Indebtedness, the cost of borrowing, and the U.S. working class

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[In progress]

Abstract

In this paper, we analyze the distribution and burden of debt for the U.S. working and non-working classes between 1989 and 2022. Using a definition of social class based on employment relationship and occupation, we document that, notwithstanding a moderately larger recent rise in the working class, non-working class households have higher average debt-to-income ratios than working-class households. Despite holding less debt, however, working-class households tend to face a greater financial squeeze from borrowing. First, working-class debt is relatively more concentrated in those that facilitate consumption or help make ends meet, whereas non-working-class debt is relatively more concentrated in liabilities that build wealth. Second, despite lower average debt-to-income ratios, working-class households with debt incur higher average required debt payments relative to income than non-working-class households. We link this divergence in the stock and payment burden of debt to borrowing costs: by estimating household-level interest rates, we show that working-class households pay higher average interest rates than non-working-class households – and that this gap persists even *within* certain liability categories, namely vehicle and installment loans. These adverse terms of borrowing mean that, even if the working class borrows less, borrowing can nonetheless widen the wedge between working- and non-working-class wealth.

JEL codes: B5, D3, E44, G51

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1 Introduction

One central feature of the post-World War II U.S. economy is a stark rise in the indebtedness of the U.S. household sector, both in absolute terms and relative to income. This rise has been dramatic, with the average household debt-to-income ratio increasing from approximately 30% after World War II to close to 120% before the 2008 financial crisis, remaining elevated thereafter at almost 100% of household income (Bartscher, Kuhn, Schularick, and Steins, 2025). This rise has, furthermore, taken place during a period of dramatically rising inequality. Linking these phenomena, a substantial body of research describes the distribution of debt across the personal income distribution (e.g. Mason, 2018; Bartscher et al., 2025), and analyzes debt as both a cause and consequence of the widening distributions of income and wealth in the U.S. (e.g. Cynamon and Fazzari, 2016; Barba and Pivetti, 2009; Mian and Sufi, 2014, 2016; Kim, Lima, and Setterfield, 2019).

While distributional analyses of household debt have largely focused on personal income, this period also coincides with growing inequality between the U.S. working and non-working classes (Wodtke, 2016; Davis and Konstantinidis, 2024) and with an increasingly prominent narrative that U.S. workers have fallen behind. There are clear reasons to expect that stagnating incomes drive patterns of working-class indebtedness. Perhaps most intuitively, stagnating working-class incomes may drive borrowing as households struggle to make ends meet, particularly in a period that is also characterized by the withdrawal of the state from the provision of social services (Harvey, 2007) and by rising asset prices. At the same time that working-class incomes stagnate, rising non-working-class incomes may further encourage working-class borrowing through emulation effects, as the working class struggles to keep up with non-working class spending (Setterfield and Kim, 2016).

There is, however, little empirical work on indebtedness and the economic conditions of the working versus non-working classes (see McCormack, 2019, for an exception). In this paper, we consider this intersection of debt and class by analyzing the distribution and burden of debt repayment for the U.S. working and non-working classes between 1989 and 2022. We take, in particular, an approach to social class that is based not on income (or wealth, geography, or educational at-

tainment), but instead on one's relationship to their workplace. While we introduce the definition in detail below, the working class consists in straightforward terms of people who work, but do not have a 'say' in how this work gets done. Put differently, working-class individuals work for a wage or salary and do not have supervisory control (Braverman, 1974; Ehrenreich and Ehrenreich, 1977) or, as Wodtke (2016) writes, lack both ownership and authority in the workplace (for recent empirical applications, see Addo and Darity, 2021; Wodtke, 2016; Davis and Konstantinidis, 2024).

By applying this definition of class to household-level data from the Survey of Consumer Finances for 1989-2022, we document the distribution of debt and the burden of its repayment by class status. We show that, while *non*-working-class households have a higher average debt-to-income ratio than working-class households, the average working-class household faces a greater financial squeeze from debt than the average non-working-class household. In fact, despite their lower debt-to-income ratios, working-class households have higher average debt-payment-to-income ratios and pay higher effective interest rates. These higher costs of serving debt reflect, in part, that working-class debt is relatively concentrated in higher-cost categories of liabilities that facilitate consumption rather than that build wealth. It also reflects, however, that working-class households face higher borrowing costs *within* some liability classes; namely, on specific types of consumer loans (vehicles and installment loans). This inter-class gap in the cost of borrowing suggests that *non*-working-class households are differentially able to utilize debt to build wealth, such that a similar increase in borrowing can widen the inter-class wealth gap. Coupled with lower working-class rates of return on the asset side of the balance sheet (Davis and Konstantinidis, 2024), these results imply a two-sided squeeze on U.S. working-class wealth accumulation from interacting with financial, housing, and debt markets.

