 10% of its current-year debt for this group of students, or $1,000; 90%, or $9,000, is forgiven.

In this way, Treasury can communicate the aggregated impact of earnings data on a school's Pell liability without revealing the individualized earnings data behind that calculation and violating the unit record ban.

References

---

[24] Regulators should strongly consider also reporting the unweighted performance number (in our example case, -50%). This provides a more accurate measure of an institution's value-add and could be reported publicly as such. It could also help provide an indication of whether the Pell for Progress incentives are effective. In theory, an institution should be optimizing for the weighted performance; if the incentives are working weighted performance will on average be better than unweighted performance.

"College Scorecard Institution-Level Data." College Scorecard. Department of Education, n.d. https://collegescorecard.ed.gov/data/.

"Distribution of Federal Pell Grant Program Funds by Institution and Award Year." US Department of Education (ED), September 30, 2019. https://www2.ed.gov/finaid/prof/resources/data/pell-institution.html.

Dortch, Cassandria. Federal Pell Grant Program of the Higher Education Act: Primer, Federal Pell Grant Program of the Higher Education Act: Primer § (2018). https://fas.org/sgp/crs/misc/R45418.pdf.

Miller, Ben, and Beth Akers. "Designing Higher Education Risk-Sharing Proposals." Center for American Progress, May 22, 2017. https://www.americanprogress.org/issues/education-postsecondary/reports/2017/05/22/432654/designing-higher-education-risk-sharing-proposals/.

Miller, Ben. "Building a Student-Level Data System." Publication. *Building a Student-Level Data System*. Institute for Higher Education Policy, May 2016. http://www.ihep.org/sites/default/files/uploads/postsecdata/docs/resources/building_a_student-level_data_system.pdf.

"Pell Grants: Recipients, Maximum Pell and Average Pell – Research – College Board." College Board, November 1, 2019. https://research.collegeboard.org/trends/student-aid/figures-tables/pell-grants-recipients-maximum-pell-and-average-pell.

Rothwell, Jonathan. "Using Earnings Data to Rank Colleges: A Value-Added Approach Updated with College Scorecard Data." Brookings. Brookings, August 25, 2016. https://www.brookings.edu/research/using-earnings-data-to-rank-colleges-a-value-added-approach-updated-with-college-scorecard-data/.

"Technical Documentation: College Scorecard Institution-Level Data." College Scorecard. Department of Education, November 2019. https://collegescorecard.ed.gov/assets/FullDataDocumentation.pdf.

Whistle, Wesley, Tamara Hiler, and Michael
        Itzkowitz. "Sharing the Risk for Students'
        and Taxpayers' Pell Grant Investment."
        Third Way, June 6, 2018.
        https://www.thirdway.org/report/sharing-
        the-risk-for-students-and-taxpayers-pell-
        grant-investment.
Kreighbaum, Andrew. "CBO: Federal Student
        Loan Program Will Run Deficit." Inside
        Higher Ed, May 8, 2019.
        https://www.insidehighered.com/quicktakes
        /2019/05/08/cbo-federal-student-loan-
        program-will-run-deficit.