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Student Loan Policies and Payments during the COVID-19 Pandemic: Closing the Gap or Widening Inequalities?

Jason Jabbari
Washington University in St. Louis, jabbari.jason@wustl.edu

Takeshi Terada
Washington University in St. Louis, terada@wustl.edu

Haotian Zheng
Washington University in St. Louis, haotian.z@wustl.edu

Stephen Roll
Social Policy Institute, stephen.roll@wustl.edu

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Cover Page Footnote

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By Jason Jabbari, Washington University in St. Louis; Takeshi Terada, Washington University in St. Louis; Haotian Zheng, Washington University in St. Louis; Stephen Roll, Social Policy Institute

Student debt was specifically addressed in the federal government's response to the COVID-19 pandemic through forbearance polices. However, not all individuals were eligible for forbearance, and it is possible that forbearance would leave some feeling further behind. Yet, little is known about student loan debt over the course of the pandemic, especially in relationship to forbearance policies, loan payments, and household financial stability. Leveraging a representative longitudinal survey of households during the pandemic, we use descriptive regression techniques to explore changes in loan balances throughout the pandemic, as well as the relationships among student loan policies, payments, and measures of financial well-being. We find that the negative effect associated with not being able to take advantage of forbearance polices was exacerbated for disadvantaged households during the pandemic. We also found that households who were required to make student loan payments were more likely to experience financial hardships.

Keywords: Student debt; Forbearance policies; COVID-19; Household hardships

"Standing still is the fastest way of moving backwards in a rapidly changing world"

– Lauren Bacall

Introduction

Student loan debt in the U.S., estimated to be over $1.61 trillion, is the second largest category of debt (after mortgage debt) and the most rapidly increasing debt category (The Office of Federal Student Aid 2021). Student debt has significant implications for individuals' financial well-being, including increased risk of bankruptcy and foreclosure (Gicheva & Thompson, 2015), as well as families' health, including their ability to purchase nutritious food and seek medical care (Despard et al. 2016). Delays in home-ownership (Mezza et al. 2016) and family formation (Bozick & Estacion 2014), as well as strains in family relationships (Stivers & Popp Berman 2020), have also been associated with student debt. In addition, burgeoning student debt has been associated with increases in the racial wealth gap (Percheski & Gibson Davis 2020). When considering the influence of parent's education level on children's student loan repayments, student debt can also be seen as a limit to the meritocratic power of higher education (Oh 2022).

As large financial and social disruptions can exacerbate the negative effects of student debt, as seen in Pinto and Steinbaum's study (2021) on the Great Recession and student debt, it is important to consider student debt in the wake of COVID-19. In contrast to previous financial and social disruptions, student debt was specifically addressed in the federal government's response to the pandemic. The Coronavirus Aid, Relief, and Economic Security (CARES) Act provided grants and loans to businesses, direct stimulus checks to households, and mandated student debt forbearance for federal loans.

Nevertheless, little is known about student loan debt dynamics over the course of the pandemic, especially regarding the relationship between forbearance policies, loan payments, and household financial stability. While forbearance policies provide many students with the option to temporarily pause their loan payments, these household decisions may be sub-optimal in the long run, as these borrowers are not able to make progress on paying down their debts. Moreover, as financially advantaged borrowers may be more likely to continue to make payments during forbearance periods, these policies may exacerbate pre-existing inequalities. Alternatively, forbearance policies may provide

households—especially those experiencing hardships (e.g. job loss)—with additional money to pay for essentials, such as food, utilities, and rent/mortgage payments.

Given the social and economic disruptions brought about by the pandemic, many households are forced to make-tradeoffs in the face of economic insecurity and competing priorities. While some of these tradeoffs are detailed in Schudde et al.'s (2022) study on college-going trajectories, less is known about the financial side of educational trajectories—particularly around student debt and repayment. As student loan policy discussions, including discussions on loan forgiveness (Looney & Yannelis, 2018; Perry et al. 2021), continue to play an important role in our social and political discourse, it is important to understand the experiences of families with student debt during the pandemic. Doing so can provide policy-makers and practitioners with evidence that can inform future policy, programming, and practices around student debt. For example, policy-makers may consider expanding forbearance policies in times of economic disruptions, while practitioners may be able to identify students who are most at risk of falling behind. Alternatively, practitioners may consider ways to encourage borrowers to make loan payments when possible—even when it is not mandatory.

Leveraging a nationally representative longitudinal survey of households during the pandemic, we use descriptive regression techniques to explore changes in loan balances throughout the pandemic, as well as the relationships among student loan policies, payments and both student loan hardships and other financial hardships. Across both student loan hardships and other financial hardships, we find that the negative effect associated with not being able to take advantage of forbearance policies was exacerbated for disadvantaged households. We also found that households that were required to make student loan payments during the pandemic were more likely to experience financial hardships.

Background & Literature Review

Student Debt and Financial Hardships

Student debt can represent a type of human capital investment that translates into income premiums and asset accumulations through the labor market value placed on an academic degree (Daniels & Smythe 2019). However, student debt can also constrain an individual's credit and budget, and thus contribute to adverse social, emotional, and financial outcomes that can—in some circumstances—offset the potential return on educational investments. For example, student debt may delay homeownership (Mezza et al. 2016) as borrowers may have to save longer for a down payment while continuing to make student loan payments. Furthermore, due to high debt-to-income ratios, student debt may constrain borrowers' access to credit (Lee et al. 2014), and thus place them in a disadvantaged position in the financial market. Moreover, defaults and payment delinquencies on student loans can erode borrowers' credit, which can further impact their access to financial products. Furthermore, student debt payments may crowd out consumption and savings, particularly for graduates who are in the early stage of lifetime earnings and borrowers who did not complete their degree but incurred a large amount of student debt (see Jabbari, Despard, Kondratjeva, Grinstein-Weiss, Gupta 2022).

The extant literature also suggests that there may exist an association between student debt and financial hardships. Bricker and Thompson (2016) used data from the Survey of Consumer Finances (SCF) and found that student debt was associated with increased probabilities of being late on bill payments and denial of credit compared to those without student debt. They also found that the probability of experiencing financial difficulty was positively associated with the amount of student debt held. This association with financial hardships was unique to student debt, and was not observed for other types of debt. Using tax filing records of low-to-moderate income households, Despard et al. (2016) examined the relationship between student debt and material hardship. After adjusting for self-selection into student debt status, their findings suggested that carrying student debt increased the

probability of experiencing material hardships (skipped housing payments, skipped bills, and food insecurity), medical hardships, and other forms of financial difficulty.

Of course, when considering financial hardships associated with student debt, it is also important to consider income. The widely cited "8 percent rule" (Illinois Student Assistance Commission, 2001) states that borrowers will encounter difficulty covering daily expenses (e.g., rent or mortgage, household expenses, auto loan, etc.) if more than 8 percent of their pre-tax income is devoted to monthly student loan payments. Using the financial aid need-analysis methodology to examine the relationship between subjective burden and observed debt-to-income ratio, Baum and Schwartz (2006) suggested that the payment-to-income ratio was sensitive and that the percentage of income that borrowers could be expected to use for student debt payment should increase with income. Their findings implied that borrowers with lower than average earnings would face severe difficulties paying for everyday expenses.

