Jain Family Institute

Economic Policy Institute

Student Debt and Homeownership Barriers in D.C.

By Eduard Nilaj and Kyle K. Moore¹

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Student Debt and Homeownership Barriers in D.C.

Summary: In Washington D.C., rising student loan debt is associated with low homeownership rates, exacerbating racial and economic inequalities. Since the implementation of the COVID-19 repayment pause, there has been a slight decrease in overall student loan debt. Despite this, young borrowers in the District's majority-Black neighborhoods continue to be burdened with disproportionately high student debt relative to income and low repayment rates. Bold policies, such as student debt forgiveness, could mitigate these disparities and make homeownership more accessible.

Key Findings

- The decline in homeownership rates among young borrowers in D.C., from 22.1
 percent in 2010 to 13.7 percent in 2022, is closely linked to the surge in student loan
 debt.
- Homeownership in D.C. is marred by racial and educational disparities, as majority-Black neighborhoods grapple with lower educational achievements and elevated mortgage denial rates.
- Young borrowers in D.C. not only have the highest levels of student debt in the United States but also face challenging debt-to-income ratios, exacerbating financial strain, particularly in majority-Black areas.
- The root causes of racial disparities in homeownership and mounting student debt in
 D.C. are systemic, necessitating multi-faceted federal policy for meaningful change.

Why this matters

Student loan debt is making it even harder for young people to buy homes in Washington, D.C., particularly for those in majority-Black neighborhoods. This creates a cycle where high levels of debt limit opportunities for homeownership, which is a crucial way to build wealth. The ripple effects of this issue extend beyond individual households, reinforcing existing racial and economic inequalities. The struggle to move from renting to owning a home impacts not just family stability, but also has wider consequences for community well-being and the transfer of wealth between generations. In a city with a stark racial wealth gap, the added obstacle of student debt further hinders efforts to achieve more equitable economic opportunities.

How to fix it

To effectively address student debt and homeownership issues in D.C., targeted policy measures are needed, including student debt forgiveness. Implementing such policies with broader eligibility criteria will create opportunities for increasing Black homeownership and wealth, thereby reducing the stark racial wealth gap. Finally, it's vital for both local and federal governments to invest in programs that assist with down payments and to also focus on building more affordable housing to combat rising costs.



Foreword by the Washington Interfaith Network (WIN) Black Equity Through Homeownership campaign.

The American Dream. The formula is simple. Higher education, gainful employment. Work hard. The white picket fence surrounding your home offers testimony for all to see that you have not only achieved the dream but that you've laid a path to prosperity for your family for generations to come.

But is that dream achievable for all?

In a "bait and switch," the keys to prosperity and intergenerational wealth in America remain outside the grasp of many Black Americans. The rapidly increasing racial wealth gap in America, firmly rooted in historic and contemporary public policy, exemplifies the exclusion of Black Americans from fair access to housing—and to homeownership, in particular.

The nation's capital provides a compelling example of this glaring disparity. According to the Urban Institute, white households in DC have a net worth eighty-one times greater than Black households. Fewer and fewer Black residents own their homes; given dwindling public land and limited inventory, many working- and middle-class Black families have been forced to move elsewhere. Only a pronounced shift in public policy can help stall this vicious cycle and preserve the contributions and presence of Black families in the District.

In the years preceding the pandemic, and throughout 2021, we at the Washington Interfaith Network (WIN), a nonpartisan community organizing coalition, convened a series of focus groups with two objectives: 1) identifying the core issues putting affordable housing out-of-reach for middle- and working-class Black families and 2) compiling this evidence into a set of strategic and innovative solutions that the District might embrace. As part of our Black Equity Through Homeownership (BETH) campaign, we met a wide range of affected residents including graduate students from Howard University, a small group of local upstart bankers, public housing residents, elderly residents, existing homeowners, and community leaders.

This broad-based constituency offered critical first-hand testimony on the struggle to find affordable units, the limited history of homeownership in their own families, and the lack of resources on the purchasing process and financial literacy more broadly. Among the most common barriers identified: student loans.

One respondent, Brian, recounted his journey as a rising basketball star whose college career ended abruptly when his brother was killed. He left college to provide emotional and financial support to his family. Now a married father of three, Brian works hard to cover the cost of his debt payments and monthly bills. But his mounting credit card debt has undermined his credit score, rendering him unqualified for a mortgage.



A student at Howard, poised to graduate in May 2022 with a master's degree in social work, reported that homeownership felt increasingly out-of-reach as her student debt mounted. Already struggling with living expenses, she spoke of her anxiety over the looming debt load—six years of undergraduate and graduate education—coming due. Having pursued the American Dream, like so many of her young Black peers, she now felt it slipping beyond her grasp.

The question facing this cohort is whether they can afford to live independent, professional lives in the District or, under the albatross of unmanageable student debt, be forced to relocate.

The following report from the Jain Family Institute (JFI) and the Economic Policy Institute (EPI) on student debt holding and homeownership in D.C. grounds the powerful stories gathered by WIN in concrete and indisputable data. It highlights exclusionary policy—of the kind powerfully put forward by Richard Rothstein in The Color of Law—as the common thread uniting the economic, social, and political barriers identified by our respondents. And it convincingly demonstrates that in Washington, D.C. in particular, student loan debt acts as a special hindrance on Black homeownership, thereby exacerbating pre-existing racial and economic inequalities. The authors find that a decline in homeownership, from 22.1 percent in 2010 to 13.7 percent in 2022, closely tracks with rising student debt. Indeed, student debtors in the District's majority-Black communities are disproportionately burdened by high levels of debt and low levels of income compared to their peers across the nation.

WIN strongly endorses the suite of solutions put forward in the paper, from full or targeted loan cancellation to mortgage lending partnerships between DC government and local banks to the incorporation of student debt into the formulas that determine local housing subsidies. We and our community of local partners stand eager to bring these findings to the attention of local policymakers. Only through the strength of coordinated leadership will the District community find the will to address the injustices of inequitable policy—and ensure that DC remains a place where Black families may build their future and pursue, sustainably, the American Dream of education and homeownership.

Now is the time to use our collective power to build a future that includes economic opportunity for all.

Black Equity Through Homeownership (BETH) Campaign Leaders
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Introduction

Student loan debt is becoming an increasingly significant hurdle across the United States. This problem directly impacts debtholders' ability to own a home, an important part of wealth accumulation and financial security. As student debt continues to rise, homeownership among young adults is declining, darkening their long-term economic prospects and exacerbating racial wealth disparities. This research examines the current situation of those with student loans in Washington, D.C. Here, we're looking at data from young adults' credit reports, focusing specifically on trends and patterns in student debt, homeownership, and credit scores. We're particularly interested in understanding how these factors vary by location, race, education level, and income. While our primary goal is to present a clear picture of the current situation, we also discuss policies that could alleviate the burden of student debt and encourage equitable growth in homeownership, especially among young Black families.

