Do additional dollars buy engagement? Effects of monetary incentives on attending financial aid counseling for at-risk students

Abstract

During the COVID pandemic, many financially vulnerable students at Georgia State University (GSU) received money from the CARES Act Higher Education Emergency Relief Fund (HEERF). With this money depleted, GSU administrators were concerned that GSU HEERF recipients would be at risk of dropping out. They wanted these students to receive financial counseling advising students about their options to successfully fund their education. However, uptake for similar counseling had historically been low. In this context, GSU planned to email HEERF fund recipients inviting them to attend financial counseling.

This paper reports on the results of an experiment that added to those emails randomized offers of monetary incentives for counseling attendance with the goal of measuring the degree to which monetary incentives increase counseling attendance. One-fifth of email recipients received an email with no monetary incentive to attend the counseling session. The remaining 80% received emails with monetary incentives that were randomized among 10 equal sized bins from \$10 to \$100. We analyze the results for 3,481 students who received these randomized email invitations.

James C. Cox Georgia State University

Daniel Kreisman Georgia State University

Stephen Shore Georgia State University

Counseling attendance rates increased roughly monotonically and linearly in money offered, from under 2% for those not offered monetary incentives, to 3.7% for those offered \$10, to 8% for those offered \$100. Low open rates for the emails explains the low uptake for high amounts. The figures imply that offering \$10 to 100 students to attend counseling will cost \$37 and, on average, increase the number of students attending counseling from two to 3.7, so that it costs roughly \$22 to use \$10 monetary incentives to induce an additional student to attend counseling. In comparison, offering \$100 to 100 students will cost \$800 and increase the number attending counseling from two to eight, so that it costs roughly \$130 to use \$100 monetary incentives to induce an additional student to attend counseling. An additional finding is that monetary incentives are particularly effective at inducing students of color and students with loans to attend counseling.

1. Introduction

Many university students struggle financially to remain enrolled in school. This is particularly true for those from less wealthy families. Given the importance of college degrees for later life earnings, this holds significance for wealth and inequality in later life (Barrow & Malamud, 2015). In particular, research suggests that access to student aid—including both grants and loans—can play a strong role in college attendance and completion (e.g., Barr et al., 2021; Bettinger et al., 2019; Card & Solis, 2022; Carlson et al., 2022; Denning, 2019; Denning, Marx, & Turner, 2019; Stinebrickner & Stinebrickner, 2008). Importantly, research now shows that is not simply access to financial aid that matters. Financial literacy, student supports, advising and aid design also play a strong role (Marx & Turner, 2018; Cox, et al., 2020; Abraham et al., 2020).

At Georgia State University (GSU), over 4,000 students per term are identified as at risk of being withdrawn from classes due to finances. Most students come from lowincome families, in the sense that they are eligible for Pell grants.¹ During the Covid-19 pandemic, additional assistance has been available to assist these students.² However, these funds will soon be depleted. When this occurs, many at-risk students who have benefited from these funds will likely be withdrawn or drop out of college.

To assist students in navigating the complex world of student financial aid, including grants and loans, the Office of Student Financial Services (SFS) at Georgia State University (GSU) Student Financial Management Center provides proactive advising. Despite the availability of these services, many students—even those in need of financial assistance and despite proactive outreach from the Center—never come for free counseling. Our experiment is designed to test whether relatively modest financial incentives can improve uptake of counseling, and whether counseling improves student outcomes. To ask these questions we have designed an experiment that is embedded within SFS's existing activities.