Student debt may also affect graduates' investment decisions and constrain their asset accumulation. Fry (2014) reported that the median net worth of college-graduates who were not indebted was more than seven times that of those who were indebted. Retirement savings may also be at a higher risk for college graduates with outstanding amounts of student debt. Elliott et al. (2013a) found that among college graduates, those who had more than $55,000 student debt had retirement savings that were 52% lower than those with less than $55,000 or no student debt. Moreover, prior studies have found that college graduates with larger amounts of student debt were less likely to purchase a home than those with small amounts student debt (Elliott et al. 2013b).

COVID-19 and Student Debt

At the onset of the COVID-19 pandemic, the U.S. economy went through significant disruptions that caused substantial hardships for households. During the early weeks of the pandemic, the Center on Budget and Policy Priorities (2022) observed that nearly 15% of parents reported food insecurity in their households, about one-quarter of renters with children reported being behind on rental payments, close to 40% households reported having difficulty paying housing, utility, or healthcare expenses, and more than 40% parents reported that they or their family members lost a job or the primary source of income due to COVID (Karpman et al., 2020). COVID-19 also caused severe disruptions for students. For example, college students who reported a COVID-19 infection were 1.7 times more likely to experience food insecurity and were both 1.4 times more likely to experience depression and anxiety than those who did not report COVID infection (Goldrick-Rab et al. 2022).

Moreover, COVID-19 exacerbated inequalities for racial/ethnic minority groups; for example 50% of non-Hispanic Black parents and more than 60% of Hispanic parents reported losing work or having family members that became jobless (Karpman et al. 2020). Using an online survey of Supplemental Nutritional Assistance Program (SNAP) recipients and the U.S. Census Bureau Household Pulse Survey, Enriquez and Goldstein (2020) demonstrate pandemic-induced increases in housing insecurity, food scarcity, new debt accrual, and recent job loss, as well as inequities among these hardships with Black respondents consistently faring worse than white respondents.

Given these hardships, researchers have begun to examine the effects of the pandemic on student debt. Using data from 2016 Survey of Consumer Finances, Bhutta et al. (2020) estimated families' recurring monthly expenses (including debt payments, food costs, health costs, utilities, rent and mortgage payments, and vehicle costs) to assess whether families' liquid savings and cash assistance provided by the CARES Act could cover these expenses during the pandemic. Importantly, their estimates revealed that, irrespective of the level of unemployment risk, more families would be able to cover expenses for six months had there been student debt and mortgage forbearance programs. Since the onset of the pandemic, about one-fifth (19%) of loans were at least 30 days delinquent between March and December 2020 and more than a quarter (26%) of delinquent loans did not enter into a

forbearance plan despite broad eligibility for the Federal grant forbearance program. While no direct implications on borrowers' financial lives have been drawn from student loan delinquency and forbearance trends during the COVID-19 pandemic, Kim et al. (2021) provided such information on their study of the CARES Act mortgage forbearance program; the authors found that households used additional liquidity from forbearance programs to pay down high-cost credit card debt.

Current Study

Student debt is negatively associated with a range of financial outcomes, including financial hardships. However, the impact of student debt is not homogenous across borrowers. Rather, the impact of student debt—and subsequently student debt *policies*—can vary across a variety of demographic, social, and economic factors, such as degree completion, enrollment status, and income (Perna et al. 2017).

In the context of the COVID-19 pandemic, the heterogeneous impacts of student debt were further compounded by the forbearance policy, which was not universally applied to nor experienced by borrowers. Rather, some borrowers were left behind because the forbearance policies did not apply to their specific loans, while other borrowers were left behind because they weren't able to make progress on their payments that were now made optional through forbearance policies. Here, some borrowers may still feel left behind in forbearance, if they were not able to make progress towards their financial goals. However, research has yet to explore the degree to which some borrowers were left behind during the pandemic. Moreover, as previous research has demonstrated the multifaceted impact of student debt, it is not only important to consider household balance sheets (e.g. who is making payments during the pandemic). Rather, it is also important to consider which borrowers were left behind during the pandemic, as these instances may compound inequalities. Finally, it is important to investigate the material hardships faced by borrowers during the pandemic; in this case, being behind in student debt can impact other areas of borrowers' lives.

To this end, the current study attempts to better understand the heterogeneous impacts of student loans and student loan policies on borrowers by focusing on three distinct indicators of falling behind on student debt payments. First, we explore student debt balances over the course of the pandemic; second, we explore borrowers' reports of being behind on student loans; finally, we explore borrowers' financial hardships. In each analysis, we consider student loan policies, as well as a variety of demographic, social, and economic characteristics of borrowers. In doing so, we provide policy-makers and other stakeholders with a comprehensive understanding of student debt during the pandemic, which can inform future efforts to help borrowers who were left behind during the pandemic.

Data and Methods

Data and Sample

The primary data source for this study comes from four waves of the Socioeconomic Impacts of COVID-19 survey, which is a quarterly, nationally representative longitudinal survey that collects data on household social and financial circumstances—both during and after the height of the pandemic. The first wave was administered in May, 2020, and the fifth wave was administered in May, 2021. The results in the analysis rely on responses from waves 2-5, which included additional information on student loans. Each wave recruited approximately 5,000 respondents and roughly 50% of prior wave respondents participated in subsequent waves. The samples for these surveys are drawn from a large, online panel provider and are constructed using a quota sampling technique to ensure the samples are representative of the U.S. population in terms of age, race/ethnicity, income, and gender (Roll et al. 2021). The survey also includes a highly detailed set of questions capturing a variety of household experiences including employment and financial hardships during the pandemic.

The survey responses collected through this study undergo several quality checks to ensure the reliability of the data. These quality checks involve assessing the speed of responses during the survey, post-hoc checks of the consistency of responses both within and across surveys, and a within-survey commitment exercise to elicit reliable responses.

In total, we observed 4,418 individuals had student debt across waves 2 – 5. Following previous research using this data, we use listwise deletion to remove respondents who skipped survey items used in the analyses. In the end, our research included 3,622 individuals across the four waves. Of these individuals, 907 responded to the survey in wave two, 933 in wave three, 894 in wave four, and 888 in wave five, respectively.

Measures

Dependent Variables. We first examined the association between household demographic and financial characteristics and changes in student loan balances throughout the pandemic ("student loan differences"). We then examined the association among student loan characteristics and whether households were behind on their loans. Finally, we examined the association among student loan characteristics and financial hardships. For student loan differences, we created a variable of the difference in the student loan amount during the pandemic and three months prior to the survey (i.e., how much households owed on student loans when they took the survey minus how much households owed on student three months prior to the survey). In order to censor extreme outliers, two variables on student loan amounts (i.e., the current amount of student loans and the amount of student loans three months prior to the survey) were winsorized at the upper-bound 99th percentile. This resulted in 40 responses being winsorized for student loan differences and 34 responses being winsorized for student loans three months prior to the survey. For being behind, we created a binary variable for whether someone in their household reported being behind on payments for any student loans or that their loans were currently in collections (0 = no; 1 = yes)[1]. For financial hardships, we created a binary variable for experiencing any financial hardships in the three months prior to taking the survey.[2] Specifically, the variable includes whether households did not pay the full amount of their rent or mortgage, skipped paying a bill or paid a bill late, could not go to the hospital or see a doctor due to the pandemic, or could not fill or postponed filling a prescription for drugs (0 = no; 1 = yes).

