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Jobs for the Future

Racial Disparities in Student Loan Affordability

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Introduction

Student debt has exploded over the past several decades, rising to over $1.7 trillion.[1] Federal student loans represent over 90% of student loan balances, with private financing making up the remainder.[2] Research has shown that the negative impact of student debt has not been distributed equally across different demographics, with Black borrowers disproportionately feeling the adverse effects of student debt.[3] Yet to date, little research has explored how monthly repayment burdens—defined as the borrower's monthly payment as a share of their earnings—vary across different demographic groups or how that may relate to the specific fixed-payment structure of student loans.

This study uses the 2019 Survey of Consumer Finances (SCF), a comprehensive national survey of U.S. families' financial lives, to identify differences in monthly repayment burdens across racial groups. Not controlling for factors like education and gender, this analysis found Black borrowers on average paid 3.6% more of their monthly income toward student loans compared to white borrowers. Even after controlling for education, marital status, sex, and the total amount borrowed in student loans, Black borrowers on average still paid 2.6% more of their monthly income toward loan repayment compared to white borrowers. Our analysis also indicated enrollment in a federal income-driven repayment (IDR) plan does not significantly affect this disparity.

These results could be driven by lower earnings of Black borrowers, making their monthly repayment burdens higher than those of white borrowers in otherwise similar situations. Shifting how students finance their education away from fixed-payment loans and toward income-contingent financing, in which all borrowers above a certain earnings threshold pay the same share of their income in monthly payments, would likely close these disparities in monthly repayment burdens.

While we expect President Joe Biden's new IDR plan, especially the automatic enrollment feature, to reduce these monthly repayment burden disparities in the Title IV market, further reforms—including mandatory enrollment in the new IDR plan and reducing the program's complexity and administrative burdens, which lead to Black borrowers enrolling in IDR programs at lower rates—should be explored.[4] Moreover, in the non-Title IV market, the movement toward income-contingent financing, such as outcome-based loans, should be encouraged and closely monitored.

Existing Research

Racial Disparities

There has been an explosion in individual borrowing for education over the past several decades in the United States, as total student debt has risen to over $1.7 trillion.[5] College has historically served as a tool for economic advancement, with the assumption that student debt will be repaid through increased future earnings once a student enters the labor market. While this was once an accepted assumption, scholars like Tressie McMillan Cottom have questioned whether student debt is always an investment that pays long-term dividends.[6] Multiple studies indicate increased earnings are less likely for those with student debt.[7]

Additionally, high levels of student debt have hindered young adults from participating in long-term investments like homeownership.[8]

As student borrowing has risen, Black students have experienced higher rates of debt growth, with Black households more likely to have student debt and larger amounts of student debt on average compared to white and Latine households.[9] Additionally, studies show Black and Latine students are disproportionately affected by student debt, perhaps due to lower completion rates, occupational segregation, and structural racism in the labor market that lead to Black and Latine workers being paid less for the same work.[10] Furthermore, because of diminished returns from higher education for Black and Latine borrowers, they are also more likely to default during loan repayment.[11]

Student loans have also been associated with worsening disparities in racial wealth gaps and economic inequality.[12] Scholars like Venoo Kakar, Gerald Daniels, and Olga Petrovska have estimated that student debt explains between 3% and 7% of the racial wealth gap between Black and white households.[13] According to the Student Borrower Protection Center, student debt is both a "cause and consequence" of racial and economic inequality.[14] For example, Black and Latine borrowers may have less intergenerational wealth to draw on and thus must depend more on loans to finance their education. That debt will mean they are less likely to build wealth that allows their children to avoid loans for *their* education.[15] Two decades after starting school, the average white borrower has paid off 94% of their student debt, while the average Black borrower still owed 95% of their debt.[16]