Key Takeaways

- Homeownership rates for young borrowers with student loans in D.C. have fallen from 22.1 percent in 2010 to 13.7 percent in 2022, after hitting a low of 11.6 percent in 2020. This decline is closely associated with rising student debt. Our estimates show an 8 percent reduction in the likelihood of owning a home for each \$10,000 increase in student loan debt, assuming other variables are constant.
- Homeownership in D.C. is marred by racial and educational inequalities. Borrowers in majority-Black areas experience lower educational attainment and higher mortgage denial rates. Black student debt holders are also far more likely to have gone to college but not attained a bachelor's degree: in majority-Black areas, only 33 percent of borrowers in 2022 had attained at least a bachelor's degree. In Wards 7 and 8, respectively, 78 percent and 85 percent of student debtholders in Black majority areas had not completed a bachelor's degree. Additionally, emerging trends indicate the risk of gentrification and displacement in historically Black neighborhoods; the rate of mortgage approvals for white applicants in these areas is outpacing that for Black applicants.
- Young borrowers in D.C. have the highest student loan debts in the U.S.
 Furthermore, they struggle with high debt-to-income ratios, which impacts their ability to repay loans. Racial disparities are evident in the growth of student debt, non-repayment rates, and debt-to-income ratios, with majority-Black areas facing a disproportionately growing financial burden.
- Racial inequity in homeownership and rising student debt burdens arise from
 systemic issues and require transformative federal policies. A comprehensive
 strategy including implementing asset-building programs, increased housing supply,
 and targeted student debt cancellation could effectively reduce racial disparities in
 homeownership. Implementing either full or targeted student loan cancellation,
 along with more inclusive eligibility criteria like lower credit score thresholds and



targeting of D.C. high school graduates, could further enhance homeownership accessibility and narrow racial gaps.

Student debt, homeownership, and racial disparities in D.C.

For those Americans who are not lucky enough to receive an inheritance, homeownership and higher education are the two clearest pathways toward wealth-building and upward mobility. Indeed, homeownership and "getting a degree" have become fundamental steppingstones towards "the American Dream" as conceived throughout most of the 20th century. The trade-off between an investment of time and money into one's education was supposed to pay off in the future with high-quality, high-skill, high-wage/salary employment, which would in turn allow one to purchase and maintain a home and attain a better overall quality of life. What happens, then, when these direct pathways towards the American Dream are made inaccessible, or inequitably accessible to different communities?

Homeownership has certainly always been less accessible for Black families than for their white counterparts. The homeownership rate for Black Americans has never crested above 50 percent, even during the height of the 2000s housing boom. In the 1930s and 1940s, when the United States government consciously encouraged homeownership among the middle class through institution building and policy, Black would-be homeowners were largely excluded from accessing mortgages. The legacy of these redlining policies is alive even today, as urban neighborhoods grow more racially segregated. The result has been low homeownership rates for Black families, and lower appreciation of real estate prices in majority Black neighborhoods, making returns on homeownership comparatively less for Black homeowners.

A similar story of diminished relative returns on investment can be seen in Black Americans' pursuit of higher education. In terms of wealth, income, health benefits, and employment prospects, Black Americans fare worse than white Americans at the same levels of education. In fact, Black families where the head of household holds a four-year college degree tend to have less wealth than white families where the head of household did not graduate high school.

A pernicious relationship between the increasing costs of both higher education and homeownership threatens to push both further out of reach for all Americans. As Americans continue to pursue higher education, they have begun taking on increasing amounts of student loans, largely out of necessity—the cost of higher education has skyrocketed over the past forty years. Moreover, in an increasingly service-based economy, a college degree has become necessary for securing stable professional employment. Even so, the returns on college education have not increased at the same pace as their costs.



The debt incurred in pursuit of a college degree as a matter of necessity hinders upward mobility for all Americans, but especially for Black borrowers. They have lower returns on education in general and lower familial wealth with which to offset the increasing costs of higher education. As a result, Black borrowers in general incur a more severe debt burden than white borrowers for a given level of education. They also face more difficulty in repaying that debt over time, leading to higher rates of delinquency. This is exacerbated by the fact that Black student debtholders are less likely to complete a degree, whether two-year, four-year, or professional.

In an already hostile and less accessible housing market, this greater debt burden further hinders Black borrowers' attempts to secure mortgages for new homes. This scenario is being played out in real time in our nation's capital, Washington D.C. In 2016, White families held eighty-ones times the wealth of Black households in D.C., and twenty-two times the wealth of Latino households. The Black unemployment rate is six times that of the white rate (as of the first quarter of 2023). Occupational segregation in the District is such that the secure professional service jobs that make up much of the Federal workforce are overwhelmingly filled by White workers, while the more volatile jobs in retail and restaurant service are disproportionately held by Black and brown workers. This occupational segregation is mirrored in residential segregation throughout the city. While D.C. was once majority Black (and even referred to as "Chocolate City"), in recent decades gentrification driven by rising housing costs and the continuation of discriminatory housing practices has pushed much of the Black population out.

As discussions around homeownership inequalities in D.C. continue, the significance of initiatives like Mayor Bowser's <u>Black Homeownership Strike Force</u> is growing. This initiative, aimed at achieving 20,000 net new Black homeowners by 2030, sets a backdrop for our discussion. Considering such ambitious local goals and policy recommendations like providing estate planning resources, protecting homeowners from harassment, and creating financial support mechanisms, this report aims to explore how student debt intersects with these efforts to impact homeownership.

Data and methodology

Our study is based on data collected from student debt holders, utilizing individual credit bureau cross-sectional data, which are then linked to demographic estimates gathered from three five-year American Community Surveys (2011, 2016, 2021) of the respective US Census Tracts. Given that our data set does not offer individual demographic details such as race/ethnicity, we use the demographic attributes of the Census Tract in which the borrower resides as a proxy. We utilize a measure of educational attainment (i.e., what is the highest degree attained) that is self-reported, derived based on occupational information, or inferred from a predictive model, and provided along with the credit and debt profile of borrowers.

Our study population consists of one million borrowers aged between eighteen and thirty-five, sampled independently each year from 2009 to 2022. For the purpose of this report, we



narrowed down our focus to borrowers who were living in Washington, D.C. at the time of sampling and held a minimum student loan balance of \$100. To minimize underestimation of student debt levels and homeownership rates, we limit our analysis to borrowers aged between twenty-five and thirty-five, a group that makes up about 85 percent of each annual sample.

Our examination of the yearly samples sheds light on student loan debt, credit scores, and home mortgage debt at the consumer level. Furthermore, we reference data from the Home Mortgage Disclosure Act (HMDA) to explore trends in mortgage loan originations and application denials across Washington, D.C. from 2009 to 2021.

Analysis

This report is split into three sections. The first section takes a close look at homeownership among borrowers with student loan debt and mortgage lending patterns across the District. To better understand the relationship between homeownership and student loan debt, we first examine homeownership rates among young borrowers, focusing on trends and differences by educational attainment as well as how educational attainment levels vary by ward and race. Next, we present key results from a regression model that examines the effect on homeownership of several explanatory variables, including borrower student loan debt. Then, we explore data from the Home Mortgage Disclosure Act (HMDA), examining mortgage loan originations, loan amounts, and application denials throughout the city between 2010 and 2021. In the second section, we take a deeper look at the total debt burdens of young borrowers in D.C., which includes but is not limited to student debt. This exploration includes analysis by facets of race, income, and geographical location. In the third and final section, we turn our attention towards policy implications. Here, we outline the various challenges that young D.C. student loan borrowers encounter in the housing market. Alongside this, we discuss an array of policy initiatives that could pave the way for more equitable solutions.

