**STUDENT LOAN RELIEF AND HOME PURCHASE**

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# STUDENT LOAN RELIEF AND HOME PURCHASE

Abstract

Amid the COVID-19 pandemic, the U.S. Department of Education implemented administrative forbearance for student loan payments from March 13, 2020 to September 1, 2023. This unexpected policy, affecting all eligible loans and preventing anticipatory plans or selective participation, ensures a sample free from selection bias or endogeneity. This study investigates the impact of student loan relief on home purchases using the 2022 Survey of Consumer Finances. We find that among the households with a student loan, those benefiting from relief were 71% more likely to purchase homes. Our findings suggest that student loan payments hinder homeownership and subsequent wealth accumulation.

## Introduction

More than half of undergraduates rely on federal student loans to finance college (Black et al. 2023). Heavy debt can limit the individual's capacity for subsequent loans due to limited liquid assets for down payment, increased debt-to-income ratio, lower credit score, and psychological debt aversion (Scott and Bloom, 2022). Homeownership allows families to build wealth and serves as a measure of financial security in the U.S. (Goodman and Mayer, 2018), and wealth accumulation via house price appreciation has also been documented outside the U.S. (Sodini et al., 2023).

Studies on the impact of student loans on home purchases are important, but the literature has mixed results and is inconclusive. Shand (2007) reported that for young household heads, a $1000 education debt is associated with a 3% decrease in homeownership rates among college graduates while Mezza et al. (2020) reported that a $1,000 increase in student loan debt lowers the homeownership rate by about 1.8 percentage points for public 4-year college-goers during their mid-20s. Brown and Caldwell (2013) also reported a lower homeownership rate for thirty-year-olds with student debt than that for nonstudent debtors. Bleemer et al. (2021) found that the rise in tuition and student debt contributed to a sharp decline in homeownership among recent student cohorts. Additionally, De Gayardon, Callender and Desjardins (2022) found that young graduates at age 25 in England who did not borrow for higher education are more likely to own their homes than those who borrowed for their studies or who never attended college.

Houle and Berger (2015), however, concluded that the effect of student loan debt is not strong enough to be a major factor in declining homeownership rates. Letkiewicz and Heckman (2018) reported that student loan debt *per se* is not related to home ownership after controlling for other factors, but students who have already paid off their loans are twenty-one percent more likely to own a home. Scott and Bloom (2022) found that having student loan debt increases the likelihood of homeownership by

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15.1% but individuals with student loan debt above the median amount ($35,000) are 27% less likely to be first-time home buyers.

Several factors such as assets, income, parental assistance, and family circumstances concurrently influence the decisions on college attendance, student loans, and homeownership. Additionally, potential selection bias may exist among individuals with education loans, especially if they chose a college education anticipating a high return on investment. Studies examining the impact of student loan payments on home ownership are often susceptible to selection bias and endogeneity issues.

## Education Loan Administrative Forbearance

During the COVID-19 pandemic, the U.S. Department of Education implemented 'administrative forbearance' for student loan payments, with a 0% interest rate for eligible loans from March 13, 2020, to September 1, 2023.[1] Since student loan forbearance was automatically applied to all eligible loans, the experience during these 42 months provides an excellent laboratory setting to examine the impact of student loan reliefs on home purchases. The forbearance was an unexpected external event that the borrowers could not plan or selectively choose to join, and our study does not suffer from a selection bias or an endogeneity problem.[2]

We hypothesize that consumers with student loan payment relief are more likely to buy homes during the administrative forbearance period. The affirmative results will support the argument that student loan payment impedes home purchase.

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[1] Eligible loans include Direct Loans, Federal Family Education Loan (FFEL) Program loans held by ED, Federal Perkins Loans held by ED, defaulted FFEL Program loans not held by ED and defaulted Health Education Assistance Loan (HEAL) program loans. Some FFEL Program and HEAL loans are held by commercial lenders. Some Perkins Loans are held by the school the borrower attended. Some loans, however, are not eligible for the forbearance program, including nondefaulted FFEL Program loans not held by ED, nondefaulted HEAL loans, Federal Perkins Loans not held by ED, and private student loans. ED does not have legal authority over private student loans.

[2] Aside from studies on home purchases, Dinerstein, Yannelis and Chen (forthcoming) found borrowers experiencing a pause in loan payments increased their borrowing for mortgage, auto and credit card loans. Additionally, Lourie, Nekrasov and Yoo (forthcoming) found that forbearance resulted in heightened levels of consumption and investment.

