

The Federal Student Loan Pause
Assessing its Impact on Healthcare and Retirement Spending

by

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ABSTRACT

The student loan pause was implemented to assist borrowers during the economic downturn caused by the Covid-19 pandemic. Using quarterly data from the Consumer Expenditure Survey from 2019-2021, I analyze the impact of the pause on household spending on healthcare and retirement savings. Prior studies have shown negative impacts of student debt on health and retirement outcomes. The results indicate no statistically significant difference in spending in these categories for households that were eligible for the student loan pause. These findings raise concerns of whether the student loan pause was enough to help households affected by student debt and how these households will fare once the pause ends.

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INTRODUCTION

The federal student loan pause was initially implemented just over three years ago at the time of this writing as part of a larger push from the federal government to mitigate the economic consequences of the Covid-19 pandemic (Federal Student Aid, 2023). The student loan pause was implemented as part of the CARES act, which among other things provided individuals with direct financial assistance in the form of a one-time payment of \$1,200 (Congress.Gov, 2020). While the one-time payment was a significant help for households who received it, its impact was likely not substantial even in the short term. The student loan pause on the other hand provided individuals with ongoing extra cash in the form of saved income from no longer having to make payments towards student loans. While not all households hold student loans, the issue has become pressing as student loan balances skyrocket. The student loan pause is an interesting policy because it is an acknowledgment by the state that student debt is a significant issue and that households that hold student debt are likely in need of assistance during times of crisis. Therefore, it is worth testing the impact of the student loan pause on areas in which student loan borrowers were struggling prior to the pandemic to see if the pause allowed for some relief. The following section highlights some of the struggles of student loans borrowers.

STUDENT LOANS AND ECONOMIC SECURITY

Student loans have become a pressing issue for many Americans. Current estimates of total student loan debt have climbed into the trillions. Currently, student loan debt sits at \$1,973,789,560,761 (Finaid, 2023). At nearly two trillion dollars, this is a significant issue impacting households. The origins of the student loan crisis can be traced to a reduction in government spending on public goods such as higher education and a stagnation of wages for most American workers. Hacker (2019) details the former trend by describing how in the last 50 years Americans have had to deal with greater economic risk as they are left to provide themselves with things that had been previously afforded them either through public or private investment. In the case of education, investment mainly came through public mechanisms. As state investment into higher education declined, student loans arose as a means for making up that lost state investment. Some argue that student loans have never been a product of coherent public policy but rather an ongoing fix to fill the void of a retraction of state investment in public colleges (Fossey, 1998). Universities have thus been forced to increase tuition, shifting a cost formerly covered by the state onto students through higher tuition prices (Goldrick-Rab et al., 2016). Increases in tuition then force students and their families to borrow to afford higher education.

Student loans have even become a means for profit-making. Soederberg (2014) highlights how student loans have become commodified and traded so as to minimize risk to lenders. This creates conditions in which the risk of borrowing for college is almost entirely borne by students and their families. One might wonder why students and their families do not pay for the costs up front rather than borrowing. There are many

determining factors as to why students and their families are not able to cover costs up front but stagnant wages are one of the most important. Wages and benefits have remained largely stagnant for many American workers as highlighted by Kalleberg (2011). Stagnant wages in relation to increasing costs of living, in this case increasing costs of higher education, create a situation in which students and their families are less likely to be able to afford paying for college out of pocket. Stagnant wages also means students are not able to work their way through college as they might have been able to do in the past. The need to borrow then creates conditions in which students are forced to borrow against their future earnings, and as will be described in the next section, their future economic security.

The connection between student debt and various measures of economic security have been well documented. Studies have found that student borrowers tend to have worse financial situations than their counterparts without student debt. Part of this is through the effects of student debt on earning potential. Using data from the 1987 national postsecondary student aid survey, Minicozzi (2005) finds that student debt can have a negative effect on wage growth for the first 4 years of post-graduate work, meaning that students graduating with no debt tend to have higher paying jobs over the first 4 years out of school. These findings might be explained by students' decision to rush into whatever job they can get into right after college considering that they will have student loan payments to make soon. Although interestingly enough, using data on students graduating into a recession in 2009, Bernasek and Long (2021) find no significant difference in wages between indebted and non-indebted students, though that

might be attributed to a weaker labor market. Evidence of lower wages for indebted students is manifested in their net worth.