Section 1: Student debt & homeownership and mortgage lending

Student debt & homeownership

Researchers have documented the numerous adverse impacts of the student debt crisis, including, but not limited to, the relationship between student debt and homeownership. Past studies have shown that the decline in homeownership rates among young borrowers can be partially attributed to rising student loan debt. In their investigation into the impact of student debt on future homeownership, Mezza et al. (2020) report that for individuals who borrow to attend public four-year colleges, a \$1,000 increase in student debt results in roughly a 1.8 percentage point decrease in their homeownership



rate. Moreover, our previous study of homeownership trends among young borrowers in the United States between 2009 to 2019 shows that, when controlling for income, borrowers with high student loan debt are less likely to be homeowners. As the study shows, borrowers with incomes in the bottom 50 percentile had an average homeownership rate of 0 to 1 percent in 2019. This can obscure the relationship between homeownership rate and student debt, but it is quite apparent when observing borrowers with medium-to-high income levels. In this group, borrowers with a student debt total of about \$8,000 (25th percentile) had an average homeownership rate of 42 percent, while borrowers with a debt total of \$40,000 (75th percentile) had a far lower average homeownership rate of only 12 percent.²

Our analysis of young student debtholders in D.C. reinforces these claims. The homeownership rate among our sample of D.C. borrowers, measured as the share of individuals with an outstanding mortgage debt balance, was at its highest level in 2010, where 22.1 percent of borrowers are considered homeowners. The homeownership rate fell to its lowest point in 2020 at 11.6 percent and stands at 13.7 percent in 2022. We examine these trends in more detail in Figure 1 below, which shows the yearly average of homeownership rates among young student debtholders from 2009 to 2022. The data is broken down into three categories based on the borrower's highest educational attainment level (associate or no degree, bachelor's degree only, and professional/graduate degree) and shows that homeownership among student debt holders declined among each educational category.

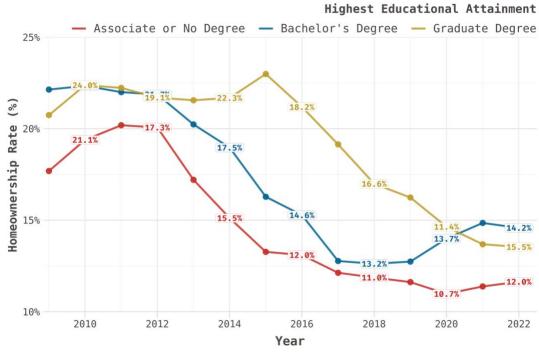
² Figure 5 in Homeownership & the Student Debt Crisis.

³ Excluding individuals who own their homes outright due to the positive mortgage debt balance criterion may lead to an underestimation of homeownership. However, given that the median age of first-time home buyers was at record highs in 2022 and only about one-third of homeowners own their homes outright, we believe that this exclusion affects only a very small portion of our sample and does not significantly impact our findings.



D.C. Borrower Homeownership Rates by Education, 2009-2022

Three-year rolling average of homeownership rates among young D.C. borrowers, between 25 and 35 years old, by highest educational attainment level.



Source: Experian Information Solutions, Inc; American Community Survey, 5-year estimates. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 1: Borrower Homeownership by Education Level, 2009–2022

In 2009, those with an associate degree or no degree, who made up 47 percent of borrowers (decreasing to 41 percent by 2022), had a homeownership rate of 18 percent. In 2022, the rate had decreased to 12 percent. Those with a bachelor's degree, accounting for 32 percent of borrowers in 2009 and 27 percent in 2022, had a homeownership rate of 22 percent in 2009, which fell to 14 percent by 2022. A similar trend was observed for those with graduate degrees (21 percent of borrowers in 2009, increasing to 32 percent in 2022), with homeownership falling from 21 percent in 2009 to a low of 11 percent in 2020, before rising slightly to 16 percent in 2022.

In order to better understand the consequences of these trends, it's important to take into consideration variations across wards and racial groups. Analysis of data from 2017 to 2022 uncovers striking disparities. Black student debtholders are far more likely than white student debtholders to have an associate or no degree rather than a four-year or graduate degree. In the affluent and predominantly white Ward 1, 44 percent of borrowers in majority-Black census tracts either held an associate degree or had no degree at all, as compared to 19 percent of borrowers in majority-white tracts who had similar levels of educational attainment. As shown in Table 1, borrowers in majority-Black tracts were more likely to fall into the 'Associate or No Degree' category across all wards. This trend peaks at 78 percent and 85 percent in Wards 7 and 8, which are not only the district's poorest but also the most predominantly Black. In stark contrast, borrowers in



majority-White tracts had higher educational attainment across D.C., with an overwhelming majority holding at least a bachelor's or professional degree. In Ward 3, which is both the most affluent and the most predominantly white, 82 percent of white student debtholders had earned a college or professional degree, as compared to Wards 7 and 8, where only 22 percent and 15 percent had, respectively. This is a cause for concern, as recent studies indicate that those with student debt who haven't completed their college degrees are in a worse financial situation than any other group.

Educational Attainment Levels of Young Borrowers in D.C. by Ward & Race, 2017–2022¹

D.C. Ward	Tract Race Majority	Associate or No Degree	Bachelor's Degree	Graduate Degree
Ward 1	Black	43.6%	33.1%	23.3%
Ward 1	White	18.9%	36.4%	44.7%
Ward 2	White	16.3%	38.6%	45.1%
Ward 3	White	17.8%	40.6%	41.6%
Ward 4	Black	64.1%	17.2%	18.7%
Ward 4	White	28.6%	23.4%	48.1%
Ward 5	Black	63.0%	19.2%	17.7%
Ward 5	White	36.0%	22.7%	41.3%
Ward 6	Black	52.1%	22.3%	25.6%
Ward 6	White	33.2%	29.3%	37.5%
Ward 7	Black	78.2%	14.0%	7.8%
Ward 8	Black	85.2%	9.6%	5.1%

Only observes Census Tracts with a distinct population racial majority.

Source: Author's calculations utilizing data from Experian Solutions, Inc and American Community Survey.

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Table 1: Educational Attainment by Ward & Race, 2017–2022⁴

⁴ It is important to note that tracts with no clear racial majority are not included, resulting in certain wards (2, 3, 7, and 8) only displaying one racial majority in the data. This excludes 24.6 percent of borrowers in our combined 2017 to 2022 samples.



The contrast in educational attainment helps explain the disparity in average and median student debt balances we examine in section two. Furthermore, it suggests that the temporary pause on federal student loan repayments during the Covid-19 pandemic may have had uneven effects in D.C., such that communities with higher concentrations of borrowers with lower educational attainments may have experienced greater relative financial relief, while those with higher educational attainments—and, as a result, likely higher incomes—may not have benefitted to the same extent.

Next, we explain some results from a logistic regression model, which determines the odds of borrower homeownership, given several predictor variables and interactions. Here, we only use data from our 2017 to 2022 samples to more accurately estimate the current relationship between homeownership and the key variables of interest, such as student debt balance, estimated income, age, credit score, and education levels. The detailed results are presented in the appendix. These are main takeaways:

- As the student debt balance increases, the odds of homeownership decrease. More specifically, for every \$10,000 increase in student debt, the odds of owning a home decrease by 8 percent, assuming other factors remain constant.
- Higher income, advanced age, and a better credit score are all associated with increased odds of homeownership.
- Holding at least a bachelor's degree corresponds to a 35 percent decrease in the
 odds of homeownership for a borrower, all else equal. However, there's some
 variation across wards. For instance, the odds of homeownership for student debt
 holders who have obtained at least a bachelor's degree living in Ward 8 is 143
 percent higher than for those in Ward 1.5

For a detailed breakdown of the model, including all variables and interactions, please refer to the appendix. We've carefully organized the data for those interested in a deeper dive.