Trying to aid students flagged as in danger of being dropped from their courses due to nonpayment, SFS at GSU offered HEERF funding to students identified as at risk of dropping out. As this funding neared its end, SFS was slated to send emails notifying students who received this funding that it was coming to an end and encouraging them to come in for financial counseling. SFS believed that students attending one of these advising sessions would be more likely to take advantage of the financial aid options available to them, thus increasing the probability of degree attainment. During these advising sessions, students would receive:

- Guidance on completing the financial aid process
- Advice on financial aid options available to them
- Loan and debt counseling including repayment options to improve affordability
- Student success advising to ensure financial aid is not lost due to poor academic performance
- Basic financial literacy training

Because students were already receiving funding from SFS, the emails came from a trusted source with which they were familiar. We used this existing framework to ask:

- 1. Can modest financial incentives induce reluctant students to take financial aid counseling?
- 2. Can that counseling reduce student dropout, ease financial burdens, or improve student performance and graduation rates?
- Is counseling more (or less) effective for hard-toreach populations (who require larger incentives) to participate?

¹ https://news.gsu.edu/2023/09/07/georgia-state-ranked-highly-for-socialmobility-research-service/ as accessed on December 4, 2023.

² See in particular the Higher Education Emergency Relief Fund (HEERF) under the CARES Act, for minority serving institutions (https://www2.ed.gov/ about/offices/list/ope/heerfmsi.html; https://www2.ed.gov/programs/ heerf/index.html).

2. Background and institutional details

GSU's Student Financial Services (SFS) provides several forms of financial advising to students.³

Students with questions or concerns can reach out to SFS by showing up (in person during business hours to one of several locations on GSU's multiple campuses), phoning the SFS call center, or scheduling a virtual appointment from the SFS website. These appointments are typically 15 to 20 minutes in length, during which time SFS team members can look at student account information and answer their questions. Problems that can't be solved during these sessions are referred to relevant processing teams to update.

SFS staff receive a daily status report detailing the students for whom there are open action items (e.g., students who need to complete their FAFSA form). SFS proactively contacts these students via email to resolve open issues. SFS staff also contact students who may not have open issues, but about whom SFS has flagged a concern. For example, SFS routinely reaches out to students whose academic performance has been flagged as at risk for losing Hope Scholarship⁴ eligibility; these students are emailed and invited to come in for counseling.

During the Covid-19 pandemic, federal funding was available under the CARES Act to support universities and their students. In particular, thousands of GSU students received Higher Education Emergency Relief Fund (HEERF) funding under the CARES Act. HEERF money was awarded at GSU to two groups. First, students were awarded HEERF funds when their expected family contribution (EFC) was low enough to qualify for a Pell grant.⁵ These awards were made to Pell-eligible undergraduate students and graduate students in a similar financial situation whose graduate status made them ineligible for Pell grants. Second, GSU students were invited to apply through a website for HEERF emergency assistance. The amounts received by students under HEERF varied based on their EFC, with some students receiving as much as \$2,500. This money was paid into student accounts.

With HEERF funding coming to an end, HEERF recipients received an email inviting them to attend a financial counseling session. For the experiment, we randomized students from this population already slated to receive emails from SFS into our experiment. Some students simply received emails inviting them to counseling. Others were additionally offered an amount between \$10 and \$100 if they took either a virtual or in-person counseling appointment. Appendix 1 shows a sample of the email offering students money to attend counseling. Students without a financial incentive received an otherwise identical email omitting any mention of compensation.

Students who received these emails were invited to click to schedule an appointment. These appointments were scheduled for 30 minutes, longer than the SFS appointments intended to target specific problems, which are typically 15 to 20 minutes in length.

3. Experiment and data

Our experiment began in the third week of April 2023 and ended in the second week of May. The emails were sent out in six batches. In each batch, 20% of email addresses were randomized to receive the control email with an offer of counseling but no payment. The remaining 80% received one of the treatment emails. Among those receiving the treatment emails, an equal share was randomized to each treatment amount. Thus, in each wave, 8% of email addresses were assigned to each treatment value—which ranged from \$10 to \$100 in \$10 increments—with the remaining 20% receiving the control email.

Initially, 3,952 emails were sent during this period. Due to an internal error in inviting students, 235 students received more than one email, with some receiving both treatment and control emails. We drop these students from the analysis, resulting in an analysis sample of 3,481 students who received an email invitation. Table 1 shows characteristics of students according to whether they received the control email, with no offer of money, or one of the treatment emails.