The Role of Loan Structure

All federal loans, and nearly all private financing, are structured as fixed-payment loans, where students pay a fixed dollar amount per month. Research on monthly repayment burdens shows that this conventional loan structure leads to higher repayment burdens for students from low-income backgrounds and those early in their careers.[17] Monthly repayment burdens are important to understand because high repayment burdens constrain other economic activities and contribute to higher defaults. Yet to date, little research explores how monthly

repayment burdens vary across demographic groups. Given that Black borrowers earn less than white borrowers even after controlling for a variety of relevant factors, one would assume Black borrowers would experience higher repayment burdens than white borrowers, but this has not been empirically shown in past research.[18]

The federal government responded to rising student loan burden by creating IDR programs, which set monthly payments at a fixed proportion of a borrower's monthly income. IDR programs are meant to protect borrowers from shifting financial realities and reduce the risk and burden associated with student loan use. Anyone with a federal student loan can apply for one of four IDR programs, which set payments between 10% and 20% of a borrower's monthly discretionary income. Balances are intended to be forgiven after 20 to 25 years (though Biden's recent executive actions will change these parameters—see Pollack and O'Connor).[19] IDR program usage has more than doubled since 2014, with roughly 50% of all estimated federally held student debt being repaid through IDR programs.[20]

Methods

Design and Data

This study conducted a secondary analysis of the 2019 SCF, which has been conducted by the Federal Reserve Board once every three years since 1983. The SCF uses a primary economic unit (PEU) to signify a single individual or focal couple inside of a household. It does not account for former students who may have moved back into their family's homes after graduating, and gaps like this may account for the discrepancies in total student loan debt estimates between the SCF and the Federal Reserve.[21] Based on the recommendation of Suzanne Lindamood, Sherman D. Hanna, and Lan Bi, this study does not use sample weighting for inferential analyses.[22] They explain that not using sampling weights when conducting multivariate analyses with the SCF produces more conservative estimates of effects.[23]

Sample

To identify a sample for our analyses, we screened SCF respondents for several factors. First, we removed respondents who indicated they did not have educational loans. Next, we removed any respondents who reported only loans that did not belong to them (for example, one belonging to a spouse or partner). Additionally, we removed any respondents reporting on nonfederal loans to account for any variance in private loans. Finally, any respondents who did not report their income were also removed because (1) we couldn't distinguish between nonreport respondents and zero-income respondents, and (2) a monthly repayment burden ratio cannot be calculated for respondents without reported income. After screening, our final sample with observation for all of our variables of interest included 1,586 respondents out of a total of 28,885 SCF respondents.

Table 1 shows sample characteristics for our major variables of interest. Over 50% of our sample had at least a bachelor's degree, and nearly 56% had never been married. Fifty-three percent were male, and slightly under 50% were white. Twenty-nine percent of our sample indicated they were Black, and slightly over 7% were Hispanic.[24] The average amount of student debt was $40,527, and the average yearly income was almost $74,000. Additionally, 35% of our sample indicated being enrolled in an IDR program, while 65% indicated not being enrolled. The average monthly income-to-payment ratio of our sample was 4.28%.

TABLE 1

Sample Descriptives

Education	Frequency	Percent
High School or Less	55	3.47
Some college	313	19.74
Vocational Program	135	8.51
Associates Degree	160	10.09
Bachelors Degree	563	35.5
Masters Degree	285	17.97
Other Advanced Degree/Professional School	75	4.73

Marital Status	Frequency	Percent
Married	315	19.86
Separated	70	4.41
Divorced	285	17.97
Widowed	30	1.89
Never married	886	55.86

Race	Frequency	Percent
White	776	48.93
Black	461	29.07
Hispanic	113	7.12
Other	57	3.59
More than one race	179	11.29

Sex	Frequency	Percent
Male	846	53.34
Female	740	46.66

Total Amount Borrowed Categories	Frequency	Percent
Less than $10,000	282	17.78
$10,000 - $19,999	288	18.16
$20,000 - $29,999	231	14.56
$30,000 - $39,999	220	13.87
$40,000 - $49,999	137	8.64
$50,000 - $59,999	108	6.81
$60,000 - $69,999	91	5.74
$70,000 - $79,999	49	3.09
$80,000 - $89,999	35	2.21
$90,000 - $99,999	35	2.21
$100,000 - $149,000	50	3.15
$150,000 or more	60	3.78