Mortgage loan applications (2010-2021)

Thus far we have noted the decline in homeownership among all young borrowers as well as extreme racial inequality in educational attainment amid borrowers. Now, we examine trends in mortgage lending across D.C., from 2010 to 2021, using data made available through the Home Mortgage Disclosure Act (HMDA). In particular, we analyze the annual number of approved and denied mortgage loan applications, highlighting variations based on the primary applicant's race and the census tract of the prospective property. Higher rates of loan denials for certain racial or ethnic groups may point towards bias or discrimination in the loan approval process. Furthermore, the geographical distribution of mortgage applications could suggest a correlation between

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⁵ This is likely because Ward 8 has the lowest property values in D.C. In 2023, the median value of owner-occupied housing units was \$424,884 in Ward 8 and \$898,193 in Ward 1.

⁶ The dataset analyzed for this study includes only mortgage loan applications intended for home purchases. All other applications, including those for home improvement or refinancing, were excluded.



property location and loan approval rates, indicating neighborhood-level disparities or the effects of historical patterns of segregation. Our main takeaways are as follow:

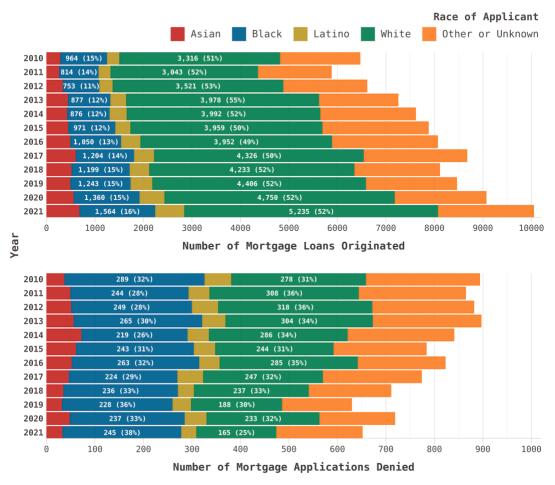
- General increase in mortgage originations doesn't align with decline in homeownership: Despite a decline in homeownership among young student debt borrowers in D.C., there has been a general increase in mortgage loan originations across all racial and ethnic groups. This suggests a causal relationship between increasing student debt burdens and declining homeownership rates among young borrowers.
- Disproportionate rates of loan approval and denial across racial groups: While
 mortgage loan denials have generally decreased from 2010 to 2021, the rate of
 decline is not uniform across racial and ethnic groups. Black applicants still
 experience the highest rate of mortgage application denials, which suggests
 persistent racial disparities in access to homeownership.
- 3. Signs of gentrification in predominantly Black wards: The data show evidence of gentrification in predominantly Black wards (e.g., Wards 7 and 8), where there has been a disproportionate increase in mortgage originations for white applicants compared to Black residents. This is concerning, given the traditionally Black composition of these neighborhoods, and hints at displacement issues.

Building on our key findings, the following figure breaks down annual mortgage loan originations and application denials in D.C. from 2010 to 2021, categorized by the race and ethnicity of the primary applicants. While there's an upward trend in loan approvals across all racial and ethnic groups, this shouldn't be interpreted as an easing of the barriers to homeownership for all. It's important to bear in mind that this dataset encompasses borrowers of all ages, potentially masking unique challenges faced by younger borrowers, especially those burdened by student loan debt.



Mortgage Originations and Application Denials in DC, 2010-2021

The top half displays the number of mortgage loans originated in DC from 2010 to 2021 split by the race of the primary applicant. The bottom half shows mortgage application denials.



Source: 2010-2021 Home Mortgage Disclosure Act (HMDA) data. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 2: Mortgage Originations and Application Denials in D.C., 2010–2021

Looking at the big picture, the distribution of loans approved has slightly changed for some groups over the years. It has remained relatively stable for Black and white applicants, while slightly increasing for Asian and Latino applicants. In 2010, Asian applicants accounted for 5 percent of all mortgage loans originated, which increased to 7 percent by 2021. Similarly, Latino borrowers experienced growth in their share of mortgage originations as well, from 4 percent in 2010 to 6 percent in 2021. Although this rise aligns with the growing populations of Asians and Latinos in D.C., it's notable that their growth rate in mortgage originations is advancing at a faster pace than their respective population growth rates. This suggests that factors beyond demographic shifts may be at play in the growing shares of Asian and Latino mortgage originations.

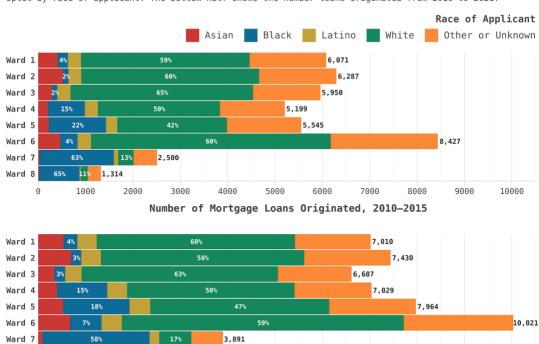
As the number of new mortgage loans has steadily increased, the number of mortgage application denials have gradually decreased from 2014 to 2021. This means that mortgage loan denial rates have considerably decreased and are not associated with the



decline in homeownership. Indeed, the denial rate for mortgage applications was halved, going from 12 percent in 2010 to 6 percent in 2021. However, this decrease has been larger for some groups than others. Between 2009 and 2021, Black applicants saw a 37 percent decrease in mortgage loan denials. In comparison, the decrease was much larger for other groups, with Asian applicants experiencing a 54 percent drop, Latino applicants a 66 percent reduction, and white applicants seeing the largest decrease at 67 percent. Moreover, the mortgage denial rate for Black applicants, still in double digits at 14 percent, remained the highest among all groups in 2021 and was nearly 9 percentage points higher than the next highest rate, which was for Latino applicants at 5 percent. This starkly indicates how mortgage loan denials are worsening racial disparities in homeownership.

To further explore the geographical distribution of mortgage loan originations in D.C., we compare the total number of new mortgage originations in each ward for two distinct time periods: 2010 to 2015 and 2016 to 2021. This comparison is intended to help us identify significant changes or trends in homeownership during these two six-year periods.

Mortgage Originations in each D.C. Ward by Race, 2010—2015 vs 2016—2021 The top half displays the number of mortgage loans originated in each D.C. ward from 2010 to 2015, split by race of applicant. The bottom half shows the number loans originated from 2016 to 2021.



Number of Mortgage Loans Originated, 2016-2021

5000

Source: 2010-2021 Home Mortgage Disclosure Act (HMDA) data. ©2023 Jain Family Institute | Eduard Nilaj.