Having student debt is associated with having a lower net worth than those with similar levels of education but no debt (Elliot and Lewis, 2015). Some estimates suggest that the differences in net worth amongst college educated people can be quite drastic depending on whether they have student debt or not. Based on 2009 data on the net worth of households, Elliot and Nam (2013) find that net worth for households without student debt is nearly 3 times higher than households of similar education levels with student debt. Student loan payments can be a heavy monthly expense for households, which greatly hinders households' ability to accumulate wealth. Using 15 rounds of data from the 1997 National Longitudinal Survey of Youth, Zhan, and Elliot (2016) find that having student loans is negatively associated with wealth building among young adults, with estimates being generally worse for Black students than white students.

The connection between student loan debt and other forms of debt is also well-documented. Gicheva and Thompson (2015) find that having student debt is associated with impaired access to financial markets, meaning student debt borrowers are more likely to be credit constrained and more likely to declare bankruptcy. Student loans are similar to other forms of debt in that they are used in credit decisions by lenders. This negatively impacts student loan borrowers from being able to rely on other forms of credit for larger expenses like a car or home. However, unlike other forms of debt, it is exceptionally difficult to have student loan debt released through bankruptcy (Iuliano, 2020). Bricker and Thompson (2016) have also found that households with student debt are more likely to be late on paying bills and are more likely to be denied credit. This

comes as no surprise as student loan borrowers are saddled with a significant portion of debt that cannot be easily discharged. The negative financial effects of having student loan debt are further exacerbated for low to moderate income households which have been shown to be at higher likelihood of not being able to meet basic household needs (Despard et al., 2016). For these households, taking the risk of getting a degree in the United States has been especially unfruitful. Impaired access to financial markets can mean not being able to rely on other forms of debt in times of hardship but also being denied access to wealth-building assets such as homeownership.

The relationship between homeownership and having student loan debt has been well-documented in the literature. Studies have shown that having student debt is negatively associated with homeownership (Mountain et al. 2020; Mezza et al. 2020). It is not difficult to imagine why student loan borrowers face a harder time purchasing a home when they are forced to dedicate a substantial amount of their income towards loan payments. Having a large sum of debt constrains the amount of other debts they are able to take on. Mezza et al (2015). finds that a 10% increase in student debt is associated with a 1-2% decrease in homeownership. From a broader context, Bleemer et al. (2021) finds that although the exact amounts can vary by state, when a state increases tuition prices, they can expect to see not a decrease in enrollment rates but rather a decrease in homeownership. These findings highlight the necessity of a college degree in that despite increasing tuition costs, enrollments have not decreased. Unfortunately, these findings also suggests that students are borrowing against their future security in order to access higher education.

Another important long-term investment is retirement saving. Having student debt can negatively impact how much a person is able to put away for their future retirement. Using data from the Survey of Consumer Finances, Elliot et al. (2013) find that retirement savings are drastically higher for those without student debt. It is important to note that student debt does not impact whether or not someone has a retirement account but rather negatively impacts the amount saved in that account (Rutledge et al., 2018). Households already have less access to disposable income when they are saddled with debt from attending college. Student debt creates conditions in which households are faced with having to avoid investing in their retirement savings because they need that money at the present moment. These studies suggest that having a student loan is a significant hindrance for households and their ability to build wealth.

The burden of student debt is not shared equally amongst all student debt borrowers. Student loans have been shown to negatively impact Black students to a greater extent than white students. For example, researchers have found that while the need to borrow is similar amongst low to moderate income students, Black students are still estimated to incur substantially more debt than their white counterparts (Price, 2004; Grinstein-Weiss et al., 2016). Houle and Addo (2019) have shown that these debt disparities continue into early adult life and further perpetuate racial wealth inequality. Seamster and Charron-Chénier (2017) have called this racial debt disparity *predatory inclusion* as student loans have become a means for Black students to obtain higher education, but on exploitative terms. Students who might otherwise not be able to access higher education gain the opportunity through student loans, but they are then trapped into debt that will negatively impact them financially for years to come. Because of this

well-documented disparity in student loan outcomes for Black borrowers, some scholars have argued that student loans have relied on anti-Black racial logistics and systemic forces and thus have called for the full cancellation of student debt (Mustaffa and Dawson, 2021). These findings might imply that the student loan pause might have benefitted Black borrowers more than white borrowers. From this view, the student loan pause could be considered a small step towards repairing the racial gap in higher education lending.