*Sample*

We analyze the latest data from the 2022 wave of the Survey of Consumer Finances (SCF), a widely employed source (Shand 2007; Baek and Cho 2021; Scott and Bloom 2022). The SCF offers comprehensive information on the financial status of U.S. households in a triennial cycle starting from 1983, ensuring the creation of a nationally representative sample. In addition to financial data, the SCF includes demographic characteristics and self-assessment metrics.

*Variables*

We note the year in which the respondent purchased a home and establish the variable **HomePurchase2020+** to denote a home purchase during 2020-2022 (X719).[3] The **Relief** variable indicates whether the respondent is not making payments on the student loan due to forbearance or job/public service loan forgiveness program (X9300).[4]

Following Zhan, Xiang and Elliott (2016) and Scott and Bloom (2022), we control for financial characteristics. **lnIncome** represents the natural log of total income received from all sources before taxes and other deductions. **lnFinAsset** denotes the natural log of the respondent's total financial assets including checking accounts, CDs, cash value of whole life insurance, retirement accounts, and directly and indirectly held bonds and stocks. **IncomeCert** takes the value of one if the respondent has a good idea of what income for next year will be and zero otherwise, and is used as an indicator of income certainty and predictability (X7586). **GovtIncome** takes the value of one if the respondent has income from TANF,

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[3] Since the forbearance program started on March 13, 2020, impact of payment deferment should not be fully manifested until 2021. Use of an alternative variable, **HomePurchase2021+**, which denotes a home purchase during the years 2021-2022, does not qualitatively change the results.

[4] Public service-related loan forgiveness was anticipated by the consumers, while the administrative forbearance temporarily stops the payments and loan principal remains the same. The SCF combined forbearance and job/public service loan forgiveness program in the public dataset. We examined the 2019 SCF (before the administrative forbearance became effective), only 1.71% (or 99 households out of 5777) had forbearance or job/public service loan forgiveness program and we conclude the vast majority of **Relief** variable from the 2022 SCF means forbearance rather than forgiveness.

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SNAP (food stamp), or other assistance such as SSI (X5719). **PartialCredit** takes the value of one if respondents did not get as much as they applied for (X407). **PmtBehind** takes the value of one if respondents were ever behind in payments by two months or more (X3005).

*FinLiteracy* represents the number of correct answers out of three financial literacy questions, measured on a scale of 0 to 3 (X7558-60). **PFKnowledge** measures the respondent's subjective assessment of knowledge about personal finance on a scale of 0 (not at all knowledgeable) to 10 (very knowledgeable; X7556). **FinRisk10** represents the amount of financial risk that the respondent is willing to take when saving or investing, and takes the value of 0 (not at all willing to take financial risks) to 10 (very willing to take risks; X7557). **TimePref** measures which time period is most important in planning or budgeting a family's saving and spending on a 1-5 scale (next few months, next year, next few years, next 5-10 years, and longer than 10 years; X3008).

We also collect demographic information: **Age** at the time of survey is computed from the date of birth (X5908), **Sex** (1: male; X8021), **Education** *(1-4*; X5931*)*, **Married** (X8023), **Unemployed** (X6670-77), and **NumberHH** (number of people in the household; X101). We categorize the respondent's self-describing race into the following: **White**, **Black**, **Hispanic,** and **Other** (X6809).[5] Since Lee and Hanna (2012) show many differences between Hispanics and African Americans, we categorize these two groups separately.[6]

**Results**

*Descriptive Statistics*

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[5] Lindamood, Hanna and Bi (2007) highlighted that the SCF's public date set reports only four race categories: White, Black/African American, Hispanic/Latino, and Other. The public data set combined Asian, American Indian, Alaska Native, and Native Hawaiian/Other Pacific Islander, as well as the response 'other' into "Other" race category.

[6] Although Urban/rural location and Census region (East, North central, South, West) are found related to homeownership (Letkiewicz and Heckman 2018), such variables (i.e., X30022 and X30041) are not included in the SCF public data set.

Table 1 reports the variable descriptive statistics. Eleven percent of U.S. households purchased a home in years 2020 or later. About ten percent of households were not making student loan payments due to student loan reliefs. Income and financial assets display a wide range of values, necessitating weighted regressions. The average age was 52 and 57% of respondents were married. A high proportion (32%) of respondents are unemployed because most old respondents were retired as the age ranges from 18 to 95.