Income Categories	Frequency	Percent
Less than $10,000	60	3.78
$10,000 - $19,999	129	8.13
$20,000 - $29,999	181	11.41
$30,000 - $39,999	201	12.67
$40,000 - $49,999	220	13.87
$50,000 - $59,999	187	11.79
$60,000 - $69,999	75	4.73
$70,000 - $79,999	113	7.12

Income Categories	Frequency	Percent
$80,000 - $89,999	50	3.15
$90,000 - $99,999	72	4.54
$100,000 - $149,000	165	10.4
$150,000 or more	133	8.39

Total Amount Borrowed	
Mean	40527.87

Income	
Mean	73908.54

Monthly Repayment Burden	
Mean	4.28

Enrolled in IDR Program	Frequency	Percent
Yes	555	34.99
No	1031	65.01

Total N = 1,586

Dependent Variable

The primary dependent variable for this study was respondents' monthly student loan payment amount-to-monthly income ratio. We calculated each respondent's monthly student loan payment amount by summing all the reported monthly payments across all reported loans for each respondent. We calculated income by summing reported yearly income across all reported sources in the SCF and dividing the total by 12 months. Finally, we divided each respondent's total monthly student loan payment amount by their total monthly income to calculate the percentage of each respondent in our sample's monthly income being used to repay student loans.

Primary Independent Variable

The primary independent variable for this study was respondents' reported race. Race is collected on the SCF as a "select all" variable; however, for the publicly available data set, it is recoded into four categories. These categories are white, Black, Hispanic, and other. If a respondent selected more than one race on the SCF, the public data set does not show the other selections but indicates they chose more than one race in a separate dummy variable. To account for those who selected more than one race, the race variable was recoded into five categories for this analysis: white, Black, Hispanic, other, and more than one race.

Analyses

As a part of this study, we estimated three ordinary least squares (OLS) regression models. The first included only our dependent and primary independent variable (see Table 2). The second included our dependent variable, primary independent variable, and all control variables (see Appendix B). The third included our dependent variable, primary independent variable, control variables, and the interaction between race and IDR program enrollment (see Appendix C).

Results

Our first OLS model estimated the differences in monthly income-to-monthly student loan payment ratio across races without including control variables (see Table 2). The results of this analysis indicated that in comparison to white borrowers, Black borrowers were on average paying 3.6% ($p<.01$) more of their monthly income toward student loans. Further analysis indicated this might be driven partly by lower incomes, as Black respondents in our sample had significantly lower incomes (that is, on average Black respondents made roughly $21,000 less per year ($p<.01$)). Additionally, consistent with previous findings, it appeared Black respondents in our sample had higher reliance on student loans, as they had on average $6,000 more in student loan debt than their white counterparts. Our analyses also indicated even when controlling for the total amount borrowed in student loans, the racial gaps still persisted, with Black borrowers paying about 3.4% more of their monthly income compared to whites ($p<.01$) (see Table 3).

We conducted further analysis that included controls for education, marital status, sex, and the total amount borrowed in student loans for each respondent. The results still indicated significant differences across races in the monthly payment-to-monthly income ratio. Compared to white borrowers, Black borrowers on average paid 2.6% ($p<.01$) more of their monthly income toward loan repayment. The full results of these analyses can be found in Appendix B.

Our analyses also attempted to account for the moderating effect of being enrolled in an IDR program by including the interaction between race and IDR program enrollment. Results of our final analysis suggest the effect of IDR enrollment does not significantly moderate racial differences in monthly payment-to-monthly income ratio. These results indicate enrolling in an IDR program does not close the racial gap in monthly student loan burden. The full results of this analysis can be found in Appendix C.