Covariates. Covariates capture the following demographic information: number of kids (0 = no kid; 1 = one kid; 2 = two kids; 3 = three or more kids); gender (0 = male; 1 = female); race/ethnicity (1 = White; 2 = Black; 3 = Asian; 4 = Hispanic; 5 = others); primary language spoken at home (0 = not English; 1 = English); educational attainment (0 = less than Bachelor's degree; 1 = Bachelor's degree or higher); school enrollment (1 = enrolled in a full-time educational program; 2 = enrolled in a part-time one; 3 = not enrolled); and area median income level (1 = less than 50% of the AMI [low]; 2 = between 51% and 80% of the AMI [moderate]; 3 = between 81% and 120% [middle]; 4 = higher than 120% [high]). In addition to demographic information, covariates also capture employment information, including: employment status (1 = working full-time; 2 = working part-time; 3 = not working); partner/spouse's employment status (1 = working full-time; 2 = working part-time; 3 = not working; 4 = not having a partner/spouse); whether or not a household member lost a job due to COVID 19 (0 = no; 1 = yes). We also included variables on student loan status: whether a respondent's household was required to make payments on their student loan (0 = no; 1 = yes); student loan status at the beginning of the pandemic (1 = in repayment; 2 = delinquent; 3 = default; 4 = deferment/forbearance; 5 = in-school

[1] With limited survey space, we combined both being behind in loan payments and having a loan payment in collections into one question.

[2] A three month interval for this variable was chosen to match up with our survey collection periods, which were roughly three months apart.

deferment); student loan type (1 = federal; 2 = private; 3 = both federal and private); and student loan payment status (0 = not making payments; 1 = making full payments; 2 = making partial payments).

Analytic Approach

For our main results, we utilized linear regression for student loan differences and logistic regression for being behind on student loans and experiencing financial hardships. Because our data are longitudinal, with some individuals being observed in multiple waves, we clustered standard errors at the individual level. Additionally, we use marginal plots to visualize the effects of interactions between groups of interests. In terms of student loan differences, we investigate the extent to which demographic, employment characteristics, and student loan status impact the change of student loan balances throughout the pandemic. To estimate the change, we employed a linear regression model of the following form:

$$Y_i = \beta_0 + \beta_1 previous\ student\ debt_i + \delta Demo_i + \theta Employment_i + \sigma Student\ Loans_i + \varepsilon_i \quad (1)$$

where Y is the change in student loan amount from three months prior to the time of the survey for individual i, the coefficient, β_1, captures the effect of student amount three months prior to the survey on the change in student debt, $Demo_i$ is a vector of demographic variables, $Employment_i$ is a vector of employment-related variables, $Student\ Loans_i$ is a vector of student-loan related variables, and ε_i is an error term clustered at the respondent level.

We then investigate the extent to which demographic, employment characteristics, and student loan status relate to whether or not households were behind on their student loans. To estimate this relationship, we use the following logistic regression model:

$$Y_i = \beta_0 + \beta_1 previous\ student\ debt_i + \delta Demo_i + \theta Employment_i + \sigma Student\ Loans_i \quad (2)$$

where Y is the probability of being behind on student loan payments and the rest the variables are the same as Equation 1.

We also explore the extent to which the relationship between student loan forbearance policies (captured by whether or not households are required to make payments) and whether or not households were behind on their student loans varied by student debt payment status, the experience of job/income loss as a result of COVID-19, and current income status. To estimate these relationships, we add an interaction term to the previous models:

$$Y_i = \beta_0 + \beta_1 Required_i + \beta_2 Payment\ status_i + \beta_3 (Required * Payment\ status)_i \ldots (3)$$
$$Y_i = \beta_0 + \beta_1 Required_i + \beta_2 HH\ job\ loss_i + \beta_3 (Required * HH\ job\ loss)_i \ldots (4)$$
$$Y_i = \beta_0 + \beta_1 Required_i + \beta_2 Income\ level_i + \beta_3 (Required * Income\ level)_i \ldots (5)$$

where Y is the probability of being behind on student loan payments; the coefficient, β_1, captures the effect of being required to make student loan payments on the probability of being behind on student loan payments; β_2 captures the effect of student payment status in Equation 3, the effect of household job or income loss due to the pandemic in Equation 4, and the effect of income levels in Equation 5; and β_3 captures the interaction between the requirement to make student loan payments ($Required_i$) and student loan payment status ($Payment\ status_i$) in Equation 3, household job loss ($HH\ job\ loss_i$) in Equation 4, and income level ($Income\ level_i$) in Equation 5.

Finally, we explore the extent to which demographic, employment characteristics, and student loan status relate to whether or not households experience any financial hardships due to the pandemic. To estimate the relationship, we utilize the following logistic regression model:

$$Y_i = \beta_0 + \beta_1 previous\ student\ debt_i + \delta Demo_i + \theta Employment_i + \sigma Student\ Loans_i \quad (6)$$

where *Y* is the probability of experiencing financial hardships and the remaining variables are the same as those in Equation 1.

Results

Sample Description

Table 1 presents the descriptive statistics for respondents for both dependent and independent variables. On average, the student loan amount three months prior to responding to the survey was $25,828 (SD = 41,405; min = 0; max = 224,000) (Figure 1). The mean difference in student loan balances from three months prior to the survey to current was -$94 (SD = 6,803.47; min = -155,000; max = 29,700) (Figure 2). This indicates that the student debt balance decreased by roughly 1.5% of a standard deviation—a difference that is statistically very close to 0. Table 2 presents the summary statistics for our sample. The majority of respondents were White (57.5%), identified as female (54.7%), and spoke English as their primary language (96.4%). In terms of income, over half of respondents (52.9%) were low-income, 20.0% were moderate-income, 13.9% were middle-income, and 13.3% were high-income. The majority (83.2%) of respondents had Bachelor's or higher degrees. About half of the respondents (54.1%) had no child, 22.7% had one child, 18.0% had two children, and 5.2% had three or more children. About half of respondents (53.7%) were not enrolled in college, while 36.9% were enrolled in college full-time and 9.3% were enrolled part-time.

More than half of respondents (67.6%) worked full time, while 11.7% worked part-time and 20.7% did not work. In addition, about half (46.3%) of respondents had a partner/spouse who worked full-time, while 36.7% did not have a partner/spouse. 43.4% of respondents reported losing a job or income due to COVID-19.

In terms of student loans, about half of the respondents (52.6%) indicated that their households were not required to make payments on their student loan; 36.9% were not making payments, 44.8% were making full payments, and 18.3% were making partial payments. In addition, over 70% of respondents indicated that they were behind on their student loan payments. More than half of the respondents (55.8%) had federal loans, 23.3% had private loans, and 21.0% had both federal and private loans. In terms of student loan status at the beginning of the pandemic, over half of respondents (52.0%) indicated that their pre-pandemic student loan status was in repayment, 18.8% indicated that their pre-pandemic student loan status was in deferment or forbearance, and 12.3% were not required to make payments because they were still in school.