The link between student debt and health has not been as well-documented though there is some evidence to suggest that student debt can negatively impact health. For example, using data from 2000–2014, Dugan and Marken (2014) has shown that having more than \$50,000 in student debt is linked to worse health. Households saddled with student debt likely have less money available for necessary expenses like healthcare. Babula (2021) has shown that student borrowers who are either behind on payments or in collections have reported forgoing mental healthcare, seeing a doctor/specialist, follow-up care, prescriptions, and dental care. Borrowers are bound to face worse health outcomes if they are forced to forgo healthcare as a result of having to keep up with student loan payments. Babula includes that the effect of student loans on forgoing healthcare persists even when controlling for having health insurance. With less income available, this might be explained by households with student debt having worse health insurance plans. A worse insurance plan would imply that households are paying more out of pocket when it comes time to get medical care. However, it is important to consider that having health insurance can be a challenge when some have found that wealth is a greater indicator of whether someone has health insurance than solely income

(Bernard et al., 2009). As shown above, households with student debt tend to have less wealth and consequently might be at greater risk of being uninsured or underinsured. The negative impacts of student debt on health extend to mental health and self-perceived health (Kim and Chatterjee 2019; Sweet et al., 2013). It is important to note that these studies have measured self-perceptions of health and therefore may not account for how healthy student loan borrowers actually are. However, it would come to no surprise that households who report that they are struggling to afford healthcare would have worse health outcomes.

RESEARCH GOALS

As the previous section has shown, the situation for student loan borrowers is especially bleak. However, on March 13, 2020, student loan payments were paused, and interest rates were set to 0% (Federal Student Aid, 2023). At the time of this writing, the student loan pause is set to expire at the very latest 60 days after June 30th, 2023. The lack of clarity around the exact end date of the pause is due to a challenge in the Supreme Court of President Biden's partial student debt cancellation policy (Liptak, 2023). This pause offers a unique opportunity to study whether loan pauses actually help borrowers in areas where they were previously struggling. Considering the research on student loans and their negative impacts on financial well-being, one might expect to see some improvements for student loan borrowers. Ghosal-Data et al. (2022) estimates that as a result of the pause average monthly debt obligations for borrowers have dropped by \$210. Debt obligations will vary widely depending on how much student debt a household has; some may have seen a greater relief while some may have seen hardly any relief. It is also worth noting that the pause only applies to federal student loans.

However, it will be interesting to see how households have used their additional income now that they are not required to make payments. Gullet et al. (2021) published recommendations for those impacted by the student loan pause, one of which being to spend that money on high priority needs like housing, food, and medical expenses. Whether households followed these recommendations remains to be seen.

As such, this paper seeks to offer a preliminary analysis of household expenditures during the student loan pause to determine if borrowers have benefitted from the pause in areas where they were previously struggling. Because the student loan pause is currently ongoing and therefore data for the entire duration of the pause is not yet available, only a short-term analysis is possible. Healthcare and retirement are two categories of expenditures that have been documented in the literature as areas in which households with student debt had been struggling prior to the pandemic. I have chosen to analyze healthcare spending partially because it is less discussed in the literature on student loans but also because it may be more likely to change in the short term. Additional income available due to the student loan pause might indicate that households are less likely to forgo healthcare like they might have been prior to the pause. Measuring retirement spending on the other hand, while not an immediate need, may still offer a glimpse at long-term wealth building trends for households that benefitted from the student loan pause. Households with student debt and their hindered ability to build wealth is well-documented in the literature, however, wealth takes time to build. It is unlikely that households whose student loan payments were paused were able to obtain wealth-building assets like a home in such a short period of time. Therefore, I analyze

retirement spending to offer a glimpse at potential long-term wealth building that was a result of the student loan pause.

HYPOTHESES

Currently, the student loan pause has been active for about three years. The extended duration of the pause creates an opportunity to better understand the link between student loans and measures of economic security. As the previous sections have shown, evidence suggests that having student loans is associated with worse financial and even physical health. Given that payments have been paused for an extended period of time, I would expect improvements in various measures of financial security. The measures I have chosen for this study include measures of healthcare-related spending and retirement spending. The relationship between student debt, healthcare and retirement savings is not as well-documented in the literature as other areas such as homeownership and net worth. In addition, because this study is a short-term analysis, I would not expect significant changes to a household's net worth and/or homeownership status during the first 1.5 years of the student loan pause. Therefore, I offer an analysis of healthcare spending and retirement spending because these are more likely to have changes reflected in the short-term. Healthcare spending is an immediate need and is more likely reflected in an analysis of short-term spending. Spending towards retirement accounts, while not an immediate need, offer some insight towards whether households saved some of their additional income.

Hypothesis I: The student loan pause is associated with an increase in healthcare spending for households with student debt relative to households without student debt.

As the previous section has shown, there is a significant connection between having a student loan and pushing off medical care (Babula, 2021). This leaves households with student debt in a medically vulnerable state that could have been

partially relieved by the student loan pause. Evidence of this relief might be shown through an increase in medical spending for households that directly benefitted from the student loan pause. The increase in spending would have to be associated with the time period of the student loan pause in order to attribute the improvement to the policy itself and not some other factor.