8000

9000

10000

7000

Figure 3: Mortgage Originations by Ward and Race, 2010–2015 vs 2016–2021

2,445

2000

1000

Ward

4000



In the more recent period, new mortgage originations saw an uptick across all wards, but the growth was not uniform. Wards 4 and 5, which are diverse but plurality Black areas, experienced the largest overall increase in new mortgages. Conversely, the high-income and predominantly white Wards 1 and 3 saw the smallest gains. The largest percentage increases were in Wards 7 and 8, which are both the poorest and the most predominantly Black, with new mortgages growing by 56 percent and 86 percent, respectively. However, new mortgage originations in Wards 7 and 8 only account for 12 percent of all new mortgage originations during from 2016 to 2021. While this is a slight increase from the 9 percent share observed from 2010 to 2015, it remains disproportionately low, given that these two wards are home to roughly 25 percent of the city's total population. Across all wards, white applicants had the largest overall increase in new mortgage originations (+5,309), while the largest growth in proportion to the previous value was experienced by Asian applicants (+52 percent). For Black applicants, the number of originations was higher by 2,384 in the latter period, which is an increase of 46 percent.

While the increase of new mortgage originations is observed among all racial and ethnic groups, there is some evidence of gentrification taking place in predominantly Black wards. Indeed, the trends in Wards 7 and 8, areas where Black residents account for nearly 90 percent of the total population, are particularly striking. Analyzing two six-year periods within 2010-2021, we see that white applicants experienced a 108 percent increase in mortgage originations in Ward 7 and a 126 percent surge in Ward 8 during the latter period. Meanwhile, the increases for Black applicants in the same areas were notably smaller, at 44 percent for Ward 7 and 75 percent for Ward 8. We notice a similar trend in Ward 5, a more racially diverse area but still majority-Black at 61 percent, according to the ACS 2021 five-year estimates. Here, white applicants saw a growth of 1,465 in total mortgage originations during the latter six-year period, marking a 63 percent increase compared to 2010-2015. Meanwhile, the rise in originations for Black applicants was notably smaller, increasing by only 194, which represents a modest 16 percent rise. Despite Black residents comprising 61 percent of Ward 5's population, then, only 18 percent of mortgage loans approved between 2016 and 2021 were awarded to Black applicants. These trends suggest potential gentrification and displacement issues.

Section 2: Racial disparities and economic dynamics of student debt

While student debt is at crisis levels across the United States, some states and areas are more impacted than others. An <u>early study on the student debt crisis</u> showed that neighborhoods in the District of Columbia had some of the highest debt burdens in the country. <u>Studies that followed</u> confirmed those findings, as does our research. As of 2022, young student debt borrowers in D.C. hold the highest median and average student loan debts. The median balance for D.C. borrowers was \$31,999, while the

⁷ From American Community Survey 2021 5-year estimates. Ward 7: 89 percent; Ward 8: 87 percent.



average stands at \$62,612. Washington, D.C.'s average is 42 percent higher than the next highest state average, Maryland, which is almost \$20,000 less. Additionally, D.C. borrowers also have the highest student debt-to-income ratios, indicating that many borrowers struggle to repay their outsized debts because of low earnings. With a median student-debt-to income ratio of 0.43, D.C. borrowers have a ratio that is 14 percent higher than the second highest state, Georgia.

Similar to previously highlighted national student debt trends, median and average debt balances have been on the decline in D.C. since the onset of the Covid-19 pandemic. The decline in balances, along with higher repayment rates and increased homeownership rates, can be largely attributed to the suspension of interest accrual on federal student loans during the pandemic. This is in addition to policy measures from the Biden administration's heightened endeavors to alleviate student loan burdens through borrower defense claims, total and permanent disability discharges (TPD), and public service loan forgiveness programs. While balances are decreasing as a whole, it's likely that relief programs, including the repayment pause, have affected racial groups of borrowers differently.

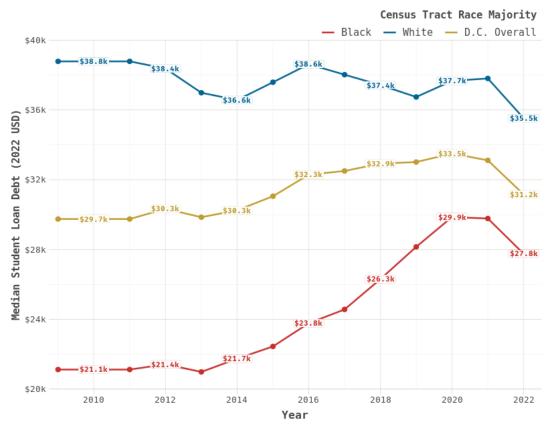
These findings raise a pivotal question: How might racial dynamics within the city's wards impact the financial burdens of today's residents? As we take a closer look at student debt among young adults in D.C., several other questions arise. Why do young borrowers in D.C. face higher debt burdens than their peers in other states? Are there aspects of our dataset that might further illuminate these disparities? Additionally, it's crucial to recognize the diverse composition of samples of borrowers. Our data encompasses a broad spectrum, from those who never completed a degree beyond high school, to associate degree holders, individuals with a terminal bachelor's degree, and those with graduate or professional degrees. This prompts more questions: Does D.C. attract a higher proportion of individuals with advanced degrees, skewing average debt upward? And crucially, when breaking down the numbers, how do debt burdens distribute among different racial and ethnic groups? The following sections aim to address these queries, highlighting the complexities of income, racial divides, and the broader context of debt in the nation's capital.

The history of racial inequality in the United States continues to shape various aspects of daily life, including education and financial opportunity. This historical legacy plays a significant role in shaping the present-day landscape of student debt, particularly in a diverse and politically significant area like Washington, D.C. The student debt scene in DC, is a complex scenario where historical divides, differences in education, economic opportunity, and racial background intersect. As we delve into the racial dynamics of student debt balances and income in the city, certain patterns emerge that cannot be ignored. For one, although borrowers in majority-Black census tracts have a lower balance than those in majority-white ones, the gap has steadily narrowed since 2009. This is shown in the below graph, which plots the three-year moving average of the median student debt balance across the entire D.C. area and among census tracts where a specific racial group forms the majority population.



Median Student Loan Debt in DC by Race, 2009-2022

Three-year rolling average of median student debt for young adults in DC by U.S. census tract race demographics*.



*Race is proxied by linking sampled data with 5-year ACS population estimates at the census tract level.

Source: Experian Information Solutions, Inc; American Community Survey, 5-year estimates. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 4: Median Student Loan Debt in D.C. by Census Tract Race Majority, 2009–2022

From 2009 to 2022, the median student debt balance for majority-Black census tracts in D.C. has grown by 32 percent, while majority-white tracts have instead seen a decrease of 10 percent. It's essential to consider the educational context (first described in the previous section) behind these figures. In majority-Black areas, only 33 percent of borrowers had attained at least a bachelor's degree by 2022, a rise from the 21 percent in the period 2009–2012. Conversely, in majority-white areas, the figure stood at 77 percent in 2022, up from 71 percent during the 2009–2012 period. In other words, while the educational attainment gap has narrowed, Black borrowers still have substantially less post-secondary education than their white counterparts, which explains their lower student debt balances. However, as the racial gap in educational attainment remains very large, there's been a notable reduction in the racial student debt gap. This means there's still a substantial portion of Black borrowers in D.C. who find themselves burdened with escalating student loan debt despite not completing a four-year college degree.