TABLE 2

Monthly Repayment Burden Across Race, No Controls

Race	Coef.	St. Err.	t-value	p-value	95% Conf Interval		Sig
Ref: White							
Black	0.036	0.009	4.05	0	0.019	0.054	***
Hispanic	-0.02	0.015	-1.31	0.191	-0.051	0.01	
Other	0.034	0.021	1.63	0.104	-0.007	0.076	
More than one race	-0.001	0.013	-0.08	0.932	-0.026	0.024	
Constant	0.033	0.006	5.9	0	0.022	0.043	***

*** p<.01, ** p<.05, * p<.1

N	1,586
R-squared	0.015
F-test	5.948
Prob > F	0

Discussion and Implications

We found that Black borrowers experienced a higher monthly burden in repaying their student loans. On average, Black borrowers paid 3.6% more of their monthly income toward student debt compared to white borrowers. Additionally, we found enrolling in an IDR program did not significantly close this racial gap. As previous research has shown, borrowers of color, particularly Black borrowers, are disproportionately negatively affected by student loan debt. The present study adds to this body of work by exploring racial disparities in the more immediate burden of student debt (that is, monthly payments). These results may be driven by lower earnings of Black borrowers, making their monthly repayment burdens higher than those of white borrowers in otherwise similar situations.

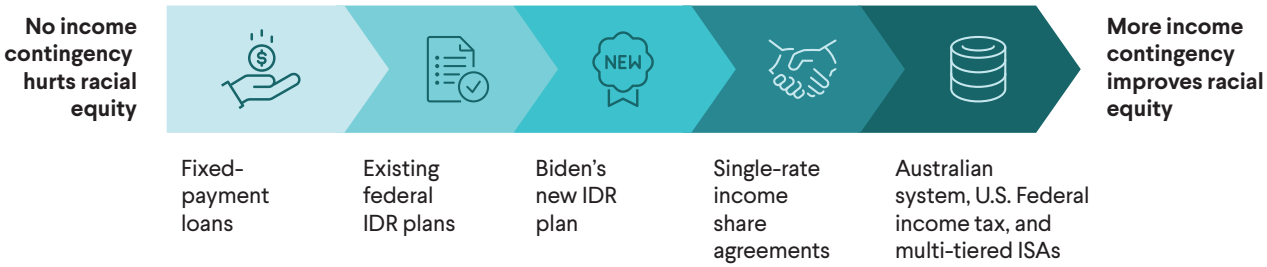
Shifting how students finance their education away from fixed-payment loans and toward income-contingent financing, in which all borrowers above a certain earnings threshold pay the same share of their income in monthly payments, could theoretically narrow these disparities in repayment burdens.

Yet this raises an interesting question: If income-contingent financing is the answer, why do we find IDR does not significantly close racial gaps? One possible explanation is that specific IDR design features cut against the income contingency of IDR. For example, how racial groups sort into the various IDR plans, each with their own repayment share, may undermine IDR programs' ability to close racial repayment burden gaps. Unfortunately, due to date limitations, we couldn't test this theory.

In other words, IDR likely isn't closing racial gaps because it isn't sufficiently income contingent. Figure A shows that income contingency is a spectrum. The least-income-contingent solution is a fixed-payment loan, which can easily lead to repayment burden disparities because the repayment amount does not vary with income. IDR plans represent a hybrid approach: a fixed-payment loan with an income-contingent feature layered on top. Moving from the left to the right of the spectrum, away from the fixed-payment loan approach and toward purer forms of income contingency, is highly likely to improve racial equity.

FIGURE A

Income Contingency



Biden's new IDR plan creates a single, very generous IDR plan and includes an automatic enrollment feature.[25] We expect it to do more to reduce these monthly repayment burden disparities in the Title IV market because most borrowers will pay the same fixed percentage of their discretionary income. The generosity of the program also could reduce the racial disparity by encouraging white students to borrow more.