We start from the debt-to-income ratio, a common indicator of fragility and the burden of outstanding debt. We show that debt-to-income is markedly higher in the U.S. *non*-working class and that non-working-class debt also dominates total household debt in aggregate terms. Despite this difference in levels and also notwithstanding a larger post-1989 rise within the working class, we also show that the average debt-to-income ratios evolves similarly by class status, with a period of leveraging up to the financial crisis followed by a (smaller) period of deleveraging thereafter that

is, in each case, dominated by intensive-margin changes in borrowing. This similar evolution of the debt-to-income ratio in the working- and non-working class is consistent with its uniform rise across U.S. population groups, independent of factors like income, education, age, or race (Bartscher et al., 2025).

We also show, however, that the debt-to-income ratio's uniform path masks important differences in the nature of leverage and financial fragility by class status. In this paper, we unpack differences along three dimensions. We, first, describe inter-class differences in the composition of debt: while non-working-class debt is relatively concentrated in liabilities that can build wealth (namely, real estate and education loans), working-class debt is more heavily concentrated in those that help make ends meet or that facilitate consumption (such as vehicle or other consumer loans). These inter-class differences in the composition of debt speak to contrasting interpretations of U.S. household leveraging in the previous literature, with one strand emphasizing the use of debt for asset building (Mason, 2018) and another emphasizing emulation effects and the need to make ends meet in light of stagnating incomes and rising inequality (Cynamon and Fazzari, 2008). The patterns that we document suggest that this nature of leveraging varies by class status and, as in Costantini and D'Ippoliti (2023), that a class-based disaggregation, which ties borrowing to the functions of wealth and/or the spending that this borrowing creates, offers insight into this distinction.

Second, we show that, despite their substantively lower debt-to-income ratio, working-class households with outstanding debt face higher average debt payments than their non-working-class counterparts, particularly since the early 2000s. This higher working-class debt repayment burden persists across both wealth-building and consumption-facilitating categories of debt, such that, dollar for dollar, debt tends to be relatively more costly for the working class.

Third, we link this divergence in the stock and payment burden of debt to higher working-class borrowing costs by using detailed information on the composition and terms of debt to calculate average household-level interest rates. In particular, we document higher average borrowing costs in the working class versus in the non-working class, which persist conditional on economic and demographic differences by class status and which are particularly large in the post-2008 era of low

interest rates. We furthermore show that working-class households also experience higher interest rates *within* certain liability categories – specifically, on vehicle and installment loans. Working-class households, therefore, tend to not only hold a larger share of their debt in these categories of consumer debt than non-working-class households, but also pay higher interest rates *within* these debt categories. Thus, both the terms and composition of borrowing drive borrowing-cost differentials by class status. Notably, and despite the vast attention to household debt, there is, to our knowledge, no work estimating average household-level borrowing costs – and only limited consideration of interest rate heterogeneity on specific categories of debt such as credit cards (Stango and Zinman, 2013) and vehicles (Grunewald, Lanning, Low, and Salz, 2023). Our results, therefore, contribute new evidence of heterogeneity in household-level borrowing costs and, in particular, how these costs differ by class status.

Differential borrowing rates on consumer loans, in particular, point to pricing power in credit markets that is consistent with institutional features of U.S. loan markets allowing lenders to differentially price loans to consumers with otherwise similar economic characteristics. In U.S. auto lending markets, for example, car dealers determine consumers' interest rates by adding markups to the minimum interest rates ("buy rates") set by lenders – *and* incentive contracts allow dealers to keep much of the revenue (Grunewald et al., 2023). Similar discretion extends to brokers in mortgage markets (Woodward and Hall, 2010; Robles-Garcia, 2020). The cost of borrowing differentials that we estimate in this paper suggest, specifically, that pricing discrimination in lending markets plays out, in part, across class lines. Together, these patterns suggest specific channels through which, even though indebtedness rises in the U.S. context regardless of class status, debt entails differential costs for the U.S. working class.

This paper also contributes to work applying a class-based lens to the growth of financial and debt markets (financialization). Work on financialization and class contends that financial markets' growth does not yield a benevolent expansion of access, but has instead strengthened the position of the already-privileged (non-working) class in the U.S. economy in a way that is distinct from these markets' expanding reach across the income and wealth distributions (Lapavitsas, 2013; Lin and Tomaskovic-Devey, 2013; Kohler, Guschanski, and Stockhammer, 2019; McCormack, 2019;

Davis and Konstantinidis, 2024). We build on this literature by showing channels through which deepening interactions with debt markets have widened inter-class inequality in the U.S. context.

The rest of the paper is organized as follows: In Section 2, we introduce the empirical definition of class status that we use in this paper. In Section 3, we describe the debt-to-income ratio, and its composition, by class status and in Section 4, we turn to debt payments and the cost of borrowing. Section 5 concludes.

2 Working-class and non-working-class households

In this paper, we define class status and measure liabilities, income, interest payments, and other demographic and economic variables using the 1989-2022 waves of both the full public data files and the summary extract of the Survey of Consumer Finances (SCF). The SCF is a triennial cross-sectional survey with household-level information on income, balance sheets, and credit, and individual-level information on demographic characteristics, employment relationship, and occupation. Thus, this data is well-suited both to classifying households' social class, defined based on their relationship to their workplace, and to describing the liability side of their balance sheets. We use this data to define class (Section 2), to describe the incidence, level, and composition of both household debt and households' payments on this debt (Section 3), and to construct new series describing household-level borrowing costs (Section 4.2).