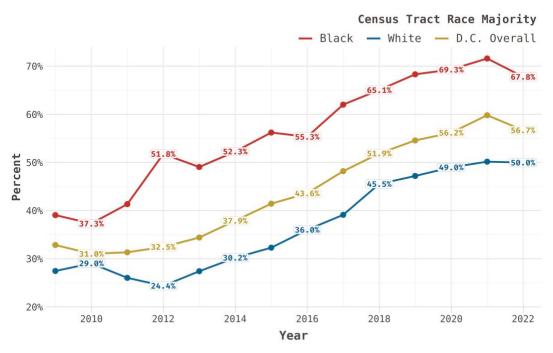
Additionally, disparities in student debt burdens for individuals with graduate or professional degrees have experienced a noticeable shift. In our combined samples from 2009 to 2012, borrowers with graduate degrees residing in majority-Black areas had a lower median student loan debt balance of \$31,797, compared to their counterparts in majority-white areas, who had a median balance of \$38,547. Fast forward to the samples from 2019 to 2022, and the situation has reversed. Borrowers with graduate degrees in majority-Black areas now carry a higher median student loan debt balance, at \$44,379, while those in majority-white areas have a median of \$42,933. This helps explain the narrowing of the racial student debt gap in recent years.

These trends underscore the unequal burden faced by Black student loan borrowers across the U.S. In addition to being more likely to incur student debt without completing a four-year degree, they are also disproportionately affected by higher instances.of borrowing, increasingly larger average loan amounts, and poorer repayment performance leading to increased delinquency and default. A specific examination of D.C. confirms an unequal burden when it comes to student loan debt repayment. The chart below illustrates this vividly. From 2009 to 2022, it plots the yearly percentage of student loans with current debt balances greater than the balance at origination. A striking pattern of persistent disparities between Black and majority-white areas emerges. While the percentage of student loans with a balance exceeding the original amount has increased across the board, the rise has been notably steeper for majority-Black tracts. In 2022, about 68 percent of the loans held by borrowers in majority-Black tracts had a greater current balance than the balance at loan origination, compared to 50 percent in majority-white tracts and 57 percent for D.C. overall.



Share of Student Loans Above Original Amount by Race, 2009-2022

Yearly percentage of student loans among young DC borrowers with current debt balance exceeding original amount, shown by U.S. census tract race demographics*.



*Race is proxied by linking sampled data with 5-year ACS population estimates at the census tract level.

Source: Experian Information Solutions, Inc; American Community Survey, 5-year estimates. ©2023 Jain Family Institute | Eduard Nilaj.

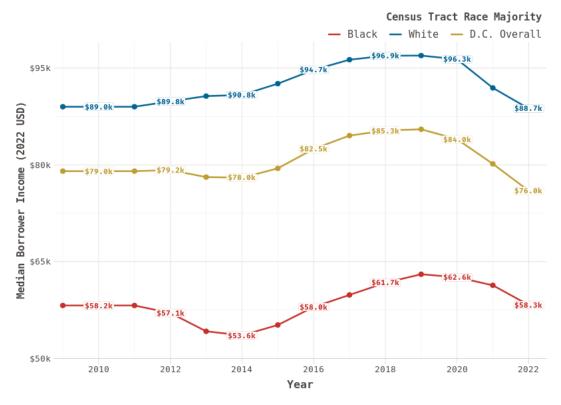
Figure 5: Share of Student Loans Above Original Amount in D.C. Race, 2009–2022

As regards D.C. student borrowers, trends in student loan debt match those in individual estimated median income, derived from credit reports. Although the racial disparity in student loan debt has been converging, the income gap between majority-Black and majority-white tracts remains unchanged. As depicted in Figure 6 below, the disparities in borrower income between majority-Black and majority-white tracts started around \$30,000 in favor of the majority-white tracts in 2009 and increased to as high as \$35,000 in 2018 but has gone down to \$30,000 again in recent years. Equally concerning is that the median income for all borrowers in D.C. sank to its lowest levels in 2021 and 2022, contrasting sharply with the escalating debt, as shown in the median student loan values over the same period.



Median Student Borrower Income in DC by Race, 2009-2022

Three-year rolling average of median income for young borrowrs in DC by U.S. census tract race demographics*.



*Race is proxied by linking sampled data with 5-year ACS population estimates at the census tract level.

Source: Experian Information Solutions, Inc; American Community Survey, 5-year estimates. c2023 Jain Family Institute | Eduard Nilaj.

Figure 6: Median Income of D.C. Student Borrowers by Census Tract Race Majority, 2009–2022

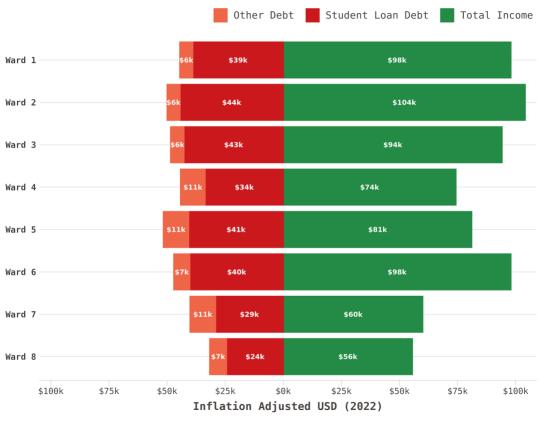
Combining data from figure 5 and 6, we can analyze the debt-to-income ratios to gain further insights. In 2009, the ratios for majority-Black tracts and majority-white tracts were 0.32 and 0.42, respectively. By 2015, these ratios almost converged, with majority-Black at 0.40 and majority-white at 0.41. However, in 2022, a divergence occurred, with the ratio for majority-Black tracts rising to 0.45, while decreasing for majority-white tracts to 0.37. Overall, figures 4, 5, and 6 underline the growing financial stress on Black borrowers. This is evidenced by the fact that borrowers in predominantly Black neighborhoods consistently have the highest current student loan balances relative to their original loan amounts, coupled with worsening student debt-to-income ratios.

The disparities in debt and income are further illustrated in a ward-by-ward breakdown. Figure 7 presents a diverging bar chart that contrasts median student and other debts against median income across D.C. wards from 2017 to 2022. This detailed view reveals the challenges faced by Wards 4, 5, 7, and 8—areas with either majority or plurality Black populations. Despite having less student debt, borrowers here have much lower incomes, and the situation is further complicated by the higher total of other debts they carry. This exacerbates the disparities we've already seen in the student-debt-to-income ratio



trends. These other debts include credit card balances, medical bills, auto loans, or mortgage amounts, which can contribute to a more overwhelming financial strain. Combined with lower median incomes, this multifaceted debt picture serves to widen the economic disparities, leaving individuals with fewer wealth-building opportunities.

Median Student Debt and Other Debt vs Income by D.C. Ward, 2017—2022 A diverging bar chart illustrating the distribution of median student and other debts against income from 2017 to 2022 across D.C. Wards.



Note: Majority of other debt comes from outstanding balances on mortgage, auto, and credit card loans.

Source: Experian Information Solutions, Inc. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 7: Median Debt vs Income for Young Student Debtors across D.C. Wards, 2017–2022

In summary, the analysis provided in this section paints a concerning picture of the student debt landscape in Washington, D.C. From racial disparities in debt and income to localized challenges in different wards, the overlapping facets of these issues showcase an unequal student debt burden—the consequences of which extend far beyond immediate financial strain, influencing long-term wealth-building opportunities, like buying a house. The urgency of the situation calls for targeted intervention. In conjunction with the analysis from section 1, the evidence presented here sets the stage for a critical examination of policy recommendations that are discussed in the section.