Hypothesis II: The student loan pause is associated with an increase in retirement savings for households with student debt relative to households without student debt.

There is a significant relationship between having a student loan and not being able to save as much for retirement (Elliott et al., 2013; Rutledge et al., 2018). A pause in student loan payments frees up some household income which might have been used towards retirement savings. An increase in spending towards retirement savings accounts for households that benefitted from the student loan pause during the pause period would be evidence to support this hypothesis.

DATA

In order to test these hypotheses, I use quarterly data from the Consumer Expenditure Survey from 2019 to 2021. This survey is conducted through the Bureau of Labor Statistics and is collected at the household level to analyze how Americans spend their money (US Bureau of Labor Statistics, 2023). I have chosen these data because of their nationally representative sample and particular focus on tracking spending. This survey also collects data quarterly which is particularly useful for tracking short-term changes in spending. I limit the sample to only households with respondents or a spouse of a respondent that have completed at least some college so that my models compare households with and without student loans that are more likely to have experience similar economic situations. This limits my sample to 26,624 observations.

DEPENDENT VARIABLES

The first dependent variable I use captures quarterly spending on healthcare generally. This variable is made up of the sum of four other health-spending related variables. These variables include measures of spending on health insurance, medical services, prescriptions, and medical supplies. However, in order to get a more detailed analysis of spending on healthcare, I also analyze these variables individually. Individually analyzing the variables that make up the healthcare variable is useful for capturing trends that might not be captured in the general variable. For example, spending on health insurance could remain constant while there are increases in spending medical services. It is unlikely that households would change their insurance plan due to temporarily paused payments, but they are more likely to perhaps see a doctor. Analyzing these variables separately allows for a capture of these nuances in spending trends.

I also include measures of retirement savings in my analysis. Unlike the healthcare variable, retirement savings are only covered by this single variable. This variable does not ask respondents how much they currently have saved for retirement but rather how much they spent towards retirement accounts in the last and current quarters.

INDEPENDENT VARIABLES

Each model includes two independent variables that allow comparing students with and without student loans, before and after the pause was implemented. The student loan pause variable identifies whether a spending observation is taken before or after the first quarter of 2020. This break roughly coincides with the initial implementation of the pause. Observations taken before the pause are coded as 0 and observations after the pause are coded as 1. The second independent variable measures whether a household reports having a student loan or not. While the sample is limited to households with comparable education levels, not every household reports having a student loan. This variable was included to test the effect of having a student loan. Having a student loan is coded as 1 while households without a student loan are coded as 0.

CONTROL VARIABLES

Each model includes controls for race, sex, age, income, and occupation type. A control for race is included to account for how student loans negatively impact Black borrowers to a worse extent than white borrowers (Price, 2004; Grinstein-Weiss et al., 2016; Seamster, Charron-Chénier, 2017). A control for sex is included to account for documented differences in the ways that men and women have been impacted by student debt (Dwyer, Hodson, McCloud, 2013). A control for age is included to account for how student debt especially impacts older borrowers in their ability to save for retirement

(Brady, Miller, Balmuth, 2019). Each model includes a control for income to account for higher-earning households that may be less impacted by student debt. And lastly, each model includes a control for occupation type to account for the fact that the sample is limited to households that report at least some college, which will impact the kinds of jobs that households will be reporting.

METHODS

To analyze the relationship between student loan debt and the spending outcomes of interest, I use difference-in-difference estimators obtained via ordinary least squares (OLS) regression models. I take the log of the dependent variable in each model to account for the skew of each dependent variable. Taking the log of each dependent variable also means modeling relative rather than absolute change in spending, which is typically more suitable. Consequently, I report my findings in percentage changes. Each model consists of a dependent variable, an interaction between the independent variables, and all control variables. The base formula for each regression model is shown below:

$$\log(\hat{y}) = b_0 + b_1X_{(\text{loan})}X_{(\text{pause})} + b_2X_{(\text{race})} + b_3X_{(\text{sex})} + b_4X_{(\text{age})} + b_5X_{(\text{income})} + b_6X_{(\text{occupation})} + \varepsilon$$

The interaction term (shown in the equation as $b_1X_{(\text{loan})}X_{(\text{pause})}$) is included to assess whether differences in spending before and after the pause are different for households with and without student debt, which is the difference-in-difference estimator.