In this paper, we assign working-class status to individuals who work for pay in non-managerial, non-professional occupations. Conceptually, the working class, therefore, consists of people who work for someone else (i.e. for a wage or salary) and who do so without a 'say' in how this work gets done (for empirical applications of this definition, see Wodtke, 2016; Addo and Darity, 2021; Davis and Konstantinidis, 2024). Put differently, the working class is excluded not only from ownership, but also from authority structures in the workplace (see also Braverman, 1974; Ehrenreich and Ehrenreich, 1977). In contrast, the non-working class consists either of owners and of the supervisors or managers, who *do* have a say over how the workplace is organized. These social classes are, by definition, antagonistic towards one another: given inter-class income and wealth inequality (Wodtke, 2016; Davis and Konstantinidis, 2024), members of the non-working

class, unlike workers, have an interest in "maintaining the unequal social relations from which they benefit" (Wodtke, 2016). Moreover, different roles in the workplace may confer working- or non-working-class members differential access to opportunity. For example, it could be the case that, in a society that celebrates entrepreneurship and business ownership, working-class members who do not have authority in the workplace may be precluded from access to the same terms of borrowing as those who occupy a privileged position in the workplace.

Thus, working-class individuals are, first of all, working, but their primary occupation is one in which they sell their labor power for a wage and, as such, in which they are neither self employed nor employing others. Second, working-class individuals work in non-managerial/professional occupations. In the SCF, the category of managerial/professional occupations includes, for instance, chief executives, managers, judges, and teachers, who enjoy what Wodtke (2016) describes as authority in the economic organizations in which they work (see also Braverman, 1974; Ehrenreich and Ehrenreich, 1977). In turn, non-working-class individuals are either self employed or work in managerial/professional occupations. The non-working class, therefore, includes capitalists as well as independent producers and the professional managerial class.

Our empirical application of this definition to SCF data follows Davis and Konstantinidis (2024). Specifically, we, first, identify the class status of survey respondents and, in households with a central couple, survey respondents' partners by applying the definitions above to the full public data files. Second, we aggregate to the household level and identify working-class households as those in which *either* the respondent *or* their partner is working class, and *neither* the respondent *nor* their partner is non-working class. In turn, non-working-class households are those with either a non-working-class survey respondent or partner (or both). Thus, households with, for instance, a working-class survey respondent and a partner who is a manager or executive are classified as *non*-working-class households – thereby capturing that their class status, income, and net worth are tied to the non-working-class status of one person in the central couple. The remaining households are those in which neither the respondent nor, in households with a central couple, their partner work, whether because they are retired or or otherwise out of the workforce.

In this paper, we restrict the scope of our analysis to working- and non-working-class households

with non-zero income. We trim the debt-to-income ratio and components of the debt-to-income ratio at the 99th percentiles of their non-zero observations, and restrict our sample to non-trimmed observations of all ratios (i.e. exclude observations that are outliers in any component of liabilities). Our final sample includes 220,070 observations (including implicates), 44.4% of which are working class and 55.6% of which are non-working class.

3 The debt-to-income ratio

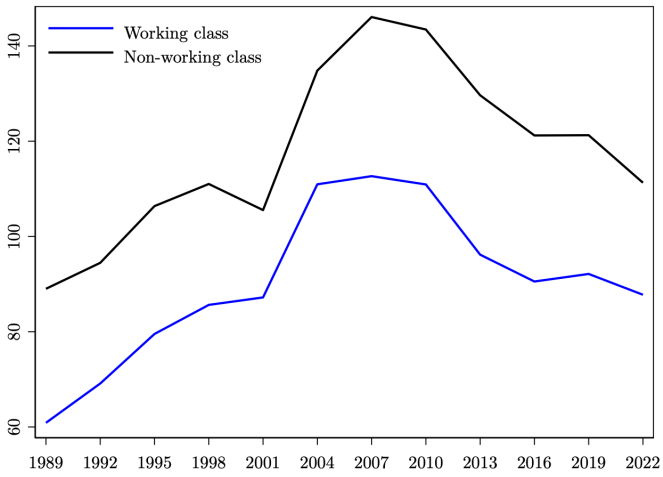
We begin in Figure 1 by showing the average debt-to-income ratio across working-class and non-working-class households between 1989 and 2022.[1] Figure 1 shows, first, that non-working-class households tend to be more indebted than working-class households, with average working-class debt equaling 90.5% of working-class income averaged over all survey waves versus 119.9% for the non-working class.[2] This pattern is perhaps unsurprising, given that non-working-class households tend to be better off (Wodtke, 2016; McCormack, 2019; Davis and Konstantinidis, 2024) and, therefore, are more likely to have favorable access to credit. This pattern, therefore, also aligns with previous evidence that household debt is concentrated in higher quantiles of the income distribution (Mason, 2018; Bartscher et al., 2025). In turn, the fact that average income is also higher in the non-working class means that, on average, non-working-class households hold substantively larger absolute stocks of debt (equal to $174,551 in the non-working class and $68,890 in the working class). The result is that, in aggregate terms as well, the non-working class dominates total household debt, holding 74.5% of aggregate debt over all waves in our primary sample.