Section 3: Policy recommendations

The problem of racial inequity in access to homeownership has deep roots that go far beyond the specifics of the D.C. housing market. Addressing the full scope of housing inaccessibility would require bold, transformative policies at the federal level. The same can be said for the dramatically increasing costs of higher education. As such, the intersection of homeownership accessibility and student debt burden, particularly for Black prospective homeowners, must be addressed at its root.

Across the country, policies to redress the history of racial discrimination and redlining in the housing market are being investigated, and in some cases implemented, under the umbrella term of reparations or redress plans. The scope of these plans and the extent to which they can be accurately called reparative varies considerably. They are variously implemented at the local, state, or federal level; and involve a mix of direct cash transfers, vouchers, or other forms of institutional expansion. A cash-based federal reparations program may indeed be the only way to definitively close the racial wealth gap that contextualizes so much of the racial gap in homeownership. Other universal but race-targeted asset-building programs, like "baby bonds" accounts for newborns, could also help curtail racial wealth disparities over time.

Increasing the supply of housing in general and of affordable housing in particular is another effective method of improving access to homeownership. Though supply constraints affect housing markets differently across the country, certain cities—D.C. being one of them—have seen entry prices skyrocket due to a lack of new housing construction and restrictive zoning laws. Many of these restrictive policies were put in place and are maintained to preserve the value of existing homes, at the expense of new would-be homeowners' access to the market. This leads to a further entrenchment of haves and have-nots in homeownership. Gentrification and racial segregation in housing are long-standing problems throughout the US housing market but are particularly severe in D.C. Addressing housing affordability can begin to mitigate both these concerns. However, it is important to note that the scarcity of affordable homes, rather than a shortage of creditworthy buyers, is the key barrier preventing many from entering the housing market. Federal level policies like the Housing Supply Action Plan put forward in 2022 provide an avenue for addressing the problem of inadequate supply as well. While millions of dollars have already been allocated through programs such as the Home Purchase Assistance Program (HPAP), the Housing Production Trust Fund (HPTF), and the DC Housing Finance Agency (DCHFA) to support affordable housing and homeownership, resources remain limited.

Cancellation is the most direct method of alleviating the burden of student debt on borrowers. Given the observed negative relationship between student debt-to-income ratio and homeownership, cancellation could make it significantly easier for young would-be homeowners to obtain a home. Full cancellation would have the greatest impact for all borrowers, despite concerns about the distributional impact of such a policy. Though borrowers with high debt balances go on to typically earn higher salaries and are disproportionately white, a greater share of Black borrowers with high balances



have either not received bachelor's degree, earn a lower return on an achieved degree, or have fewer assets with which to defray the costs of higher education. Full student loan cancellation would protect, for example, the first-generation college graduate earning a decent income but without generational wealth, as well as the person who needed to pause their degree when costs turned prohibitive, making eventual homeownership a greater possibility for both. More targeted forms of cancellation are possible as well: such as for Pell Grant recipients or borrowers with lower incomes or wealth.

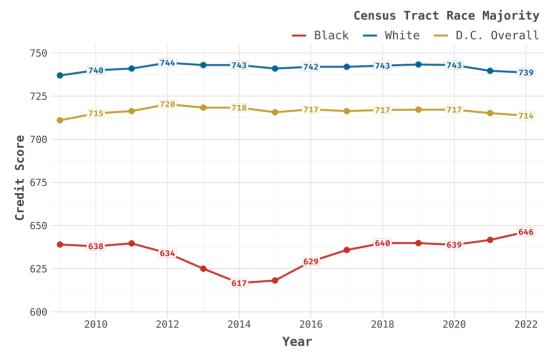
One compelling proposal is to foster homeownership among young borrowers through targeted student loan debt forgiveness programs, akin to Maryland's SmartBuy Program. The concept behind these programs is to offer substantial support, up to \$40,000, to help borrowers pay off their student loans.8 However, the existing programs' high credit score requirements can exclude those most in need. Our analysis of median credit scores across different racial backgrounds, as depicted in Figure 8, shows a concerning credit score gap that amplifies racial homeownership disparities.

 $^{^{8}}$ The updated Maryland SmartBuy 3.0 program assists qualified homebuyers with student debt in purchasing a home in Maryland. It offers a conventional mortgage along with a five-year forgivable Promissory Note, covering up to 15 percent of the purchase price (max \$40,000), to pay off the borrower's student debt entirely at the time of purchase. Additional features include optional Down Payment Assistance loans and specific eligibility criteria, including a minimum student debt of \$1,000 and a credit score of 720.



D.C. Median Borrower Credit Score by Race, 2009-2022

Three-year rolling average of median student borrower credit score for young adults in D.C. by U.S. census tract race demographics*.



*Race is proxied by linking sampled data with 5-year ACS population estimates at the census tract level.

Source: Experian Information Solutions, Inc; American Community Survey, 5-year estimates. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 8: D.C. Median Borrower Credit Score by Race, 2009–2022

A program with lower credit score eligibility thresholds could be more effective in reducing racial homeownership inequalities. Our examination of D.C. student borrower samples from 2017 to 2022 reveals stark disparities in median credit scores between wards, emphasizing the importance of tailored intervention. The situation is more alarming in the case of borrowers without a mortgage balance: those in Wards 7 and 8 have median credit scores of 596 and 587, respectively, whereas those in Wards 1, 2, 3, and 6 have median scores ranging from 713 to 727. To reduce racial homeownership disparities in D.C, we advocate for a program that emphasizes lower credit score eligibility thresholds.

To substantiate this point, we conducted an evaluation of hypothetical program eligibility criteria within our D.C. student borrower samples, pinpointing individuals from the 2017 to 2022 samples without an outstanding mortgage balance and with a student debt balance of at least \$1,000. Figure 9 displays the percentage of borrowers who would qualify for the program depending on various eligibility criteria based on minimum credit scores and maximum student debt balance. The results show the importance of considering the eligibility criteria. For instance, we see that 49 percent of our sample of

⁹ We use the maximum student debt balance here to align with Maryland's program, which requires the full student debt amount to be paid off for at least one of the borrowers at the time of the home purchase.



borrowers would qualify for a program with eligibility criteria requiring a minimum credit score of 625 and offering up to \$75,000 in student debt assistance. However, the eligibility share decreases significantly to 23 percent when the criteria are tightened to require a minimum credit score of 700 and offer only up to \$30,000 in student debt assistance. A mid-range combination of debt relief up to \$50,000 with credit scores of at least 600 would make 44 percent of student debt holders eligible.

Eligibility for D.C. Homebuyer Student Debt Forgiveness Program: Distribution by Minimum Credit Score and Maximum Debt Balance

Data from five separate annual cross-sectional samples collected between 2017 and 2022, featuring 14,686 student loan borrowers in D.C. aged 25 to 35, each with a student debt balance of at least \$1,000 and without any existing home mortgage.



Source: Experian Information Solutions, Inc. ©2023 Jain Family Institute | Eduard Nilaj.