Table 1

Descriptive Statistics

Variables	Labels	Mean/%	SD/Count
Student loan difference		-94.19	6803.47
Student loan amount - 3 months prior		25828.64	41405.96

Behind on student loan payments	Yes	70.76%	2563
	No	29.24%	1059
Student loan status - 3 months prior	In repayment (reference)	51.99%	1883
	Delinquent	8.61%	312
	Default	8.28%	300
	Deferment/forbearance	18.77%	680
	In-school deferment	12.34%	447
Student loan type	Federal (reference)	55.77%	2020
	Private	23.27%	843
	Both federal and private	20.96%	759
Student loan requirements	Not required to make student loan payments	52.60%	1905
	Required to make student loan payments	47.40%	1717
Student loan payments	Not making payments (reference)	36.91%	1337
	Making full payments	44.81%	1623
	Making partial payments	18.28%	662
Race/Ethnicity	White (reference)	57.54%	2084
	Black	17.48%	633
	Asian	3.67%	133
	Hispanic	18.88%	684
	Others	2.43%	88
Gender	Male (reference)	45.33%	1642
	Female	54.67%	1980
Income level	Low (reference)	52.87%	1915
	Moderate	19.96%	723
	Middle	13.86%	502
	High	13.31%	482
Number of kids	No child (reference)	54.11%	1960
	One	22.67%	821
	Two	18.00%	652
	Three or more	5.22%	189
Primary language	Not English	3.56%	129
	English	96.44%	3493
Education level	Less than Bachelor's degree	16.84%	610
	Bachelor's degree or higher	83.16%	3012
College enrollment	Enrolled Full-time (reference)	36.94%	1338
	Enrolled Part-time	9.33%	338
	Not Enrolled	53.73%	1946
Working status	Working Full-Time (reference)	67.64%	2450
	Working Part-Time	11.71%	424
	Not Working	20.65%	748
Spouse's working status	Working Full-Time (reference)	46.25%	1675
	Working Part-Time	6.38%	231
	Not Working	10.71%	388
	Single	36.66%	1328
Household job loss	No	56.63%	2051
	Yes	43.37%	1571

Figure 1

Histogram of Student Loan Balance

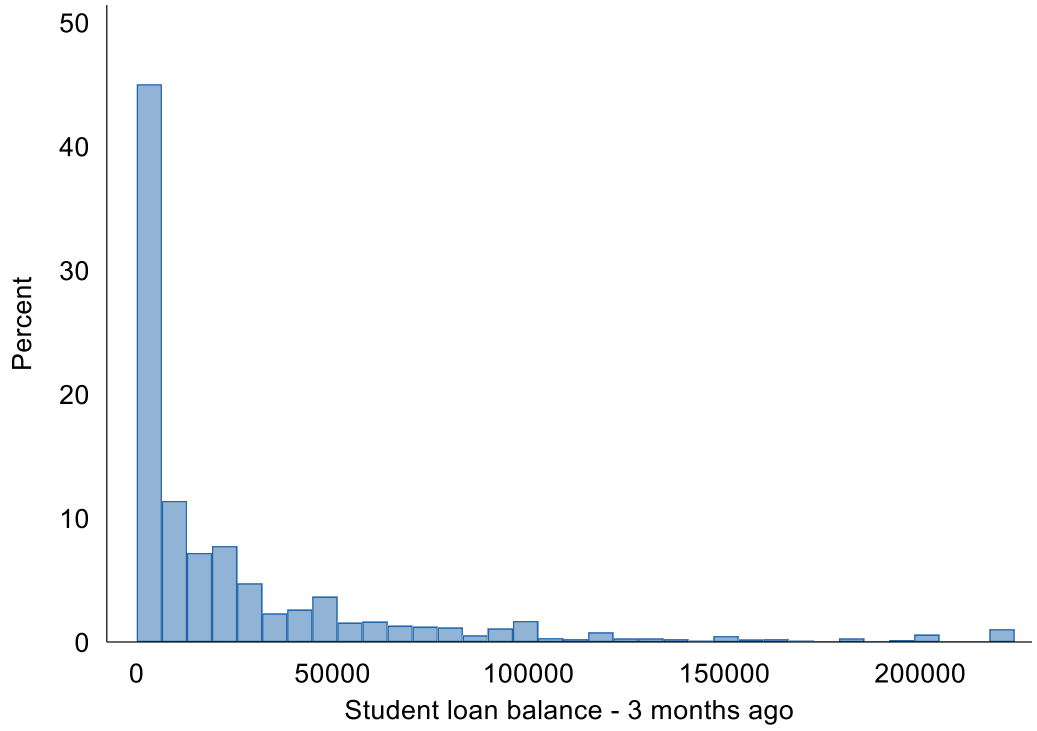
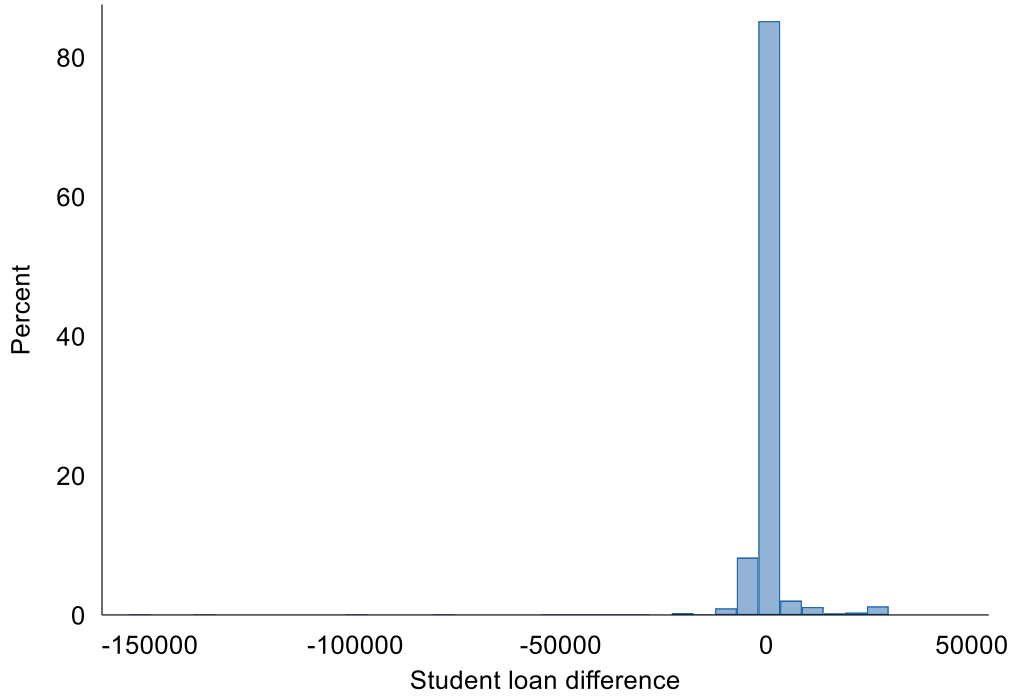


Figure 2

Histogram of Student Loan Difference



Changes in Student Loan Balance

Table 2 examined the association of demographic, employment, and student loan characteristics with changes in student loan balances. First, we see that the level of student debt held three months prior to the survey was significantly associated with a change in a household's student debt amount – for every $1 increase in student loan debt three months prior, respondents reported an additional 3 cent decrease in student loan debt at the time of the survey (β = -0.027; $p < 0.001$). In terms of demographic characteristics, when compared to the respondents who did not have a Bachelor's degree, having a Bachelor's degree or higher degree was significantly associated with an increase of $620 in student loan debt (β = 619.7; $p < 0.05$), controlling for other factors. For student loan information, when compared to being in repayment, in-school deferment was significantly associated with an increase of $826 in student loan debt (β = 826.2; $p < 0.05$), controlling for other factors. In addition, when compared to not making payments, making full payments was significantly associated with a decrease of $2,014 ($\beta$ = -2013.7; $p < 0.001$) in student loan debt, controlling for other factors; similarly, making partial payments was associated with a decrease of $2,015 in student loan debt (β = -2015.4; $p < 0.001$), controlling for other factors. Lastly, when compared to respondents who were not required to make student loan payments, respondents who were required to make student loan payments had an increase of $841 in student loan debt (β = 841.4; $p < 0.05$), controlling for other factors.