RESULTS

Table 1: Mean Quarterly Spending of Dependent Variables

| | With student loans pre-pause | With student loans post-pause | Without student loans pre-pause | Without student loans post-pause |
|------------------|---------------------------------|----------------------------------|------------------------------------|-------------------------------------|
| Healthcare | \$1,514 | \$1,499 | \$996 | \$995 |
| Health Insurance | \$1,067 | \$1064 | \$642 | \$641 |
| Medical Services | \$327 | \$325 | \$238 | \$238 |
| Prescriptions | \$75 | \$72 | \$86 | \$86 |
| Medical Supplies | \$44 | \$37 | \$29 | \$29 |
| Retirement | \$2,580 | \$2,675 | \$1,734 | \$1,735 |

Table 1 provides a descriptive overview of spending trends of each dependent variable. The table is split between households that report having a student loan and those who report having no student loans. The table also splits the observations in the sample by the time period before and after the pause. The pre-pause era consists of data from all four quarters of 2019 while the post-pause era consists of data from the first quarter of 2020 through the final quarter of 2021. The pause was first implemented roughly after the first quarter of 2020 ended. At first glance, there appears to be minimal changes in spending for both groups. Regardless of the category, spending appears to be largely the same. However, it is interesting to see that those with student loans are generally spending more than households without student loans.

Table 2: Linear Models of Quarterly Expenditures on Healthcare and Retirement.

| | Model 1 (Healthcare) | Model 2 (Health Insurance) | Model 3 (Medical Services) | Model 4 (Prescriptions) | Model 5 (Medical Supplies) | Model 6 (Retirement) |
|--------------|-------------------------|----------------------------------|----------------------------------|----------------------------|----------------------------------|-------------------------|
| Pause x Loan | 0.210 (0.131) | 0.197 (0.151) | -0.125 (0.158) | -0.040 (0.121) | 0.149 (0.094) | 0.066 (0.035) |
| Pause | -0.106*** (0.030) | -0.086* (0.034) | -0.245*** (0.036) | -0.126*** (0.027) | -0.033 (0.021) | 0.008 (0.008) |
| Loan | 0.204* (0.102) | 0.147 (0.117) | 0.433*** (0.123) | 0.298** (0.094) | 0.050 (0.073) | -0.026 (0.027) |
| Black | -0.492*** (0.049) | -0.264*** (0.056) | -0.713*** (0.059) | -0.402*** (0.045) | -0.136*** (0.035) | -0.034** (0.013) |
| Native | -0.436* (0.216) | -0.687** (0.248) | -0.753** (0.261) | -0.912*** (0.198) | 0.272 (0.154) | -0.100 (0.057) |
| Asian | -0.264*** | -0.138* | -0.371*** | -0.487*** | -0.050 | -0.008 |