More than half (64%) of students are female, and the average age of those in our sample is just over 25 years old. Almost two-thirds of students are Black, 10% are Asian, and another 10% fall into several other categories other than white, including Hispanic and multiracial. These were generally too small to test for statistical significance in effects. Just fewer than one-third of students were in GSU's College of Arts & Sciences, and 28% were enrolled

- 3 The source of background information throughout this paper was an interview with Atia Lindley, director of GSU's Student Financial Management Center, on Thursday, December 7, 2023.
- 4 https://www.gafutures.org/hope-state-aid-programs/hope-zell-millerscholarships/hope-scholarship//heerf/index.html).
- 5 https://fsapartners.ed.gov/knowledge-center/library/dear-colleagueletters/2023-01-26/2023-2024-federal-pell-grant-payment-anddisbursement-schedules

at Perimeter College, a two-year school affiliated with GSU. Slightly fewer than one-third of students received Pell grants, and one in five had a federal loan. Just over onequarter of students were first-generation college attendees. Across all categories, we find no difference between the treatment and control groups, suggesting the randomization procedure was indeed random.⁶

In the final three statistics of the table we show outcomes in the semester following the experiment. An equal share (56%) of the treatment and control groups enrolled in the subsequent term, suggesting that the treatment did not alter behavior.

4. Results

We begin evaluating effects of the experiment by observing differences in responses to email invitations by treatment status. Figure 1 shows email open and click-through rates across treatment groups. We note that neither open nor click-through rates are measured perfectly. Depending on students' email settings or web browser, they might be able to read at least part of the email without opening it, potentially including the offer amount, which wasn't in the email subject line. Thus, email reads are imprecisely measured. Likewise, students could schedule an appointment without clicking on the link, possibly by simply visiting SFS's webpage or emailing for an appointment. In fact, of the 401 students who clicked on an email, only 106 were recorded opening it, meaning the software doesn't perfectly record openings, though it does clicks. Further, nine of the 298 students who scheduled an appointment weren't recorded as clicking on the link (27% of those who clicked made an appointment).

Figure 1 shows little relationship between the funding amount and opening rates. This is expected since the amount wasn't in the email subject. We do find a strong, positive relationship between the amount offered and the clickthrough rate. Fewer than 5% of the control group clicked on the email link, while more than 13% of the treatment group did. Simply offering \$10 doubled the click-through rate, while offering \$100 increased the likelihood of clicking by 410%.

Figure 2 shows similar statistics for scheduling and attending an appointment. Many students who scheduled an appointment failed to attend. Yet again, we show a very strong and positive relationship between the amount offered and scheduling and attending. Only 2.5% of control group scheduled an appointment, and only 1.3% attended. Yet, offering only \$10 increased the scheduling rate by 130%. Increasing the payment to \$100 increased the schedule likelihood by 420%. A similar pattern emerges for our primary outcome, which is attendance. Offering a payment of \$10 increased the attendance rate from 1.3% to 3.7%, an increase of approximately 185%. Increasing the payment to \$90 or \$100, averaged, increased the attendance rate by 630%, from 1.3% to around 9.5%.

These results yield three initial conclusions. First, the baseline attendance rate is exceedingly low. Only 1.3% of students who are not offered a monetary incentive attend. This is particularly concerning given that these students were identified as being at high risk of dropping out for academic or financial reasons (or both), they were already receiving funding from the university that was set to end, and the email was coming from a trusted source. Second, we find that incentives can increase both engagement and attendance quite meaningfully. Simply offering \$10 increases the click and attendance rates by 200% and 480%, respectively. Third, the marginal value of each dollar offered *above* \$10 in terms of engaging students is flat. Figure 3 makes this point.

In Figure 3 we show that the first \$10 offered to students increases engagement in terms of clicks and attendance by 10% for clicks (left figure) and 18% per dollar for attendance (right figure). After that, the per-dollar value declines and remains flat. For example, the first \$10 increases attendance by 18%. After that, the per-dollar conversion rate halves to approximately a 9% increase for each additional \$10 increment.