Table 2

Changes in Student Loan Balance, Linear Regression

Variable	Coefficient	SE
Student loan amount 3 months prior	-0.0267***	(0.008)
Pre-pandemic student loan status (Ref=In repayment)		
Delinquent	465.2	(348.5)
Default	312.7	(335.8)
Deferment/Forbearance	605.0	(357.0)
In-School deferment	826.2*	(360.2)
Student loan type (Ref=Federal)		
Private	-400.2	(274.4)
Both federal and private	98.66	(319.4)
Required to make student loan payments (Ref=No)		
Yes	841.4*	(368.4)
Payment Status (Ref=Not making payments)		
Making full payments	-2013.7***	(451.4)
Making partial payments	-2015.4***	(451.2)
Race/Ethnicity (Ref=White)		
Black	42.63	(402.2)
Asian	739.4	(654.1)
Hispanic	201.5	(300.0)
Others	351.0	(532.9)
Gender (Ref=Male)		
Female	-153.6	(248.9)
Income (Ref=Low)		

Moderate	91.04	(290.3)
Middle	-287.7	(263.6)
High	-444.9	(450.9)
Number of children (Ref=No child)		
One	317.4	(296.2)
Two	152.5	(270.4)
Three or more	155.2	(395.1)
Primary language (Ref=Not English)		
English	187.7	(374.2)
Education level (Ref=Less than Bachelor's degree)		
Bachelor's degree or higher	619.7*	(273.7)
Student status (Ref=Enrolled full-time)		
Enrolled par-time	-240.2	(482.8)
Not enrolled	-113.5	(300.9)
Employment status (Ref=Working full-time)		
Working par-time	133.9	(338.9)
Not working	-74.21	(341.4)
Spouse's Employment Status (Ref=Working full-time)		
Working par-time	-338.1	(662.3)
Not working	653.3	(337.1)
No partner	-321.9	(323.2)
Household job loss (Ref=No)		
Yes	-251.2	(274.3)
Wave (Ref=2)		
3	-512.1	(366.2)
4	-94.62	(278.8)
5	-436.5	(318.1)
Constant	1062.1	(649.2)
R - squared	0.041	
Observations	3622	

* p<0.05, ** p<0.01, *** p<0.001

Being Behind on Student Loan Payments

Table 3 examined the association of demographic, employment, and student loan characteristics with respondents being behind on student loan payments. First, a $1 increase in the amount of student debt held three months prior to the survey was significantly associated with a 0.8% decrease in the odds of being behind ($OR = 0.992$; $p < 0.001$), controlling for other factors. In terms of demographic characteristics, when compared to having a low income level, having a moderate income level was significantly associated with a 41.4% decrease in the odds of being behind ($OR = 0.586$; $p < 0.001$), while having a middle income level was associated with a 53.0% decrease ($OR = 0.470$; $p < 0.001$), and having a high income level was associated with a 37.2% decrease ($OR = 0.628$; $p < 0.01$) in the odds of being behind, controlling for other factors. When compared to having no child, having one child was significantly associated with a 52.7% increase in the odds of being behind ($OR = 1.527$; $p < 0.01$), and having two children was associated with an 83.2% increase in the odds of being behind ($OR = 1.832$; $p <$

0.001), controlling for other factors. When compared to being enrolled in full-time educational programs, being enrolled part-time was significantly associated with a 56.5% decrease in the odds of being behind (*OR* = 0.435; $p < 0.001$), and being not enrolled was associated with a 77.6% decrease in the odds of being behind (*OR* = 0.224; $p < 0.001$), controlling for other factors. Turning to employment characteristics, when compared to having a spouse who worked full-time, having a spouse who worked part-time was significantly associated with a 52.3% increase in the odds of being behind (*OR* = 1.523; $p < 0.05$), controlling for other factors. When compared to no household job or income loss due to the pandemic, experiencing household job or income loss due to the pandemic was significantly associated with a 246.1% increase in the odds of being behind (*OR* = 3.461; $p < 0.001$), controlling for other factors.

For pre-pandemic student loan information, when compared to being in repayment, being delinquent was significantly associated with a 401.8% increase in the odds of being behind (*OR* = 5.018; $p < 0.001$), being in default was associated with a 246.4% increase (*OR* = 3.464; $p < 0.001$), and being in deferment/forbearance was associated with a 53.0% increase in the odds of being behind (*OR* = 1.53; $p < 0.01$), controlling for other factors. At the same time, having an in-school deferment prior to the pandemic was associated with 70.1% decrease in the odds of being behind (*OR* = 0.299; $p < 0.001$). When compared to respondents who were not required to make student loan payments, respondents who were required to make student loan payments had a 444% increase in the odds of being behind (*OR* = 5.44; $p < 0.001$), controlling for other factors. When compared to not making payments, making full payments was significantly associated with a 54.4% decrease in the odds of being behind (*OR* = 0.456; $p < 0.001$), and making partial payments was associated with a 40.0% decrease in the odds of being behind (*OR* = 0.600; $p < 0.01$), controlling for other factors.

Table 3

Being Behind on Student Loan Payments, Logistic Regression

Variable	Odds ratio	SE
Student loan amount 3 months ago	0.992***	(0.002)
Pre-pandemic student loan status (Ref=In repayment)		
Delinquent	5.018***	(0.994)
Default	3.464***	(0.641)
Deferment/forbearance	1.530**	(0.241)
In-school deferment	0.299***	(0.063)
Student loan type (Ref=Federal)		
Private	0.828	(0.105)
Both federal and private	0.899	(0.125)
Required to make student loan payments (Ref=No)		
Yes	5.435***	(0.738)
Payment Status (Ref=Not making payments)		
Making full payments	0.456***	(0.073)
Making partial payments	0.600**	(0.106)
Race/Ethnicity (Ref=White)		
Black	1.160	(0.177)
Asian	1.313	(0.423)
Hispanic	1.185	(0.181)
Others	1.010	(0.454)
Gender (Ref=Male)		
Female	0.976	(0.116)

Income (Ref=Low)		
Moderate	0.586***	(0.086)
Middle	0.470***	(0.079)
High	0.628**	(0.110)
Number of children (Ref=No child)		
One	1.527**	(0.212)
Two	1.832***	(0.269)
Three or more	1.284	(0.278)
Primary language (Ref=Not English)		
English	1.245	(0.327)
Education level (Ref=Less than Bachelor's degree)		
Bachelor's degree or higher	0.769	(0.121)
Student status (Ref=Enrolled full-time)		
Enrolled part-time	0.435***	(0.081)
Not enrolled	0.224***	(0.028)
Employment status (Ref=Working full-time)		
Working part-time	1.011	(0.194)
Not working	1.150	(0.172)
Spouse's Employment Status (Ref=Working full-time)		
Working part-time	1.523*	(0.309)
Not working	0.953	(0.174)
No partner	0.923	(0.141)
Household job loss (Ref=No)		
Yes	3.461***	(0.367)
Wave (Ref=2)		
3	0.750*	(0.094)
4	0.718*	(0.095)
5	0.831	(0.108)
Constant	0.328	
R-squared	0.357	
Observations	3622	

*p < 0.05, **p < 0.01, ***p < 0.001

Note: Log-odds have been exponentiated into odds ratios for ease of interpretation.