***** Insert Table 1 here *****

Table 2 reports key metrics across three separate groups: households without a student loan, those with a student loan but no relief, and those with a student loan relief. The majority of the respondents (n=3783 or 82.3%) do not have a student loan balance, resulting from the fact that a substantial proportion of them are old enough to pay off such a student loan or to pass up a college education. Respondents with a student loan but no payment relief represent 9.4% (or n=433) of the sample, while those with a student loan relief represent 8.2% (n=379). Together 17.7% of the respondents have a student loan balance.[7]

17.5% of the households with a student loan payment relief bought a home during the 2020-2022 period, but only 12.4% of those with a student loan but not a relief did so. Different groups also show notable differences in income, financial assets, race, ethnicity, etc. The financial and demographic differences among households may also affect the home purchase decisions and warrant a regression analysis.

***** Insert Table 2 here *****

*Home Purchase*

To examine the direct effect of student loan relief on home purchases, we analyze the *HomePurchase2020+* variable with a weighted logit regression with the repeated-imputation inference

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[7] These percentages are unweighted and do not represent the whole U.S. households. Using proper weights, 22% of the households have a student loan balance.

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(RII) method among the sample with a student loan (nobs=812). Researchers ideally should use all five implicates of the SCF with the RII method (Rubin, 1987).[8] Lindamood, Hanna and Bi (2007) also noted that SCF's dual sampling technique results in the overrepresentation of high-wealth groups compared to the whole U.S. population. Therefore, we use weighted regressions with the RII method to control sampling errors and to avoid the false significance of coefficients from using multiple implicates in one regression.

The results of the weighted logit regression with RII are presented in Table 3. Student loan *relief* is associated with a 71% higher likelihood of purchasing a home during the 2020-2022 period compared to other households who had a student loan but did not get loan relief. This finding suggests that student loan payment impedes home purchase. While the previous literature analyzed the student loan effect on homeownership, we focused on the impact on the home purchase.

***** Insert Table 3 here *****

**Conclusion**

This paper examines the impact of student loan relief on home purchases by analyzing the 2022 wave of the SCF, which provides a unique situation where some student loan payments were suspended due to administrative forbearance, automatically implemented for all eligible loans from March 13, 2020 to September 1, 2023. This unexpected policy prevented education borrowers from planning or opting in, thereby ensuring our sample is free from selection bias or endogeneity issues concerning home purchases. We find that borrowers receiving student loan relief were 71% more likely to engage in homebuying than those without payment relief. These results substantiate the argument that student loan payments act as a barrier to home purchases and subsequent wealth accumulation.

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[8] When Lindamood, Hanna and Bi (2007) replicated Bi and Montalto's (2004) logit analyses using the RII method instead of the averaging method, RII produced higher p-values and less significant results.

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**Table 1. Descriptive Statistics**
Nobs=4595

| Variable Name | Mean | Std Dev | Min | Med | MAX |
|---|---|---|---|---|---|
| HomePurchase2020+ | 0.11 | 0.31 | 0 | 0 | 1 |
| Relief | 0.10 | 0.30 | 0 | 0 | 1 |
| Income | 138,807 | 720,838 | 0 | 70,259 | 453,258,755 |
| ln Income | 11.13 | 1.24 | 0 | 11.16 | 19.93 |
| PartialCredit | 0.03 | 0.16 | 0 | 0 | 1 |
| PmtBehind | 0.05 | 0.22 | 0 | 0 | 1 |
| IncomeCert | 0.65 | 0.48 | 0 | 1 | 1 |
| GovtIncome | 0.13 | 0.34 | 0 | 0 | 1 |
| FinAsset | 494,896 | 4,542,939 | 0 | 34,500 | 1,924,763,000 |
| ln FinAsset | 10.08 | 3.13 | 0 | 10.45 | 21.38 |
| FinLiteracy | 2.22 | 0.81 | 0 | 2 | 3 |
| PFKnowledge | 7.24 | 2.16 | 0 | 7 | 10 |
| FinRisk10 | 4.22 | 2.74 | 0 | 5 | 10 |
| TimePref | 2.98 | 1.31 | 1 | 3 | 5 |
| Age | 52.45 | 17.61 | 18 | 52 | 95 |
| Sex | 0.72 | 0.45 | 0 | 1 | 1 |
| Education | 2.97 | 1.00 | 1 | 3 | 4 |
| Married | 0.57 | 0.49 | 0 | 1 | 1 |
| Unemployed | 0.32 | 0.47 | 0 | 0 | 1 |
| NumberHH | 2.45 | 1.42 | 1 | 2 | 12 |
| White | 0.7 | 0.46 | 0 | 1 | 1 |
| Black | 0.13 | 0.34 | 0 | 0 | 1 |
| Hispanic | 0.11 | 0.32 | 0 | 0 | 1 |
| Other | 0.04 | 0.2 | 0 | 0 | 1 |