We next turn to regression results. In Table 2 we show the percentage point increase from each additional \$10 on the email open rate, click-through rate, the scheduling of appointments, and attending a counseling session respectively. The model we estimate is as follows:

$$y_{i(b)} = \alpha + \beta Amount_i + \Pi X_i + \gamma_b + \epsilon_{ib}$$

The dependent variable is one of the four binary outcomes (open, click, schedule, attend). *Amount* is the amount a student was offered (\$0 to \$100) divided by 10. X is a set of student-level covariates, including gender, race, whether the student received Pell or a federal loan, if the student is a Georgia resident, if the student is a first-generation college attendee, and if the student is at the College of Arts

⁶ Separately we test for differences across each of the monetary treatments, finding no more differences than one would expect by chance.

& Sciences or Perimeter College. Finally, γ_b is an email date (batch) fixed effect. We estimate the model using a linear probability model. We divide *Amount* by 10 such that the coefficient β estimates the percentage-point increase in the likelihood of each outcome from an additional \$10 in incentives. Standard errors are clustered on the batch.

We begin with column 1 of Table 2 in which the dependent variable is opening the email. There is no effect of additional financial incentives, which was expected since the offer wasn't in the subject line. This specification does allow us to observe who is most likely to open the email from SFS. This is valuable because it allows us to consider which students are "hard to reach." Later we'll test for =heterogenous effects in incentives to see if harder-to-reach populations are more or less responsive to incentives. Studying the baseline open rates, we find that female and Black students are approximately 7 percentage points (26%) more likely to open the email. We also find that each additional GPA point is correlated with an additional 25% increase in the open rate. Students with Pell grants or federal loans were only marginally more likely to open the emails.

In column 2 we show effects of the financial incentive on clicking the email link, one measure of engagement. As before, we find an approximate 1.3 percentage point increase in click-through rates for each additional \$10, from a baseline of a 4.4% open rate. This passes through to a similar scheduling increase for each additional \$10. Finally, column 4 shows a 0.8 percentage point increase in counseling attendance for each \$10 in incentive, compared with the baseline attendance rate of 1.3%. In other words, \$16 doubles the attendance rate.

In Table 3 we test for interactive effects by student characteristics, for attending. We find some evidence that Black students and students who identify as neither Black, white, nor Asian account for much of the effects, noting that 73% of students in the sample fall into those two categories. Students with Pell grants, first-generation college students, and female students don't appear to be differentially sensitive.

Finally, we test for differences in effects on enrollment in the subsequent term (fall 2023). In the first column of Table 4 we estimate a naïve regression of attending on enrollment,

conditional on our full set of covariates. Approximately 55% of those who didn't attend the offered counseling enrolled in the following semester. Those who attended counseling were 14 percentage points (25%) more likely to reenroll. Yet, that difference is unrelated to whether they received the incentive. The reduced form effect of receiving additional funding on attending is zero. In column 3 we show results from a two-stage least squares estimation where the first stage is attending counseling. The IV estimate is also zero. Figure 4 shows this quite clearly. Focusing on the orange bars (those who attended), we find no difference in attendance rates either between those in the control group (\$0) and the treatment groups, nor across the amount offered. This suggests that those induced into counseling only due to the funding did not see differential outcomes. In other words, the impact of counseling on later enrollment is entirely driven by selection.

5. Conclusions

We use an experiment randomizing the financial incentives offered to students to attend financial counseling to document that offering financial incentives substantially increases the likelihood of attendance, but from a very low base rate. Counseling attendance rates increased roughly monotonically and linearly in money offered, from under 2% for those not offered monetary incentives to 8% for those offered \$100. Low open rates for the emails explains the relatively low uptake for high amounts. The figures imply that offering \$10 to 100 students to attend counseling will cost \$37 and, on average, increase the number of students attending counseling from two to 3.7, so that it costs roughly \$22 to use \$10 monetary incentives to induce an additional student to attend counseling. In comparison, offering \$100 to 100 students will cost \$800 and increase the number attending counseling from two to eight, so that it costs roughly \$130 to use \$100 monetary incentives to induce an additional student to attend counseling. An additional finding is that monetary incentives are particularly effective at inducing students of color to attend counseling.