Second, Figure 1 shows that the debt-to-income ratio rises substantively in both the working- and non-working classes between 1989 and 2022, with increases totaling 26.9 percentage points in the working class and 22.3 percentage points in the non-working class. On the one hand, these totals imply a meaningfully larger increase in working-class indebtedness: relative to their class-specific

[1] Throughout the paper, we focus on the current burden on debt and, thus, on debt that is actively in repayment. To do so, we exclude education loans that are in deferment, which do not impact current financial flows (see also Costantini and D'Ippoliti, 2023). In appendix Figure A1, we show the debt-to-income ratio inclusive of deferred education loans. While doing so increases average debt in both the working- and non-working class, particularly after 2001, overall differences by class status are largely unchanged.

[2] We report these summary statistics, as well as the others cited in this section (for income, debt, the debt-to-income ratio among households with debt, the share of households with debt, and net worth) in Appendix Table A1.

Figure 1: Debt-to-income ratio by class status



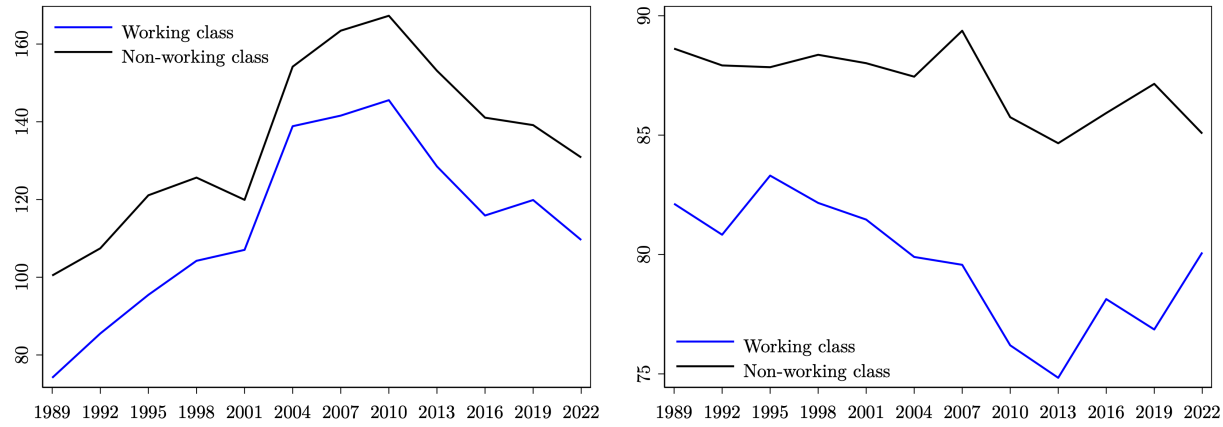
Notes: This figure shows the average debt-to-income ratio across working- and non-working-class households between 1989 and 2022 calculated using SCF sample weights. Debt includes all liabilities that are currently in repayment. See Section 2 for details on the class definitions.

average, these changes equal approximately 30% of the average working-class debt-to-income ratio versus less than 20% of the non-working-class debt-to-income ratio. On the other hand, despite this difference in magnitude, the dominant trends in Figure 1 are similar independently of class status, defined by a period of leveraging taking place through 2007 (the last survey wave before the 2008 crisis) and a period of deleveraging thereafter. In turn, Figure 1 highlights that, notwithstanding this post-2007 deleveraging, there is a marked decoupling of debt and income in the post-1989 U.S. economy that transcends class.

The evolution of the debt-to-income ratio shown in Figure 1 is also similar across class in that it is dominated by changes taking place on the intensive margin. In other words, the overall post-1989 increase in indebtedness reflects that the working- and non-working-class households that do hold debt tend to hold *more* debt relative to their incomes, as opposed to capturing substantial changes in the share of indebted households. To document this pattern, like Bartscher et al. (2025), we decompose the percentage point change in the average debt-to-income ratio between two periods into changes along its intensive and extensive margins:

$$d_{c,t} - d_{c,t-1} = \underbrace{s^{+}_{c,t}(d^{+}_{c,t} - d^{+}_{c,t-1})}_{\Delta Intensive} + \underbrace{(s^{+}_{c,t} - s^{+}_{c,t-1})d^{+}_{c,t-1}}_{\Delta Extensive} \tag{1}$$

Figure 2: Intensive and extensive margin components of debt-to-income ratios, 1989-2022