Further reforms should be considered as well. Mandatory enrollment in the new IDR plan would ensure high-earning borrowers do not face lower repayment burdens than lower-earning borrowers because all borrowers would pay 5%. Reducing the program's complexity and administrative burdens, which disproportionately hurt Black borrowers, should also be explored. This could include allowing borrowers to have loan payments automatically calculated and deducted from their paychecks, just as Social Security contributions are collected (the borrowers in the UK and Australia make loan payments in this way, with far more ease).

There is also a trend in the non-Title IV market toward income-contingent financing, such as outcome-based loans and income share agreements. This trend should be encouraged and closely monitored, and consumer protections should be put into place to ensure students are protected and these financing options improve rather than undermine equity.

Appendix A.

Additional Analysis Methods

Control Variables

The analyses in this study also controlled for other variables that might affect respondents' monthly payment-to-income ratio, including the total amount of money borrowed in student loans, monthly income, education level, sex, and marital status. The total amount of money borrowed in student loans was calculated by summing the total amount borrowed across all loans reported on the SCF for each respondent. Yearly income was calculated as reported for our dependent variable. Both income and total amount borrowed in loans were transformed into categorical variables. Sex included the categories male and female. Marital status was recorded as married, living with a partner, separated, divorced, widowed, and never married. Education was recoded to account for categories including high school or less, some college, vocational program, associate's degree, bachelor's degree, master's degree, and other advanced degree/professional school.

Moderating Variable

The current study attempted to assess the moderating effect of being enrolled in an IDR program on the relationship between race and income-to-monthly payment ratio. To identify respondents enrolled in an IDR program, a dummy variable (that is, 1 for those in IDR and 0 for those not) was created using the SCF variable, asking if the reported payment amount on a loan is determined by any type of income-based program. If the respondent said yes to this variable for any reported loan, they were coded as a 1 and 0 otherwise.

Appendix B.

Monthly Repayment Burden Across Race with Controls

	Coef.	St. Err.	t-value	p-value	95% Conf Interval		Sig
Race							
Ref: White							
Black	.026	.009	2.82	.005	.008	.045	***
Hispanic	-.018	.015	-1.16	.245	-.048	.012	
Other	.01	.021	0.46	.648	-.032	.052	
More than one race	-.005	.013	-0.41	.68	-.03	.02	
Education							
Ref: High school or less							
Some college	-.006	.023	-0.26	.798	-.05	.038	
Vocational program	.011	.025	0.47	.64	-.037	.06	
Associate's degree	.002	.024	0.07	.948	-.046	.049	
Bachelor's degree	.024	.023	1.03	.301	-.021	.069	
Master's degree	.024	.025	0.95	.341	-.025	.073	
Other advanced degree	-.028	.031	-0.91	.362	-.089	.033	
Other	.01	.021	0.46	.648	-.032	.052	
More than one race	-.005	.013	-0.41	.68	-.03	.02	
Gender							
Ref: Male							
Female	.004	.009	0.47	.639	-.013	.021	

Marital Status							
Ref: Married							
Separated	-.01	.021	-0.49	.624	-.052	.031	
Divorced	.013	.014	0.95	.34	-.014	.04	
Widowed	.02	.03	0.68	.497	-.038	.079	
Never married	.037	.011	3.35	.001	.015	.059	***

Total Borrowed in Loans							
Ref: Less than $10,000							
$10,000-$19,999	-.001	.013	-0.04	.967	-.026	.025	-
$20,000-$29,999	.026	.014	1.77	.076	-.003	.054	*
$30,000-$39,999	0	.015	0.02	.984	-.029	.029	-
$40,000-$49,999	.003	.017	0.19	.849	-.03	.036	-
$50,000-$59,999	.128	.019	6.85	0	.092	.165	***
$60,000-$69,999	.008	.02	0.39	.697	-.032	.048	-
$70,000-$79,999	.005	.025	0.21	.837	-.043	.053	-
$80,000-$89,999	.094	.028	3.29	.001	.038	.149	***
$90,000-$99,999	.002	.029	0.08	.938	-.055	.06	-
$100,000-$149,000	.026	.026	1.03	.305	-.024	.077	-
$150,000 or more	.088	.026	3.43	.001	.038	.139	***
Constant	0.163	0.025	6.43	0	0.113	0.213	***

*** p<.01, ** p<.05, * p<.1

Number of obs	1,586
R-squared	.091
F-test	5.973
Prob › F	0

Appendix C.