References

- Abraham, K. G., Filiz-Ozbay, E., Ozbay, E. Y., & Turner, L. J. (2020). Framing Effects, Earnings Expectations, and the Design of Student Loan Repayment Schemes. *Journal of Public Economics*, 183.
- Barr, A. C., Bird, K., & Castleman, B. L. (2021). The Effect of Reduced Student Loan Borrowing on Academic Performance and Default: Evidence from a Loan Counseling Experiment. *Journal of Public Economics*, 202.
- Barrow, L., & Malamud, O. (2015). Is College a Worthwhile Investment? Annual Review of Economics, 7, 519–555.
- Bettinger, E., Gurantz, O., Kawano, L., Sacerdote, B., & Stevens, M. (2019). The Long-Run Impacts of Financial Aid: Evidence from California's Cal Grant. *American Economic Journal: Economic Policy*, 11(1), 64–94.
- Card, D., & Solis, A. (2022). Measuring the Effect of Student Loans on College Persistence. *Education Finance and Policy*, 17(2), 335–366.
- Carlson, D., Schmidt, A., Souders, S., & Wolfe, B. (2022). The Effects of Need-Based Financial Aid on Employment and Earnings: Experimental Evidence from the Fund for Wisconsin Scholars. *Journal of Human Resources*.
- Cox, J. C., Kreisman, D., & Dynarski, S. (2020). Designed to Fail: Effects of the Default Option and Information Complexity on Student Loan Repayment. *Journal of Public Economics*; 192(1).
- Denning, J. T. (2019). Born Under a Lucky Star: Financial Aid, College Completion, Labor Supply, and Credit Constraints. *Journal of Human Resources*, 54(3), 760–784.
- Denning, J. T., Marx, B. M., and Turner, L. J. 2019. ProPelled: The Effects of Grants on Graduation, Earnings, and Welfare. *American Economic Journal: Applied Economics*, 11(3), 193–224.
- Marx, B. M., & Turner, L. J. (2018). Borrowing Trouble? Human Capital Investment with Opt-In Costs and Implications for the Effectiveness of Grant Aid. *American Economic Journal: Applied Economics*, 10(2), 163–201.
- Stinebrickner, R., & Stinebrickner, T. (2008). The Effect of Credit Constraints on the College Drop-out Decision: A Direct Approach Using a New Panel Study. *American Economic Review* 98(5), 2163–84.

Figures



FIGURE 1. OPEN AND CLICK-THROUGH RATES BY TREATMENT

Notes: Figure plots email open and click-through rates by treatment status. Not all email openings are recorded.



FIGURE 2. APPOINTMENT SCHEDULING AND ATTENDANCE RATES BY TREATMENT

Notes: Figure plots mean appointment scheduling and attendance rates by treatment status.



FIGURE 3. PER-DOLLAR PERCENT INCREASE OVER TREATMENT

Notes: Figure shows mean per-dollar percent increases in click (left, orange) and attendance (right, blue) rates compared with the control.



FIGURE 4. ENROLLMENT IN FALL 2023, BY TREATMENT STATUS AND WHETHER ATTENDED COUNSELING

Notes: Figure shows 2023 fall enrollment rates—the period directly after treatment—for those who did and did not attend counseling by amount offered.