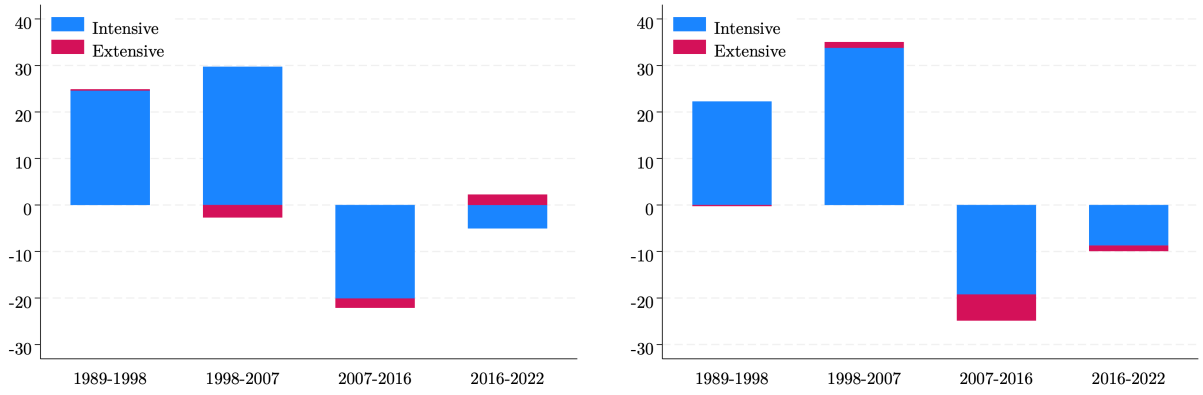
(a) **Intensive**: D/Y ratio for households with debt (b) **Extensive**: % of households with debt

Notes: This figure shows the average debt-to-income ratio among households holding debt in percent terms and the percent shares of working- and non-working-class households with any outstanding debt between 1989 and 2022 calculated using SCF sample weights. Debt includes all liabilities that are currently in repayment. See Section 2 for details on the class definitions.

where $d_{c,t}$ is the average debt-to-income ratio for social class c in year t; s^+ is the share of households with positive debt; and d^+ is the debt-to-income ratio among households with positive debt. The first term of Equation 1 describes the intensive margin, namely changes in the debt-to-income ratio among already-indebted households (weighted by the share of households with outstanding debt). The second term describes the extensive margin, defined by the counterfactual change in the average debt-to-income ratio if it only reflected changes in the share of households that hold debt.

Figure 2 shows the underlying series on which the decomposition in Equation 1 is based. Figure 2a begins with the debt-to-income ratio among households that do have debt, showing that – even while the inter-class gap in the debt-to-income ratio narrows when restricting to households with non-zero debt (particularly in the run-up to 2008) – the dominant patterns from Figure 1 hold. In turn, Figure 2b shows that, in addition to holding more debt relative to income, non-working-class households are also more likely to hold any debt whatsoever, with 87% of non-working-class households holding debt and 80% of working-class households. In fact, the share of working-class households with debt falls over most of the post-1989 period – *including* during the lead up to the

Figure 3: Changes in the debt-to-income ratio on the intensive and extensive margins, 1989-2022



(a) Working class

(b) Non-working class

Notes: This figure decomposes the change in the average debt-to-income ratio across working- and non-working-class households from 1989-1998, 1998-2007, 2007-2016, and 2016-2022 into the percentage point changes on the intensive and the extensive margins. Debt includes all liabilities that are currently in repayment. See Section 2 for details on the class definitions and Section 3 for the decomposition equation.

housing crisis, when it falls from 83.4% in 1995 to 76.1% in 2013, only rising again after 2013 to reach 80.3% in 2022. In contrast, and despite a rise during the housing bubble (in the 2007 survey), the share of non-working-class households with positive debt stays within two percentage points of its 88% average across all years.

Despite the differences in Figure 2b, the dominant driver of changes in the total debt-to-income ratio after 1989 lie at the intensive margin for both the working- and non-working class. In Figure 3, we link Figures 1 and 2 using Equation 1 for four sub-periods of the 1989-2022 period. These decompositions show that – for both social classes – the dominant driver of the debt-to-income ratio after 1989 is more intensive borrowing among existing borrowers. In the working class, for each sub-period up through 2016, the intensive margin accounts for at least 90% of the change in the debt-to-income ratio (24.7 percentage points of the 24.8 percentage point increase in 1989-1998, 29.7 of a 27.0 percentage point total increase in 1998-2007, and 20.1 of 22.1 percentage point total decline in 2007-2016). In the non-working class, the pattern is similar – with the exception a larger extensive deleveraging in 2007-2016, when the extensive margin accounts for almost one quarter of the decline in the debt-to-income ratio. Notably, while Figure 3 shows that the post-2007 extensive deleveraging is smaller in the working class, this is because – as noted above – it in fact began

earlier, as the share of working-class households with positive debt declines *into* the 2008 financial crisis.