Monthly Repayment Burden Across Race With Controls and Interaction

	Coef.	St. Err.	t-value	p-value	95% Conf Interval		Sig
Race							
Ref: White							
Black	0.021	0.010	2.190	0.029	0.002	0.041	**
Hispanic	-0.008	0.016	-0.520	0.602	-0.040	0.023	
Other	0.029	0.021	1.380	0.168	-0.012	0.070	
More than one race	-0.024	0.014	-1.760	0.079	-0.050	0.003	*
IDR Program Enrollment							
Ref: No							
Yes	.016	.012	1.38	.166	-.007	.04	
IDR Enrollment * Race							
Black*in IDR	.016	.019	0.83	.408	-.021	.053	
Hispanic*in IDR	-.03	.036	-0.83	.406	-.099	.04	**
Other*in IDR	-.062	.063	-0.99	.324	-.184	.061	
More than one race*in IDR	-.005	.026	-0.20	.84	-.057	.046	
More than one race	-0.024	0.014	-1.760	0.079	-0.050	0.003	*

Education							
Ref: High school or less							
Some college	-.006	.023	-0.25	.802	-.05	.039	
Vocational program	.009	.025	0.38	.701	-.039	.058	
Associate's degree	.001	.024	0.04	.967	-.047	.049	
Bachelor's degree	.024	.023	1.02	.306	-.022	.069	
Master's degree	.023	.025	0.90	.368	-.027	.072	
Other advanced degree	-.025	.031	-0.80	.422	-.086	.036	
More than one race*in IDR	-.005	.026	-0.20	.84	-.057	.046	
More than one race	-0.024	0.014	-1.760	0.079	-0.050	0.003	*
Gender							
Ref: Male							
Female	.001	.009	0.13	.894	-.016	.019	
Marital Status							
Ref: Married							
Separated	-.011	.021	-0.54	.593	-.053	.03	
Divorced	.013	.014	0.95	.34	-.014	.04	
Widowed	.017	.03	0.57	.566	-.042	.076	

Total Amount Borrowed							
Ref: Less than $10,000							
$10,000-$19,999	-.002	.013	-0.14	.892	-.027	.024	
$20,000-$29,999	.029	.015	1.98	.048	0	.058	**
$30,000-$39,999	-.001	.015	-0.08	.937	-.03	.028	–
$40,000-$49,999	0	.017	-0.02	.986	-.033	.033	
$50,000-$59,999	.126	.019	6.64	0	.089	.163	***
$60,000-$69,999	.003	.02	0.17	.868	-.037	.044	–
$70,000-$79,999	0	.025	0.00	.999	-.048	.048	–
$80,000-$89,999	.087	.029	3.04	.002	.031	.143	***
$90,000-$99,999	.005	.03	0.17	.866	-.053	.063	–
$100,000-$149,000	.026	.026	1.01	.311	-.024	.077	
$150,000 or more	.081	.026	3.11	.002	.03	.131	***
Constant	0.031	0.022	1.4	0.163	-0.013	0.075	–

Number of obs	1,586
R-squared	.095
F-test	5.262
Prob › F	0

**** p<.01, ** p<.05, * p<.1*

Endnotes

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24 JFF strives to use equitable and inclusive language in all our published content. When we share insights or data from individuals or organizations whose language choices differ from our own, we use their terms to preserve accuracy. See our Language Matters Guide for more information.

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