Tables

TABLE 1. MEANS AND T-TEST ACROSS TREATMENTS

| | (1) Control | (2) Treatment | (1)-(2) Pairwise t-test |
|-------------------|----------------|------------------|----------------------------|
| Female | 0.64 | 0.63 | 0.01 |
| | (0.48) | (0.48) | |
| Age | 25.37 | 25.29 | 0.08 |
| | (8.15) | (7.51) | |
| White | 0.17 | 0.17 | 0.00 |
| | (0.37) | (0.37) | |
| Black | 0.63 | 0.63 | 0.00 |
| | (0.48) | (0.48) | |
| Asian | 0.10 | 0.11 | -0.00 |
| | (0.30) | (0.31) | |
| Other race | 0.10 | 0.10 | 0.00 |
| | (0.30) | (0.30) | |
| Arts/Sciences | 0.31 | 0.32 | -0.01 |
| | (0.46) | (0.47) | |
| Perimeter College | 0.28 | 0.28 | -0.00 |
| | (0.45) | (0.45) | |
| GPA | 2.54 | 2.55 | -0.02 |
| | (1.02) | (1.06) | |
| Has Pell | 0.31 | 0.30 | 0.01 |
| | (0.46) | (0.46) | |
| Has Fed. loan | 0.21 | 0.20 | 0.00 |
| | (0.40) | (0.40) | |
| GA resident | 0.78 | 0.79 | -0.00 |
| | (0.41) | (0.41) | |
| 1st generation | 0.27 | 0.26 | 0.00 |
| | (0.44) | (0.44) | |
| Enroll F23 | 0.56 | 0.56 | -0.00 |
| | (0.50) | (0.50) | |
| Hours F23 | 6.34 | 6.45 | -0.11 |
| | (6.32) | (6.42) | |
| Loan in F23 | 0.20 | 0.20 | 0.00 |
| | (0.40) | (0.40) | |
| Pell in F23 | 0.20 | 0.21 | -0.01 |
| Obs. | 701 | 2780 | 3481 |

Notes: Table shows summary statistics for all students in the sample, less those who received multiple emails due to error.

TABLE 2. MAIN REGRESSION

| | (1) Opened | (2) Clicked | (3) Scheduled | (4) Attended |
|-------------------|---------------|----------------|------------------|-----------------|
| Amount (\$10) | 0.003 | 0.013*** | 0.011*** | 0.008*** |
| | (0.003) | (0.002) | (0.001) | (0.001) |
| Female | 0.071*** | 0.034** | 0.016 | 0.009 |
| | (0.017) | (0.012) | (0.016) | (0.010) |
| Age | -0.001 | 0.002** | 0.001** | 0.001 |
| | (0.001) | (0.001) | (0.000) | (0.001) |
| Black | 0.064** | 0.054*** | 0.055*** | 0.036*** |
| | (0.018) | (0.011) | (0.008) | (0.005) |
| Asian | 0.088 | 0.055* | 0.037* | 0.025 |
| | (0.049) | (0.022) | (0.018) | (0.015) |
| Other race | 0.008 | 0.027 | 0.033 | 0.040*** |
| | (0.023) | (0.024) | (0.017) | (0.008) |
| Has Pell | 0.019 | 0.036 | 0.018 | 0.005 |
| | (0.018) | (0.018) | (0.012) | (0.006) |
| Has Fed Ioan | 0.030 | 0.010 | -0.000 | -0.001 |
| | (0.018) | (0.019) | (0.017) | (0.009) |
| GA resident | -0.161*** | -0.104*** | -0.079*** | -0.067** |
| | (0.016) | (0.019) | (0.016) | (0.019) |
| 1st generation | 0.033 | 0.015 | 0.001 | -0.006 |
| | (0.020) | (0.007) | (0.005) | (0.007) |
| Arts/Sciences | 0.042* | 0.030*** | 0.023 | 0.016* |
| | (0.020) | (0.007) | (0.014) | (0.007) |
| Perimeter College | -0.045** | 0.010 | 0.007 | 0.011 |
| | (0.016) | (0.017) | (0.018) | (0.010) |
| GPA | 0.069*** | 0.028*** | 0.029** | 0.027*** |
| | (0.008) | (0.007) | (0.008) | (0.004) |
| Observations | 3,481 | 3,481 | 3,481 | 3,481 |
| R-squared | 0.093 | 0.068 | 0.059 | 0.056 |
| Batch FE | YES | YES | YES | YES |
| Mean Y (control) | 0.227 | 0.044 | 0.028 | 0.013 |

Notes: Table shows linear probability results with dependent variables in the column titles. Batch FE are fixed effects for the experimental round/date. Standard errors are clustered on the experiment date.