| | | | | | | |
|-------------------------|-----------|-----------|-----------|-----------|----------|-----------|
| | (0.055) | (0.063) | (0.067) | (0.051) | (0.039) | (0.015) |
| Pacific Islander | 0.095 | 0.173 | -0.387 | -0.181 | -0.077 | 0.0731 |
| | (0.207) | (0.239) | (0.249) | (0.191) | (0.148) | (0.055) |
| Multi-race | -0.116 | -0.131 | -0.297* | -0.041 | 0.075 | -0.055 |
| | (0.108) | (0.124) | (0.130) | (0.099) | (0.077) | (0.028) |
| Sex | 0.093** | 0.032 | 0.176*** | 0.219*** | 0.096*** | -0.028*** |
| | (0.030) | (0.035) | (0.037) | (0.028) | (0.0217) | (0.008) |
| Age | 0.042*** | 0.048*** | 0.019*** | 0.036*** | 0.007*** | -0.008*** |
| | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) | (0.001) |
| Income | 0.833*** | 0.866*** | 0.515*** | 0.218*** | 0.148*** | 1.053*** |
| | (0.016) | (0.019) | (0.020) | (0.015) | (0.012) | (0.004) |
| Teacher | 0.208** | 0.192* | 0.221** | 0.256*** | -0.032 | -0.005 |
| | (0.067) | (0.078) | (0.081) | (0.062) | (0.048) | (0.018) |
| Professional | 0.099* | 0.157** | 0.159** | 0.129** | -0.030 | -0.007 |
| | (0.047) | (0.054) | (0.057) | (0.043) | (0.034) | (0.012) |
| Admin. | 0.118 | 0.211** | 0.049 | 0.002 | -0.039 | -0.092*** |
| Support | (0.068) | (0.079) | (0.082) | (0.063) | (0.049) | (0.018) |
| Sales, retail | -0.125 | 0.018 | -0.162 | -0.061 | -0.085 | -0.173*** |
| | (0.0751) | (0.086) | (0.091) | (0.069) | (0.054) | (0.020) |
| Sales, business | -0.197* | -0.119 | -0.194* | -0.020 | -0.104 | -0.127*** |
| goods and | (0.077) | (0.088) | (0.092) | (0.070) | (0.055) | (0.020) |
| services | | | | | | |
| Technician | 0.000 | 0.140 | -0.282** | 0.060 | -0.074 | -0.029*** |
| | (0.073) | (0.084) | (0.088) | (0.067) | (0.052) | (0.019) |
| Protective | 0.060 | 0.113 | -0.249 | 0.134 | -0.121 | 0.006 |
| service | (0.127) | (0.145) | (0.152) | (0.116) | (0.091) | (0.033) |
| Private | -0.814*** | -1.046*** | -0.388* | -0.126 | 0.092 | -0.165*** |
| Household | (0.159) | (0.183) | (0.191) | (0.146) | (0.114) | (0.042) |
| Service | | | | | | |
| Other service | -0.414*** | -0.377*** | -0.297*** | -0.086 | -0.102** | -0.133*** |
| | (0.055) | (0.063) | (0.066) | (0.050) | (0.039) | (0.014) |
| Machine | -0.220** | -0.168 | -0.254** | -0.080 | -0.002 | -0.085*** |
| Operator | (0.0793) | (0.0912) | (0.096) | (0.073) | (0.057) | (0.021) |
| Transportation | -0.621*** | -0.566*** | -0.473*** | -0.222** | -0.144* | 0.009 |
| operator | (0.086) | (0.098) | (0.103) | (0.079) | (0.061) | (0.023) |
| Handler, | -0.281 | -0.356 | 0.007 | 0.070 | 0.034 | -0.103* |
| helper, laborer | (0.160) | (0.185) | (0.194) | (0.148) | (0.115) | (0.042) |
| Mechanic, | -0.067 | -0.022 | -0.282 | -0.338 | 0.077 | -0.024 |
| repairer | (0.226) | (0.260) | (0.272) | (0.207) | (0.163) | (0.060) |
| Construction, | -1.457*** | -1.198*** | -1.427*** | -0.654*** | -0.083 | 0.039 |
| mining | (0.152) | (0.174) | (0.183) | (0.139) | (0.108) | (0.040) |
| Adjusted R ² | 0.193 | 0.167 | 0.064 | 0.083 | 0.0143 | 0.728 |
| N | 26,565 | 26,624 | 26,434 | 26,542 | 26,582 | 26,624 |

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2 provides estimates of changes in healthcare and retirement spending from the period before the pause to the period after the pause. Model 1 estimates spending on healthcare generally while models 2-5 estimate specific components of healthcare spending (prescriptions, health insurance etc.). Because I am measuring changes in

spending and have taken the log of each dependent variable, the coefficients can be interpreted as percent changes. For example, the pause coefficient (-0.106) from model 1 can be interpreted as an estimated 10.6% decrease in healthcare spending during the time period of the pause for households with no student loans (since the coefficient is part of an interaction). The coefficient for the pause x loan interaction in the first row of each model in table 2 provides the difference in difference estimates. It provides the predicted difference in the change in spending pre- and post-pause across borrowers and non-borrowers. A positive coefficient, for example, means that borrowers' spending increased during the pause by a greater amount than non-borrowers' spending.

In model 1 of table 2, the coefficient for the pause x loan interaction coefficient suggests a 21% greater increase in medical spending for student borrowers compared to non-borrowers. However, this coefficient is not statistically significant. The lack of statistical significance suggests that there is not enough evidence to support that the increase in healthcare is associated with the student loan pause. Furthermore, the adjusted R^2 value suggests that the chosen independent variables in the model are only accounting for just over 19% of the variation amongst the healthcare variable. The R^2 value suggests that the variation in the healthcare variable is only partially explained by the included independent variables and controls, and that the rest of the variation is likely explained by other factors.

Similarly, the interaction coefficient from model 2 suggests an increase in health insurance spending but this coefficient is also not statistically significant. The interaction coefficients from model 3 and model 4 suggest decreases in medical services and prescriptions, respectively. However, neither coefficient is statistically significant. Model

5, the last healthcare-related model suggests a 6% increase in spending of medical supplies, however, this increase is not statistically significant. Altogether, the results from models 1-5 do not offer support for hypothesis I. While these models report some increases in healthcare spending, lack of statistical significance means they do not provide evidence that the increases (or decreases) for student loan borrowers in medical spending are associated with the student loan pause.