Table 4 presents models estimating the relationships between being required to make student loan payments and being behind on loan payments, and how these relationships are moderated by three key variables: student loan payment status, household job or income loss, and income levels. While moderation effects are estimated through interaction terms, we use marginal probabilities to interpret these relationships. In the student loan payment status model, there was a significant interaction for making full and partial payments, compared to making no payments. In the household job or income loss model, there was a significant interaction for experiencing a job or income loss, compared to not experiencing a job or income loss. In the income level model, there was a significant interaction for those with high incomes, compared to those with low incomes.

Figures 3-5 presents three plots that show the marginal probabilities of being behind on student loan debt, conditional on being required to make student loan payments *and* student loan payment status, household job or income loss, and income levels, respectively. The plots indicate that in many cases, the relationship between payment requirements and being behind on student loan payments varied across student loan payment status, household job or income loss, and income levels. As shown in Figure 3, being required to make payments was significantly associated with increased probabilities of being

behind for respondents who were not making payments at all, when compared to respondents who were making full or partial payments. Additionally, being required to make payments was also associated with increased probabilities of being behind for respondents whose household lost a job or income, when compared to respondents whose households did not lose a job or income (Figure 4). Finally, being required to make payments was associated with decreased probabilities of being behind for respondents with a high income level, when compared to respondents with a low income level (Figure 5).

Table 4

Moderating Effects on the Relationship between Payment Requirements and Being Behind on Student Loans, Logistic Regression

	Payment status moderation		**Job loss moderation**		**Income level moderation**	
Variables and interactions	**Odds ratio**	**SE**	**Odds ratio**	**SE**	**Odds ratio**	**SE**
Payment Requirement (Ref=No)						
Yes	12.36***	(2.969)	4.308***	(0.764)	6.247***	(1.012)
Payment status (Ref=Not making payments)						
Making full payments	0.661*	(0.135)	0.457***	(0.073)	0.456***	(0.073)
Making partial payments	0.932	(0.221)	0.605**	(0.106)	0.595**	(0.105)
Household job loss (Ref=No)						
Yes	3.546***	(0.379)	2.709***	(0.440)	3.459***	(0.368)
Income (Ref=Low)						
Moderate	0.588***	(0.086)	0.590***	(0.087)	0.702	(0.162)
Middle	0.480***	(0.080)	0.475***	(0.080)	0.479**	(0.136)
High	0.634**	(0.112)	0.635*	(0.114)	0.968	(0.277)
Payment requirement*Payment status (Ref=Not Required, Not making payments)						
Payment required*Full payments	0.340***	(0.102)				
Payment required*Partial payments	0.292***	(0.099)				
Payment requirement* Household job loss (Ref=Required, No job loss)						
Payment requirement*Job loss: Yes			1.533*	(0.318)		
Payment requirement*Income level (Ref=Required, Low)						
Payment required* Moderate					0.735	(0.212)
Payment required*Middle					0.956	(0.309)
Payment required*High					0.514*	(0.168)
Covariates	Yes		Yes		Yes	

Constant	0.277	0.364	0.361
R-squared	0.361	0.358	0.358
Observations	3622	3622	3622

Notes: Covariates include student loan amount 3 months prior, gender, race/ethnicity, number of children, primary language, education level, employment status, spouse's employment status, student status, pre-pandemic student loan status, student loan type, and waves. Log-odds have been exponentiated into odds ratios for ease of interpretation.

Figure 3

Moderating Effect of Payment Status on Being Behind on Student Loans, Marginal Plot