Figure 9: Eligibility for Hypothetical D.C. Homebuyer Student Debt Forgiveness Program

To summarize, the racial inequity in access to homeownership is an issue that transcends the boundaries of the D.C. housing market. Our analysis makes clear that bold, transformative policies that not only redress historical racial redlining but also address housing supply constraints, gentrification, and student debt burdens are needed. Through proposals ranging from implementing targeted asset-building programs and affordable housing initiatives to comprehensive student debt cancellation and reparations plans, we outline a path towards narrowing the racial wealth gap and making homeownership more accessible for marginalized communities.

Addressing targeted cancellation, we advocate for a robust strategy that recognizes the complex relationship between student debt and homeownership. Our data from 2017 to



2022 has illuminated alarming disparities in credit scores across D.C.'s wards—a situation which necessitates a program that emphasizes lower credit score eligibility thresholds. Additionally, targeted recommendations from the Black Homeownership Strike Force can serve as foundations for student debt policies. For instance, one of the Strike Force's recommendations is to create an online comprehensive District homeownership platform. This could be expanded to include resources and guidance on managing student debt as a barrier to homeownership. These approaches, combined with the consideration of different eligibility criteria for hypothetical homebuyer student debt forgiveness programs, could lead to a more inclusive and effective strategy for reducing racial homeownership disparities. For example, eligibility for student debt relief for firsttime homebuyers could be targeted at D.C. natives by focusing on those with high school degrees. This is in line with recent research that emphasizes the importance of incomebased eligibility in housing assistance programs. A debt relief program might also target families with an intergenerational residency. The amount of student debt can also be a consideration in qualifications for HPAP and the amount of funding allocated to a firsttime buyer. The challenge is how to employ student debt to advance Black and native DC homeownership but to avoid fueling gentrification. It could be worthwhile to experiment with geographically based initiatives that would ensure legacy families are the primary beneficiaries of programs or policies.

Conclusion

Rising costs in both housing and higher education have combined to push homeownership further out of reach for young adults in D.C. Due to the history of racial discrimination in housing, barriers to wealth-building, and diminished labor market returns for higher education, Black would-be borrowers face an even more difficult path towards homeownership.

The present study provides evidence that those with higher student loan debt have a more difficult time securing homeownership in D.C. This means that young adults' attempts to achieve both economic mobility and economic stability are not only less successful but are also at cross purposes. To the extent that we value an economic system where young people can work hard, invest in themselves, and see a return on that investment in terms of improved quality of life and economic security, we must address the pernicious relationship between student loan debt and access to homeownership.

We must also continue to take responsibility for our history of unequal access to homeownership for Black Americans, especially in our nation's capital. The increased difficulty of owning a home for those with high student loan balances relative to their income—those who have invested the most and seen the lowest return on that investment—cannot be divorced from the context in which Black Americans see a lower return on their investment in American institutions. If reaching broad-based equity in homeownership is our goal, then redressing past harms and implementing bold structural changes are both necessary.



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Appendix

Logistic Regression

The odds of homeownership can be estimated using the following logistic regression equation:

 $log \ (Odds(Homeownership) \ = \ \beta_0 \ + \ \beta_1 D10 \ + \ \beta_2 I10 \ + \ \beta_3 Cr \ + \ \beta_4 Age \ + \ \beta_5 Mrate \ + \ \beta_6 Ed \ + \ \beta_7 D^2 \ + \ \beta_8 I^2 \ + \ \beta_9 (Inc 10 \ * \ Cr)$

Where:

- D10: Borrower's student debt balance, in tens of thousands.
- I10: Borrower's estimated income, in tens of thousands;
- Cr: Borrower's credit score, in tens;
- Age: Borrower's age, in years,
- Mrate: The percentage of owner-occupied housing units with a mortgage out of the total occupied units at the census tract level. (From ACS 2021 5-year estimates on housing characteristics).
- *Ed* is an indicator variable: 1 if the borrower has attained at least a Bachelor's degree, 0 otherwise.
- D^2 : Borrower's student debt balance, squared. To see if the relationship between student debt and homeownership is linear.
- I^2 : Borrower's estimated income, squared. To see if the relationship between income and homeownership is linear.
- I10 * Cr: Interaction between estimated Income and credit score

The regression table on the next page presents results from the model. The left column details the coefficients for each predictor variable, providing insight into the direction and magnitude of the relationship. Positive coefficients indicate that the predictor increases the log-odds of homeownership, while negative coefficients indicate a decrease. The right column presents the odds ratios, which denote how a one-unit increase in the predictor changes the odds of homeownership. An odds ratio greater than 1 suggests that as the predictor increases, the odds of homeownership also increase, and vice versa.



Determinants of Homeownership among Young D.C. Student Borrowers (2017-2022): Results from Logistic Regression

	Homeownership Model log(OR)	Odds Ratio
	Estimate (SE) ^{1,2}	Estimate (SE) ^{1,2}
Student Debt (10K)	-0.08*** (0.011)	0.92*** (0.010)
Estimated Income (10K)	0.77*** (0.070)	2.16*** (0.151)
Student Debt Squared	0.00* (0.000)	1.00* (0.000)
Estimated Income Squared	0.00*** (0.000)	1.00*** (0.000)
Credit Score (tens)	0.03* (0.014)	1.03* (0.014)
Age	0.08*** (0.013)	1.09*** (0.014)
Degree	-0.43* (0.197)	0.65* (0.132)
Tract Mortgage Rate	0.99*** (0.222)	2.70*** (0.619)
Estimated Income (10K) * Credit Score (tens)	0.00* (0.001)	1.00* (0.001)
Ward * Degree (Interaction)		
Ward 2 * Degree	0.01 (0.333)	1.00 (0.360)
Ward 3 * Degree	0.30 (0.383)	1.36 (0.569)
Ward 4 * Degree	0.47 (0.290)	1.60 (0.489)
Ward 5 * Degree	-0.19 (0.256)	0.82 (0.220)
Ward 6 * Degree	0.49 (0.262)	1.63 (0.444)
Ward 7 * Degree	0.45 (0.300)	1.57 (0.498)
Ward 8 * Degree	0.89** (0.332)	2.43** (0.865)
Observations	15,899	15,889
AIC	6,156	6,156

^{*}p<0.05; **p<0.01; ***p<0.001

Source: Author's calculations utilizing data from Experian Solutions, Inc. @2023 Jain Family Institute | Eduard Nilaj.

Table A1: Logistic Regression Output

Other Takeaways

- Credit Score (Cr): A ten-point increase in the borrower's credit score is associated with a roughly 2.8% increase in the odds of homeownership.
- Owner-occupied Mortgage Rate (Mrate): A one-unit increase in the owner-occupied housing units with a mortgage as a share of total occupied units at the census tract level leads to a substantial 170% increase in homeownership odds. Higher rates of homeownership with mortgages in an area suggest a more favorable environment for potential homeowners.
- Squared Student Debt (D2): The squared term for student debt points to a nonlinear relationship, indicating the effect of student debt on homeownership may not be constant across all levels of debt.
- Squared Estimated Income (I2): The squared term for estimated income indicates a non-linear relationship. The influence of income on homeownership might alter at extremely high or low income levels.
- Interaction between Estimated Income and Credit Score (I10*Cr): This term suggests that the joint effect of estimated income and credit score on homeownership slightly diminishes when both are high simultaneously.

² OR = Odds Ratio, SE = Standard Error