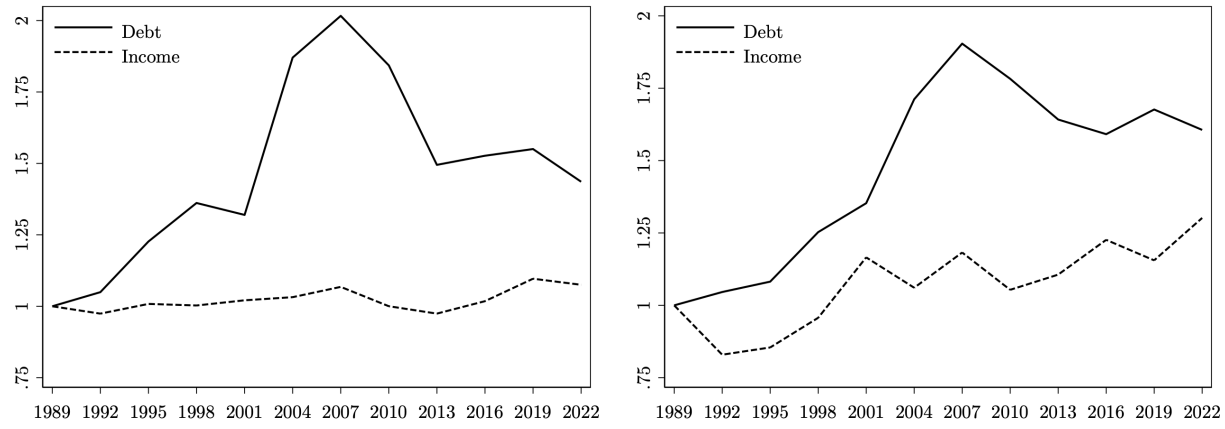
Finally, Figure 3 shows that the working-class has become *more* indebted on the extensive margin since 2016. In fact, this rise begins in 2013, such that this rise puts downward pressure on the extensive contribution in the 2007-2016 bar on this graph (with the share of working-class households with positive debt increasing from 74.8% in 2013 to 80.1% in 2022). Most notably, as shown in Figure 2b, there is a particularly large jump in the share of working-class households with debt in 2022, which drives a 2.3 percentage point positive contribution on the extensive margin to the debt-to-income ratio in the 2016-2022 sub-period in Figure 3.

3.1 Debt and income growth

Despite its similar evolution, the debt-to-income ratio has different underlying sources of pressure in the working and non-working class. To unpack the debt-to-income ratio, Figure 4 begins by comparing growth in average real debt and income by class status between 1989 and 2022, with both debt and income indexed to their 1989 values. Figure 4a shows, on the one hand, that a 43% rise in average working-class debt between 1989 and 2022 is coupled with stagnant working-class income (for more detailed evidence on working-class income stagnation, see Wodtke, 2016; Davis and Konstantinidis, 2024). Average working-class debt, furthermore, rises particularly rapidly in the 2000s (despite a falling share of indebted working-class households), followed by a deleveraging in 2010 and 2013 that is more substantive than in the non-working class. Since 2013, working-class debt is relatively steady at 50% above its 1989 level. This combination of rising debt and stagnating incomes fits with analyses of the U.S. household sector emphasizing links between income stagnation and borrowing (e.g. Cynamon and Fazzari, 2016). On the other hand, the non-working class debt-to-income ratio rises despite a 30.1% increase in real average non-working class income between 1989 and 2022. Accordingly, non-working-class debt has risen more quickly than working-class debt (reaching 161% of its already higher 1989 level in 2022, versus 143% in the working class), although – unlike in the working class – the burden of this debt is, in part, offset by rising income.

Thus, working-class households have borrowed increasingly intensively against stagnant in-

Figure 4: Debt and income growth by class status, relative to 1989



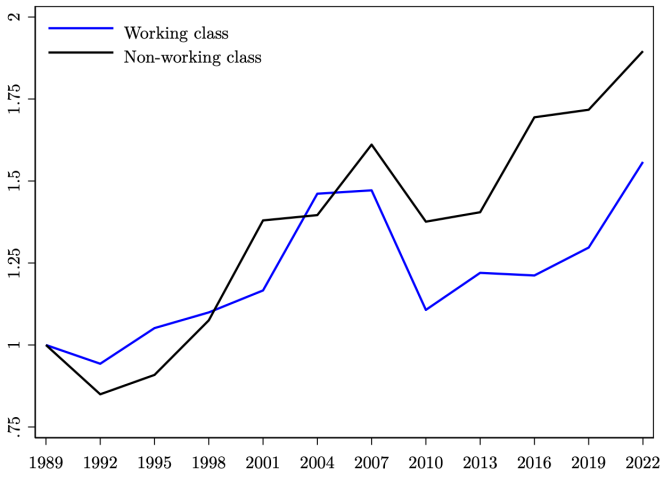
(a) Working class

(b) Non-working class

Notes: This figure shows growth in average working- and non-working-class debt and total income indexed relative to their 1989 levels (= 1) between 1989 and 2022, in constant 2022 dollars and calculated using SCF sample weights. Debt includes all liabilities that are currently in repayment. Income is total income. See Section 2 for details on the class definitions.