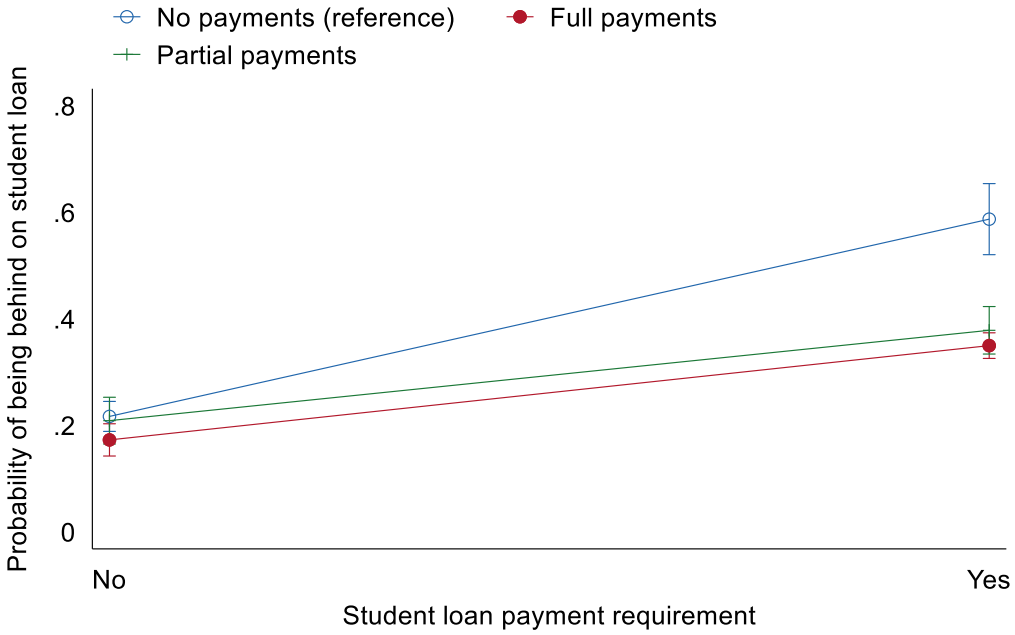


Figure 4

Moderating Effect of Job Loss on Being Behind on Student Loans, Marginal Plot

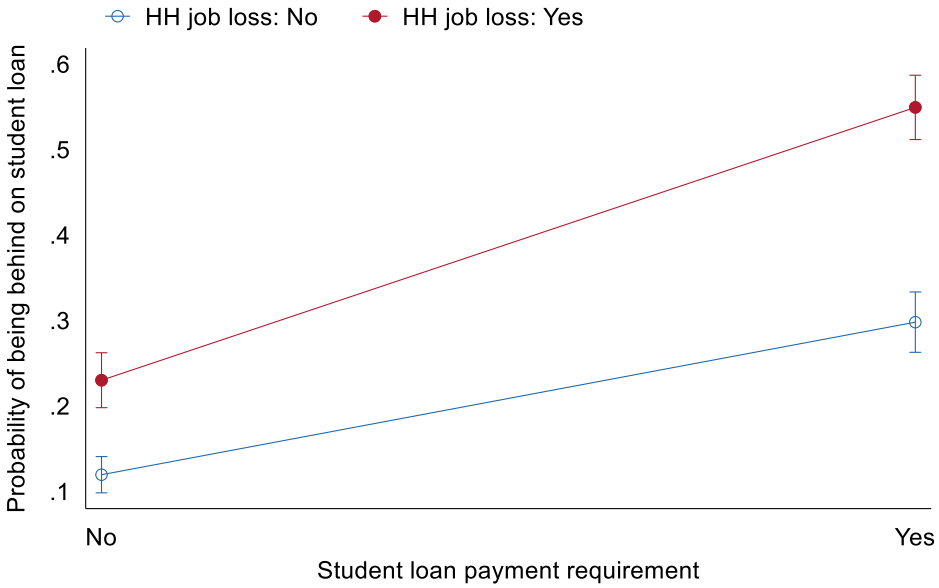
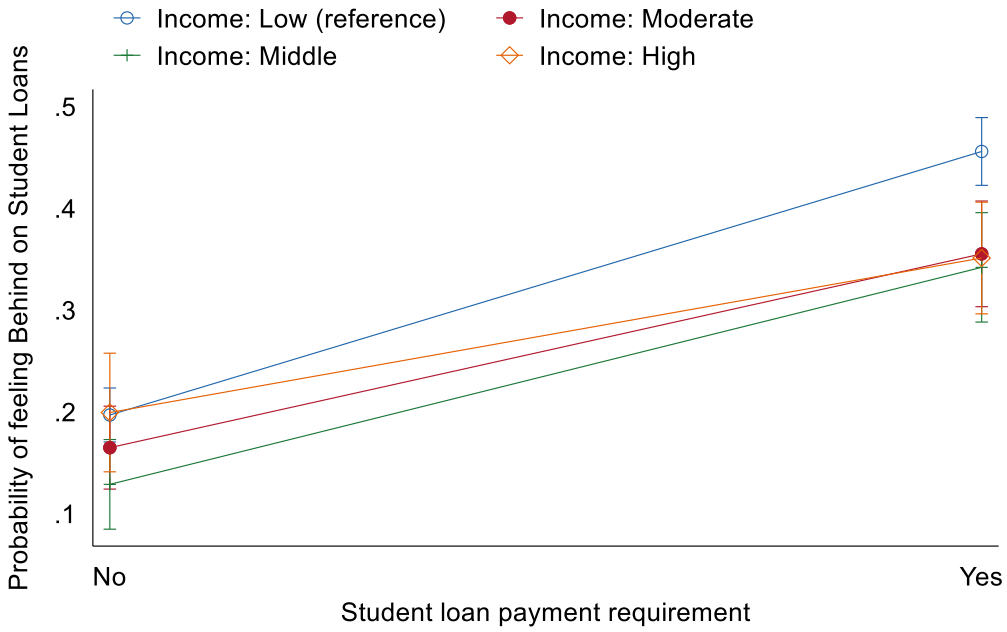


Figure 5

Moderating Effect of Income Level on Being Behind on Student Loans, Marginal Plot



Financial Hardships

Table 5 examines the associations of demographic, employment, and student loan characteristics with financial hardships. Controlling for all other factors, a $1 increase in student loan amounts three months prior to responding to the survey was significantly associated with a 0.3% decrease in the odds of financial hardships ($OR = 0.997$; $p < 0.05$). In terms of demographic characteristics, when compared to respondents who had less than a Bachelor's degree, respondents with Bachelor's or higher degree were significantly associated with a 38.5% decrease in the odds of financial hardship ($OR = 0.615$; $p < 0.01$). In addition, compared to respondents who had no child, respondents who had one child had a 60.8% increase in the odds of financial hardships ($OR = 1.608$; $p < 0.001$), respondents who had two children had a 111% increase ($OR = 2.111$; $p < 0.001$), and respondents who had three or more children had a 84.3% increase in the odds of financial hardships ($OR = 1.843$; $p < 0.01$). Moreover, compared to respondents with a low income level, respondents with a moderate income level had a 43.9% decrease in the odds of financial hardships ($OR = 0.561$; $p < 0.001$), and respondents with a middle income level, as well as respondents with a high income level, had a 50.5% decrease in the odds of financial hardships ($OR = 0.495$; $p < 0.001$). Lastly, compared with respondents who were enrolled in full-time educational programs, respondents who were not enrolled at all had a 70.7% decrease in the odds of financial hardships ($OR = 0.293$; $p < 0.001$).

In terms of employment information, when compared to the respondents who did not experience a job or income loss in their household, respondents who did experience a job or income loss had a 206.4% increase in the odds of financial hardships ($OR = 3.064$; $p < 0.001$).

For the student loan information, when compared to respondents with federal student loans, respondents with private student loans had a 31.6% increase in the odds of financial hardships ($OR = 1.316$; $p < 0.05$). In addition, when compared to respondents who were not required to make student loan payments, respondents who were required to make student loan payments had a 77.4% increase in the odds of financial hardships ($OR = 1.774$; $p < 0.001$). Lastly, when compared to respondents whose

pre-pandemic student loan status was in repayment, respondents whose status was delinquent had a 567.2% increase in the odds of financial hardships (*OR* = 6.672; p < 0.001), respondents whose status was in default had a 139.7% increase (*OR* = 2.397; p < 0.001), respondents whose status was in deferment or forbearance had a 83.1% increase (*OR* = 1.831; p < 0.001), and respondents whose status was in-school deferment had a 40.8% decrease in the odds of financial hardships (*OR* = 0.592; p < 0.01).

Table 5

Experiencing Financial Hardships, Logistic Regression

Variables	**Odds ratio**	**SE**
Student loan 3 months prior	0.997*	(0.001)
Pre-pandemic student loan status (Ref=In repayment)		
Delinquent	6.672***	(1.459)
Default	2.397***	(0.404)
Deferment/forbearance	1.831***	(0.246)
In-school deferment	0.592**	(0.095)
Student loan type (Ref=Federal)		
Private	1.316*	(0.146)
Both federal and private	1.061	(0.126)
Required to make student loan payments (Ref=No)		
Yes	1.774***	(0.194)
Payment Status (Ref=Not making payments)		
Making full payments	0.831	(0.117)
Making partial payments	1.014	(0.150)
Race/Ethnicity (Ref=White)		
Black	1.279	(0.174)
Asian	0.810	(0.206)
Hispanic	1.000	(0.131)
Others	1.434	(0.528)
Gender (Ref=Male)		
Female	0.887	(0.091)
Income (Ref=Low)		
Moderate	0.561***	(0.069)
Middle	0.495***	(0.070)
High	0.495***	(0.071)
Number of children (Ref=No child)		
One	1.608***	(0.191)
Two	2.111***	(0.291)
Three or more	1.843**	(0.382)
Primary language (Ref=Not English)		
English	0.744	(0.215)
Education level (Ref=Less than Bachelor's degree)		
Bachelor's degree or higher	0.615***	(0.090)

Student status (Ref=Enrolled full-time)		
Enrolled part-time	0.838	(0.142)
Not enrolled	0.293***	(0.031)
Employment status (Ref=Working full-time)		
Working part-time	1.116	(0.175)
Not working	1.076	(0.137)
Spouse's Employment Status (Ref=Working full-time)		
Working part-time	1.145	(0.213)
Not working	0.843	(0.134)
No partner	1.025	(0.131)
Household job loss (Ref=No)		
Yes	3.064***	(0.285)
Wave (Ref=2)		
3	1.138	(0.123)
4	0.943	(0.104)
5	1.194	(0.131)
Constant	1.326	
R-squared	0.269	
Observations	3622	

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Discussion

As large financial and social crises can exacerbate the negative effects of student debt, it is important to consider student debt in the wake of COVID-19. Unlike previous policy responses to many previous financial and social crises, student debt was specifically addressed in the federal government's response to the pandemic, which mandated student debt forbearance for federal loans. However, little is known about how student debt dynamics manifested over the course of the pandemic, especially in relationship to forbearance policies, loan payments, and household financial stability.