**Table 2. Home Purchases across Sub-Groups**

*Student Loan* indicates whether the respondent has an outstanding student loan balance (X7801). The *Relief* variable indicates whether the respondent is not making payments on the student loan due to forbearance or job/public service loan forgiveness program (X9300).

| | Households With No Student Loan | Households with a Student Loan but No Relief | Households With a Student Loan and Relief |
|---|---|---|---|
| | *(n=3783)* | *(n=433)* | *(n=379)* |
| HomePurchase2020+ | 0.0962 | 0.1237 | 0.1745 |
| Income | 147,098 | 137,815 | 101,126 |
| ln Income | 11.1062 | 11.2535 | 11.2468 |
| PartialCredit | 0.0215 | 0.0301 | 0.0608 |
| PmtBehind | 0.0395 | 0.0794 | 0.0881 |
| IncomeCert | 0.6477 | 0.6304 | 0.6692 |
| GovtIncome | 0.1309 | 0.1323 | 0.1060 |
| FinAsset | 603,665 | 181,563 | 92,249 |
| ln FinAsset | 10.1737 | 9.9626 | 9.7293 |
| FinLiteracy | 2.2142 | 2.2965 | 2.2479 |
| PFKnowledge | 7.2867 | 7.3015 | 6.9802 |
| FinRisk10 | 4.1445 | 4.7695 | 4.3408 |
| TimePref | 3.0151 | 2.9030 | 2.8030 |
| Age | 55.62 | 41.31 | 40.69 |
| Sex | 0.7252 | 0.7299 | 0.6809 |
| Education | 2.8635 | 3.3973 | 3.4147 |
| Married | 0.5596 | 0.6633 | 0.5883 |
| Unemployed | 0.3759 | 0.1401 | 0.0951 |
| NumberHH | 2.3617 | 2.8979 | 2.5999 |
| White | 0.7123 | 0.6718 | 0.6258 |
| Black | 0.1072 | 0.1866 | 0.2380 |
| Hispanic | 0.1173 | 0.0823 | 0.0945 |
| Other | 0.0470 | 0.0374 | 0.0249 |

**Table 3. Weighted Logistic Regression of Home Purchases during 2020-2022**

The dependent variable, *HomePurchase2020+*, indicates a home purchase during the years 2020-2022. Standard errors are estimated with the repeated-imputation inference (RII) method. *, ** and *** denote statistical significance at 10%, 5% and 1% levels, respectively.

| | Est. | | S.E. | *p*-value | Odds ratio |
|---|---|---|---|---|---|
| Intercept | -4.815 | *** | 1.807 | 0.008 | 0.008 |
| Relief | 0.537 | ** | 0.218 | 0.014 | 1.711 |
| LnIncome | 0.265 | | 0.196 | 0.176 | 1.303 |
| PartialCredit | -0.038 | | 0.543 | 0.945 | 0.963 |
| PmtBehind | -0.401 | | 0.540 | 0.458 | 0.669 |
| IncomeCert | -0.031 | | 0.242 | 0.899 | 0.970 |
| GovtIncome | -0.365 | | 0.473 | 0.440 | 0.694 |
| LnFinAsset | 0.002 | | 0.067 | 0.980 | 1.002 |
| FinLiteracy | -0.373 | *** | 0.143 | 0.009 | 0.689 |
| PFKnowledge | -0.004 | | 0.064 | 0.946 | 0.996 |
| FinRisk10 | 0.073 | | 0.049 | 0.134 | 1.076 |
| TimePref | 0.088 | | 0.085 | 0.303 | 1.092 |
| Age | -0.041 | *** | 0.011 | 0.000 | 0.960 |
| Sex | -0.033 | | 0.346 | 0.923 | 0.967 |
| Education | 0.342 | ** | 0.170 | 0.044 | 1.408 |
| Married | 0.879 | ** | 0.380 | 0.021 | 2.410 |
| Unemployed | -0.007 | | 0.431 | 0.986 | 0.993 |
| NumberHH | -0.006 | | 0.091 | 0.943 | 0.994 |
| Black | -0.420 | | 0.345 | 0.223 | 0.657 |
| Hispanic | 0.030 | | 0.388 | 0.938 | 1.030 |
| Other | -0.061 | | 0.568 | 0.915 | 0.941 |

| Implicate | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Nobs | 812 | 812 | 812 | 812 | 812 |
| Likelihood Ratio | 68.086 | 68.567 | 67.254 | 68.789 | 67.380 |
| Score | 59.412 | 59.765 | 58.409 | 59.735 | 58.401 |
| Wald | 54.081 | 54.478 | 53.322 | 54.590 | 53.337 |

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