comes, whereas non-working-class households' borrowing rises with rising income. In fact, non-working-class wealth growth has also outpaced that of the working class. Figure 5 turns to average net worth by class status, also indexed to its 1989 levels and in 2022 dollars. Figure 5 shows that, while working- and non-working-class wealth move in tandem through 2007, average non-working-class wealth outpaces working-class wealth after the 2008 crisis (i.e. starting in the 2010 survey). By 2022, non-working class wealth rises almost 90% above its 1989 level versus 55.6% for the working class. This differential growth is on top of large level differences in wealth between the working- and non-working class (see Table A1), such that – in dollar terms – non-working class wealth increases far more than working-class wealth. Thus, as the non-working class has become more indebted, its financial situation has also improved: income, wealth, and (given both rising debt and rising wealth) asset values have all grown. These patterns suggest that the non-working class has made use of debt to generate wealth, and that it has done so to a differential extent from the working class.

Figure 5: Net worth growth by class status, relative to 1989



Notes: This figure growth in average working- and non-working-class net worth indexed relative to their 1989 levels (= 1) between 1989 and 2022, in constant 2022 dollars and calculated using SCF sample weights. See Section 2 for details on the data, trimming, and class definitions.

3.2 The composition of debt

In Table 1, we turn to the composition of debt, distinguishing liabilities that households may use to build wealth from those that more directly facilitate consumption. To do so, we divide debt into nine exhaustive categories: mortgages on primary residences, other debt secured by primary residences, debt secured by other residential properties, vehicle loans, credit card balances, educational loans, other lines of credit, other installment loans, and other miscellaneous debt. The first three of these categories of debt describe real estate loans. For households that own their primary residence, we distinguish, first, their mortgage debt on this house from, second, home equity lines of credit (HELOCs). Third, we identify debt secured by other residential property, including second (vacation) homes and investment properties. Non-real estate debt includes, first, education loans, including consumer loans for educational purposes, that are in the active repayment period. Vehicle loans record total outstanding debt on all types of vehicles. Credit card debt reflects the outstanding balance since the last account statement, after the last payment and before new purchases made.[3] In turn, other lines of credit include any that are not secured by the primary

[3]Thus, households that make a payment equal to the last statement's balance have credit card debt of zero, such that outstanding credit card debt reflects a mode of borrowing rather than the use of credit cards to facilitate payments or smooth consumption. We note that the annual frequency of the SCF data is perhaps least well-suited to

residence. Other installment loans capture consumer loans that are paid on an installment basis, including those for consumer durables or for medical bills, Buy Now Pay Later (BNPL) loans, and payday loans.[4] Other debt includes items such as loans against pensions or against life insurance and margin loans.

Table 1 disaggregates the total debt-to-income ratio into these nine categories by class status. We show each debt component's within-class mean averaged over all survey waves; the total percentage point change in this mean between 1989 and 2022; and, following the discussion above, the intensive and extensive contributions to this percentage point change. The top panel shows total debt, as also reported in Figure 1. In turn, the second panel begins by disaggregating total debt into mortgage debt on primary residences and all other debt, while the third panel disaggregates all debt that is not mortgages on primary residences into its subcomponents. Thus, the total mean and percentage point changes in the bottom panel equal those for "all other debt" in the middle panel of the table.

These calculations show, first, that – regardless of class status – mortgages on primary residences are the biggest component of household debt, equal to 64.7% of working-class income and 86.1% of non-working-class income (such that they constitute 71.7% and 73.5% of total working- and non-working-class debt). The total increase in mortgage debt on primary residences relative to income is also very similar in magnitude by class status and, in each case, is driven by a virtually identical intensive-margin change in both the working and non-working class (of 30.7 percentage points). This overall intensive-margin rise in mortgage debt, furthermore, holds despite post-housing-crisis deleveraging on the extensive margin (which we show in the appendix). As with the similar evolution of the total debt-to-income ratio, the dominance of housing debt also mirrors the aggregate drivers of debt in the broader household sector (Bartscher et al., 2025).

Despite similarities in mortgage debt on primary residences, there are notable inter-class differences in the composition of non-mortgage debt and its evolution over time. Even though these

measuring revolving debt like credit cards. As we return to below, the SCF does not have fine-grained information about interest rates or payments on credit cards.

[4]BNPL loans are a credit instrument provided by companies such as PayPal Credit, Affirm, and Klarna, which allow consumers to pay the balance of (even small) consumer purchases – ranging from takeout food orders and everyday consumer items to furniture purchases – over a series of future payments, rather than at time of purchase. These are captured as a separate category in the SCF since 2022.