TABLE 3. INTERACTIONS (DEPENDENT VARIABLE IS ATTENDED)

| | (1) | (2) | (3) | (4) |
|-----------------|----------|----------|---------|----------|
| Amount (\$10) | 0.006*** | 0.006** | 0.002 | 0.007*** |
| | (0.001) | (0.002) | (0.002) | (0.001) |
| Amount*Female | 0.002 | | | |
| | (0.001) | | | |
| Amount*Pell | | 0.001 | | |
| | | (0.003) | | |
| Amount*Loan | | 0.004* | | |
| | | (0.002) | | |
| Amount*Black | | | 0.006** | |
| | | | (0.002) | |
| Amount*Asian | | | 0.004 | |
| | | | (0.003) | |
| Amount*Other | | | 0.008* | |
| | | | (0.004) | |
| Amount*FirstGen | | | | 0.002 |
| | | | | (0.002) |
| Female | -0.001 | 0.009 | 0.009 | 0.009 |
| | (0.008) | (0.010) | (0.010) | (0.010) |
| Black | 0.036*** | 0.037*** | 0.008 | 0.037*** |
| | (0.005) | (0.005) | (0.008) | (0.005) |
| Asian | 0.025 | 0.025 | 0.007 | 0.025 |
| | (0.015) | (0.015) | (0.020) | (0.015) |
| Other race | 0.040*** | 0.040*** | 0.004 | 0.040*** |
| | (0.008) | (0.007) | (0.018) | (0.008) |
| Has Pell | 0.006 | -0.000 | 0.005 | 0.005 |
| | (0.006) | (0.011) | (0.006) | (0.006) |
| Has Fed Ioan | -0.001 | -0.019** | -0.001 | -0.001 |
| | (0.009) | (0.006) | (0.009) | (0.009) |
| 1st generation | -0.006 | -0.005 | -0.005 | -0.014** |
| | (0.007) | (0.008) | (0.007) | (0.005) |
| Observations | 3,481 | 3,481 | 3,481 | 3,481 |
| R-squared | 0.057 | 0.057 | 0.058 | 0.057 |
| Batch FE | YES | YES | YES | YES |

Notes: Table shows linear probability results for attending counseling. Batch FE are fixed effects for the experimental round/date. Standard errors are clustered on the experiment date.

TABLE 4. EFFECT ON ENROLLMENT IN FALL OF 2023

| | (1) Naïve OLS | (2) Reduced | (3) IV |
|----------------------|------------------|----------------|-----------|
| Amount/\$10 | | -0.000 | |
| | | (0.002) | |
| Attended appointment | 0.141** | | -0.018 |
| | (0.037) | | (0.301) |
| Observations | 3,481 | 3,481 | 3,481 |
| Controls | YES | YES | YES |
| Batch FE | YES | YES | YES |

Notes: Table shows OLS and IV estimates for reenrolling in fall 2023. Controls are all those in tables 2 and 3. In column 3 (IV) the first stage is equivalent to column 4 of table 2. In that column, Attended Appointment are the predicted values from the first stage.

Appendix 1: Sample email sent to students

Student Financial Services

Georgia State University

Dear %%First Name%%,

Schedule an appointment to discuss all of your financing options within the next 10 days and receive \$%%Message%% just for attending the meeting.

As part of a current and ongoing effort to help students graduate we want to make sure that you are aware of the additional guidance, Student Financial Services can provide you with concerning how to finance your education. We believe this meeting is so important that we will send you \$%%Message%% after your meeting. All you have to do to earn the \$%%Message%% is attend the meeting.