Model 6, which provides estimates of spending towards retirement accounts, provides similar results to the healthcare-related models. The interaction coefficient suggests a 6.6% increase in spending towards retirement accounts though this estimate is not statistically significant. This suggests a lack of evidence to support the claim that an increase in retirement spending is associated with the student loan pause for impacted groups. It is worth noting that model 6 has a much higher adjusted R^2 value than the other models. This suggests that the chosen variables account for nearly 73% of the variation in the retirement spending variable. This may suggest that households in the data set were not spending much on retirement and therefore there would be little variation in the first place. However, because the interaction coefficients are not statistically significant, there is still not sufficient evidence to support hypothesis II. Model 6 does not offer support for hypothesis II which states that an increase in retirement spending for student loan borrowers is associated with the student loan pause. Potential explanations for the lack of support for both hypotheses are discussed in the following section.

DISCUSSION

It was estimated that on average, student loan borrowers saved about \$210 per month since the student loan pause was implemented (Ghosal-Data et al., 2022). While this may seem like a rather small sum, these monthly savings can make a difference for households that were already struggling prior to the pandemic, as many sources from the student loans and economic security section suggest. While there is a bulk of literature on student loans and their impact on homeownership and wealth, there is far less literature on student loans and their impact on healthcare. However, the currently available literature suggests a negative association between health and having a student loan (Dugan and Marken, 2014; Babula, 2021). Considering that the pause allowed for considerable average monthly savings for households with student loans, one might expect improvements in areas where households with student loans were previously struggling. Estimates, however, suggest that this is not the case. The student loan pause had no discernible effect on health care or retirement spending for student borrowers relative to non-borrowers.

There is a wide range of possibilities to explain why borrowers did not benefit from the student loan pause in terms of healthcare and retirement spending. Part of the answer may lie with other forms of aid that were implemented during this time. Medicaid in states that opted to expand significantly prevented people from being uninsured during a public health crisis (Benitez & Dubay, 2022). Expanded unemployment benefits were also crucial in sustaining healthcare spending during the pandemic (Evangelist & Wu, 2022). Expansion of Medicaid and unemployment benefits are only a couple examples of other forms of aid implemented at the same time as the student loan pause. Other major

forms of aid simultaneously in effect as the student loan pause makes it especially difficult to test the efficacy of the former policy. Although there are other external factors aside from additional aid from the state that are worthy of consideration.

The student loan pause was implemented during the early phases of the Covid-19 pandemic so the state of the American healthcare system during this time period must be taken into consideration. At the time of this writing, Covid has still not been eradicated, though the situation was much worse early into the pandemic. Part of the lack of increase in healthcare spending could be attributed to how overrun the healthcare system was during the first year of the pandemic. The pandemic placed an excessive strain on hospitals which resulted in an increase of deaths during July 2020-2021 (French, Hulse, Nguyen et al., 2021). This matters because this time period of strain on hospitals coincides with the time period of analysis of this study. It is possible that while households might have had extra income from their relieved student loan payments, if medical facilities were overrun, they would not have been able to see a doctor. This would be reflected in a lack of change in healthcare spending during this time period for most households. Early studies on access to healthcare in the United States during the pandemic show results of patients with disabilities and digestive disorders facing difficulty in getting access to healthcare during the pandemic (Xie, Hong, Tanner, et al., 2023; Russin, Takkakura, Chey, 2022). Though these two studies do not cover access for more routine care, it is possible that access to healthcare was hindered for other groups of people.

In regard to borrowers and Covid, it is also possible that borrowers were not as impacted by the Covid-19 virus as other groups. Early studies on workers who faced the

most severe impacts of the pandemic suggest that workers with less education, and lower-paid jobs were more likely to work jobs that placed them in higher-exposure settings (Mongey, Weinberg, 2021; Cajner, Crane, Decker, 2020). The households in this sample only include households with respondents (and/or their spouse) who report having completed at least some college or more. This means that households in the sample would have been more likely to have jobs that were less impacted by the virus and possibly less in need of healthcare during this time period. Based on the results from early studies of workers who faced the brunt of the pandemic, it is possible that student loan borrowers were less exposed to Covid-19 because they're more likely to have jobs that can be done from home. A potential lower infection rate amongst households with student loans might partially explain a lack of change in changes in healthcare spending.