Using a nationally representative survey of households during the pandemic, we explored the relationships among student debt characteristics—including access to forbearance policies—and financial circumstances. Starting with student loan balances, we were unsurprised to find that deferments were associated with an increase in student loan balances, and that making payments were associated with a decrease in student loan balances. However, while these trends represent the natural outcomes of forbearance policies, these outcomes can also represent an opportunity for widening inequalities. For example, working households paid down their loan balances during the pandemic, while households that were not working fell further behind. The differences in debt balances are considerable as well. On average, those making payments experienced a roughly $2,000 decrease in their student debt balances in our study, which is close to 8% of the sample's mean debt balance. If these patterns held over the course of the entire pandemic, it would indicate that those who were able to continue to make payments during the period that payments were frozen experienced much larger debt reductions than those who were not able to (or chose not to) pay.

These trends are confirmed when we explore the extent to which households were behind on their student loan payments. While being required to make payments was associated with an increase in the odds of being behind, actually making payments was associated with a decrease in the odds of being behind. Moreover, actually making payments moderated the effect of being *required* to make payments,

such that being required to make payments was associated with an increased probability of being behind for respondents who were not making payments at all. As making payments on student loans can represent concrete steps towards financial relief, it is unsurprising to find that the sense of being behind on student loans was worse for individuals that were not making payments and not able to take advantage of the forbearance policies.

Similarly, being required to make payments was significantly associated with increased probabilities of being behind for households who lost a job or income during the pandemic, as well as households who are low-income. In each case, the negative effect associated with not being able to take advantage of forbearance polices was exacerbated for disadvantaged households. In addition to experiencing income/job loss and being low income, having children and having student loans in delinquent, default, or forbearance status prior to the pandemic were also associated with increased odds of being behind, suggesting additional strains for families, as well as exacerbated inequalities for households who already had difficulties making loan payments.

However, the negative effects of student loans on financial outcomes extended beyond student loan hardships. Rather, households that had to make student loan payments during the pandemic were more likely to experience financial hardships as well. Moreover, among those with student debt, Black borrowers and households who recently lost a job or income during the pandemic were more likely to experience financial hardships during the pandemic, while households with higher income levels and higher levels of education were less likely to experience a financial hardship. Furthering the evidence for exacerbating inequalities, those with student loans that were in delinquency, default, or forbearance were also more likely to experience hardships.

To place these findings in context, other research has found that holding any student debt in general was associated with higher rates of skipped housing payments and other bills, food insecurity, and skipping essential medical care (Despard et al., 2016). That paper, which focused on a low-income sample, reported that holding student debt was associated with a 19% to 51% increase in the odds of experiencing different types of hardships. In our study, we find that the experience of a similar array of financial hardships was concentrated in those with private loans and those who were required to make student loan payments during a period where many borrowers were able to defer payments, as well as those who had defaulted or were delinquent on their loans. These were also the borrowers who were most likely to report being behind on their student loans. The effect sizes we see are considerable, as being delinquent on student loans was associated with 567% increase in the odds of facing financial hardships, and being required to make student loans was associated with a 77% increase in the odds of financial hardship. These patterns strongly indicate that any efforts to understand the distributional effects of student loan reform policies need to account for borrowers' specific loan terms and their obligations under those terms.

Limitations

While this study is the first to explore the relationship between student debt policies, circumstances, and financial measures of hardship during the pandemic, it is not without limitations. First, while we are able to leverage longitudinal data, sample size constraints prevent us from examining within-person variation over time. Future studies should consider how financial measures of hardship change throughout the pandemic—especially in relationship to changing policies. Second, our measure of financial difficulties were observed during the time that student debt forbearance policies were active, and thus we cannot demonstrate causal relationships. Future studies should identify or create datasets that allow for the examination of financial hardships before, during, and after the pandemic, and the extent to which these hardships are associated with student debt forbearance policies.

Finally, due to limited survey space, we combined both reports of being behind in loan payments and having loan payments in collection into one question that was operationalized as "being behind" on

student loans. While self reports of being behind can represent more subjective measures of one's financial circumstances, reports of having loans in collections represents a more objective measure. Although roughly 70% of our sample reported being behind, only 8% reported having student loans in delinquency and default, respectively. Thus, we can assume that the majority of those who were operationalized as being behind on their student loans were not in collections. Nevertheless, while the breadth of this measure allows us to capture both subjective and objective aspects of being behind on student loans, it limits our ability to specify which aspect is driving the result. Future research should consider parsing out these aspects to better understand both the subjective and objective financial circumstances of student loan borrowers.

Conclusion

Given what we know about forbearance policies and student loan payments, our study yielded many expected findings: deferments were associated with an increase in student loan balances; and making payments were associated with a decrease in student loan balances and a decrease in the odds of being behind. However, while previous research has demonstrated that student debt can have worse outcomes for disadvantaged borrowers, we were surprised to see the extent of these accumulated disadvantages and the fact that they extended far beyond student loan hardships into more general financial hardships. Starting with student loan hardships, experiencing income/job loss, being low income, having children, and having student loans in delinquent, default, or forbearance status prior to the pandemic were associated with increased odds of being behind on one's student loans. Moving on to financial hardships, households that had to make student loan payments during the pandemic, Black borrowers, households who recently lost a job or income during the pandemic, and those with student loans that were in delinquency, default, or forbearance were more likely to experience financial hardships during the pandemic. Conversely, households with higher income levels and higher levels of education were less likely to experience a financial hardship.

Based on our findings, forbearance policies should continue to be explored in the wake of large social and financial disruptions like the COVID-19 pandemic. However, these policies should also consider more universal forbearance policies that extend to all borrowers—as borrowers with private loans were not subject to these policies during the pandemic. In addition to forbearance polices, forgiveness policies should also be explored. In their recent analyses of potential responses to hypothetical student debt forgiveness scenarios, Jabbari et al. (2021) demonstrate that student debt forgiveness can have large implications for household economic stability (e.g., emergency savings) and social mobility (e.g., saving for a down payment on a home, starting a business). Given the influence of earnings on negative outcomes associated with student debt, and the opportunity for universal polices to further widen inequities, targeted means-tested student debt forgiveness policies should also be explored in this regard—not only as a mechanism for reducing hardships, but also as a mechanism for increasing social mobility.

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