You have been identified as a student who has previously relied on MSI / PRG /CARES Act / HEERF funding to pay for one or more of your past semesters. The majority of these funds were provided by the federal government to assist students during the COVID-19 pandemic. *These funds will no longer be available as of Fall 2023.*

Good News! We are here to help and want to meet with you to discuss your plans. Here is a summary of what we can provide you with:

- 1. Guidance on completing the financial aid process
- 2. Advising on financial aid options available to you
- 3. Loan and debt counseling including repayment options to improve affordability
- 4. Satisfactory Academic Progress advising
- 5. Financial literacy advising

Set an Appointment

Note: The acceptance of the \$%%Message%% incentive does not obligate you to any future requirements. You are already obligated to review your options to finance your educational journey. The \$%%Message%% gift is to incentivize you to meet with the Student Financial Management Center to discuss all of your financing options. You are not obligated to select or participate in any of the options that are presented to you.

The payment will be processed through your school account within 3 business days of the meeting. The funds will be returned in accordance with your refund preferences identified at

About the authors

James Cox is the Noah Langdale Jr. Chair in Economics; Georgia Research Alliance Eminent Scholar; director, Experimental Economics Center, Department of Economics, Georgia State University.

Cox has conducted research on integration of portfolio choice and consumer demand theories, public expenditure theory, credit rationing, energy policy, economics and political economics of minimum wage legislation, auction markets, job search models, and decentralized mechanisms for control of monopoly. Additional research topics include the utility hypothesis, the preference reversal phenomenon, procurement contracting, topics in social epistemology and legal theory, group vs. individual behavior in strategic market games and fairness games, and e-commerce with combinatorial demands. His research encompasses behavioral experiments and theoretical modeling of trust, reciprocity and altruism; trust and trustworthiness of immigrants and native-born Americans; calibration paradoxes for small- and large-stakes risk aversion; incentive compatibility of payoff mechanisms for choice under risk; public goods and common pool resources; and isomorphic centipede games and Dutch auctions.

He has a PhD from Harvard University.

Daniel Kreisman is an Associate Professor of Economics at Georgia State University in Atlanta. His research focuses on education and the workforce. He is a founding director of CTEx—a consortium of researchers and state partners working to inform the future of Career and Technical Education policy in the US. He also studies education finance and other topics at the intersection of labor and public economics.

Dan has a PhD in Public Policy from the University of Chicago, and was a postdoc at the University of Michigan's Ford School before joining Georgia State.

Stephen Shore is the R. Means Davis Professor of Risk Management and Insurance in the Robinson College of Business at Georgia State University.

He is also the executive director the S.S. Huebner Foundation for Insurance Education. His current research interests are the determinants of mortgage and credit card default, income dynamics, income risk, and intra-household risk-sharing.

Dr. Shore received his undergraduate degree from Princeton University and graduate degrees from Harvard University. He spent four years on the faculty of the Wharton School of the University of Pennsylvania and four years on the faculty of the Johns Hopkins University economics department. He has served as a Deputy Assistant Secretary of the Treasury in the Office of Economic Policy.

About the TIAA Institute

The TIAA Institute helps advance the ways individuals and institutions plan for financial security and organizational effectiveness. The Institute conducts in-depth research, provides access to a network of thought leaders, and enables those it serves to anticipate trends, plan future strategies, and maximize opportunities for success.

To learn more, visit tiaainstitute.org.



Join the conversation online: @TIAAInstitute

Corresponding author: dkreisman@gsu.edu. All authors thank TIAA/UPenn for financial support, CEAR at Georgia State University for pilot funding and the Georgia State University Office of Student Financial Services for generous assistance. In particular we thank James Blackburn, Atia Lindley, Alyssa Taylor, Tara Roberson, Ben Brandon and Aria Simmons.

TIAA Institute is a division of Teachers Insurance and Annuity Association of America (TIAA), New York, NY. ©2024 Teachers Insurance and Annuity Association of America-College Retirement Equities Fund, New York, NY GRE-3499492PR-00424WX

CTIAA Institute