The unclear duration of the pause is another potential reason for a muted impact. Federal student loan payments were first paused on March 13th, 2020 (Federal Student Aid, 2023). However, it has never been clear when the pause was set to end. The student loan pause has been extended a total of 7 times since its initial implementation (Custer and Azoulay, 2023). At the time of this writing, the exact end of the student loan pause remains in question. The pause is set to expire whenever the legal dispute against President Biden's partial loan cancellation is resolved in the Supreme Court or 60 days after June 30th, 2023, if the dispute is not resolved by then (Federal Student Aid, 2023). So, while student loans have now been paused for just over 3 years, those who benefitted from the pause have not had a clear sense of how long they would have extra income. A lack of clarity on how long the pause would last is a significant hindrance in how households are able to plan and utilize any savings from the student loan pause. While the

exact duration of the pause was always in question, the fact it would eventually end was not. This could explain the lack of change in retirement savings for households with student loans as they were not able to plan how long they would have access to additional income. Households may have decided to spend their additional income on more immediate needs rather than long-term needs, like saving for retirement. If student loan borrowers had clearer expectations of how long they would have access to additional income, perhaps they might have been more inclined to allocate some of their additional funds into long-term savings accounts. For comparison, stimulus checks were another form of direct federal aid that allowed some households to either add to their savings or pay down other debts (Cox, Ganong, Noel, 2020; Coibion, Gorodnichenko, Weber, 2020). However, the notable difference between saved income from paused student loan payments and direct payments from the federal government is that the latter was clearly just a one-time payment. Households knew the exact amount they were receiving because there was not ambiguity around exactly how much assistance they would be receiving in the form of direct payments. The clarity in expectations around the stimulus payments might explain that households used their stimulus payments for savings and repayment of other debts.

It is also worth noting that this study offers a short-term analysis of the impact of the student loan pause. Data from the Consumer Expenditure Survey is currently only available up through the last quarter of 2021. Therefore, this analysis only covers about 1.5 years of the duration of the policy, which may not be enough time to capture its effects on spending. Especially considering the previous point on a lack of clarity around the duration of the pause during the early phases of the pandemic. It is possible that

effects of the student loan pause on spending are better reflected in a long-term analysis which would require data that covers the entire duration of the pause. A long-term analysis might even look at the first few years after the end of the pause to assess long-term effects.

ASSESSING THE EFFICACY OF THE STUDENT LOAN PAUSE AND ITS FUTURE

There is a wealth of literature to suggest that having a student loan is an overall detriment to a household's economic security. Given that, the federal government was right to pause payments during a time of crisis. This policy allowed for an ever-growing portion of the American population to gain some needed relief. Though it might be tempting to view the results as evidence of a lack of efficacy of the student loan pause, this is not an argument I wish to make. On the contrary, paused payments were and continue to be (at the time of this writing) a great help to households with student debt even if this help is not reflected in estimates of healthcare and retirement spending. It is very possible that households were able to use their additional income on other immediate necessities like food and shelter, though I do not measure this in my models. I do not measure food and shelter in my models because I am more interested in areas where previous studies have shown that that households with student debt have struggled. Though there are studies that demonstrate difficulty for people affected by student debt in owning a home, they don't speak to whether these same people struggle with access to housing. There is evidence to suggest that low to middle income households with student debt are more likely to struggle with meeting household needs, such as food (Despard et al., 2016); however, the focus of this study is not limited to low- and middle-income households. Although the impact of the pause specifically on low to middle income households would an interesting area for future research.

It is also possible that savings from student loan payments were used similarly to stimulus payments in that they went towards other savings accounts or payment of other debts that are not captured in the data. The student loan pause and its relationship to other

debts, perhaps credit card debt, could be an area of future study. Additionally, a qualitative analysis of individuals who benefitted from the student loan pause might be able to shed more light on the positive impacts of the pause.

In the neoliberal era of big bank bailouts, with the second one in my rather short lifetime currently unfolding (Smialek, Rappeport, 2023), the student loan pause is a welcome policy in that it acknowledges the difficulties that households with student debt face. It is possible that this policy has set the stage for the partial cancellation that is currently tied to the supposed official end of the student loan pause. Though it is unclear exactly when, student loans payments are likely to resume sometime in 2023. At the time of this writing, President Biden has been unable to deliver on his promise of partial student debt cancellation (White House, 2022) with the decision of whether to cancel some student debt being decided by a conservative supreme court (Liptak, 2023). However, it is worth noting, that even a \$10,000-\$20,000 cancellation of student debt may not be enough to solve the economic issues that households with student debt faced before the pandemic. As with the student loan pause, a policy like partial cancellation is helpful but it does not eliminate the issue altogether. Though their burdens might be reduced (and for a minority of borrowers, eliminated altogether), borrowers are likely to still suffer economically as they did before. Considering that there are currently no moves being made towards free universal education to prevent more student debt being added, it is worth questioning the long-term impact of a small, partial cancellation. Policy that is serious about ending the economic burden on households who need to borrow to pursue higher education should call for full cancellation of student debt and create conditions for free, universal higher education.

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