Table 1: Composition of debt, average level relative to income and total change (1989-2022)

	Working class				Non-working class			
	Mean	pp Δ	Inten.	Exten.	Mean	pp Δ	Inten.	Exten.
Total debt	90.29	26.88	28.39	-1.51	117.85	22.26	25.84	-3.57
Mortgages on primary residence	64.73	25.14	30.70	-5.56	86.05	26.45	30.65	-4.20
All other debt	25.56	1.74	2.44	-0.70	31.80	-4.19	-2.36	-1.83
Total	90.29	26.88			117.85	22.26		
HELOCs	1.49	-0.61	-0.51	-0.10	2.62	-0.63	-0.34	-0.29
Debt on other real estate	2.98	0.77	0.74	0.03	7.23	0.68	2.14	-1.45
Other installment loans	2.91	-0.02	0.17	-0.19	2.69	-5.26	-3.49	-1.77
Education loans	2.77	-0.65	0.56	-1.21	4.91	1.96	1.75	0.21
Vehicles	9.75	0.97	1.95	-0.99	8.11	-1.03	-0.28	-0.75
Credit card balance	4.20	0.94	0.78	0.17	4.19	1.00	0.93	0.07
Other lines of credit	0.27	-0.14	0.03	-0.17	0.53	-0.21	0.27	-0.48
Other debt	1.20	0.49	0.21	0.27	1.52	-0.70	0.06	-0.76
Total	25.56	1.74			31.80	-4.19		

Notes: This table describes the mean composition of debt as a percent of income for working- and non-working-class households, averaged over all survey waves, the percentage point change in each category of debt as a percentage of income between 1989 and 2022, and the decomposition of the percentage point change into its intensive and extensive components, following Equation 1. See Section 2 for details on the class definitions and Section 3 for the decomposition equation.

components of debt are smaller in magnitude – and, therefore, less important on the aggregate scale – the squeeze they place on working-class households matters for household payment burden: for example, a payday loan may squeeze current household finances more than a mortgage loan amortized over 30 years. The middle panel of Table 1 shows that, when turning to debt that is *not* mortgages on primary residences, working-class debt has risen 1.7 percentage points, whereas non-working class debt has declined 4.2 percentage points due to declines on both the intensive and extensive margins. Among working-class borrowers who *do* hold non-mortgage debt (i.e. on the intensive margin), this rise in non-mortgage debt is larger, equal to 2.4 percentage points – i.e. almost 10% of the average level of non-mortgage debt in the working class.

Table 1 also shows that non-working class debt is more concentrated in liabilities that can build wealth than working-class debt – namely, in real estate debt (whether on primary residences or on other residential property) and education loans. Non-working class households have a wealth-building debt-to-income ratio of 98.2%, versus 70.5% for the working class. Mortgage debt contributes towards wealth-building, even while it also facilitates the consumption of owner-occupied

housing services. In fact, exclusion from such forms of wealth-building (e.g. via red-lining and racial covenants prohibiting owners from selling to prospective black buyers) represent a well-established aspect of wealth inequality (Rothstein, 2017). Education loans, similarly, may generate future income flows. Table 1 shows, first, that the average stock of non-working-class debt on other real estate relative to income between 1989 and 2022 is 7.2%, versus 3.0% for the working class. Within the non-working class, there is also a notable increase in this ratio taking place on the intensive margin (despite an extensive margin decline). Second, the non-working class has an average education loan to income ratio of 4.9%, versus 2.8% in the working class. Unlike the non-working class, the working class has also come to hold moderately less in education loans as a percent of income after 1989, due to a falling share of working-class households with active education loans. This extensive-margin movement out of education loans is not mirrored in the non-working class. As emphasized in Mason (2018), these categories of debt build wealth, rather than smooth consumption; see also (Costantini and D'Ippoliti, 2023). Consistent with this emphasis on asset building, Davis and Konstantinidis (2024) show that non-working-class households also earn higher (conditional) rates of return on these assets than working-class households.

Consider, finally, liabilities that facilitate consumption and/or help make ends meet – namely, HELOCs, vehicle loans, other (non-vehicle) installment loans, credit cards, other lines of credit, and other debt. While Table 1 shows that, relative to income, working- and non-working-class households hold similar stocks of these categories of debt (equal to 19.8% and 19.7% of income for the working and non-working class, respectively), these average levels mask differences in their evolution by class status. Vehicle loans, for example, are 9.8% of working-class income and 8.1% of non-working-class income. However, working-class households accumulate relatively larger stocks of vehicle debt between 1989 and 2022 – in particular, on the intensive margin, such that working-class households that hold vehicle debt tend to face a rising burden from this debt. At the same time, non-working-class households deleverage in this category of consumer loans (due to both small intensive and small extensive changes). In fact, Table 1 shows that, with the exception of credit cards, the non-working class's stocks of each category of consumption-facilitating liabilities declines after 1989 (while all three categories of wealth-building liability rise).

Similarly, Table 1 shows that, despite an otherwise similar stock of other installment loans by class status (equal to an average of 2.9% of working-class income and 2.7% of non-working-class income), non-working-class households have deleveraged from this (as we show below) costly category of debt on both the intensive and the extensive margin. These declines – especially on the intensive margin – within the non-working class are large relative to the stock of this type of debt, with the total change being almost double that of the average level between 1989 and 2022. Thus, together, the calculations in Table 1 suggest differences in the intensivity with which working- and non-working-class households use debt to build assets on the one hand, and to facilitate consumption on the other.

4 The payment burden of debt: payment flows and interest rates

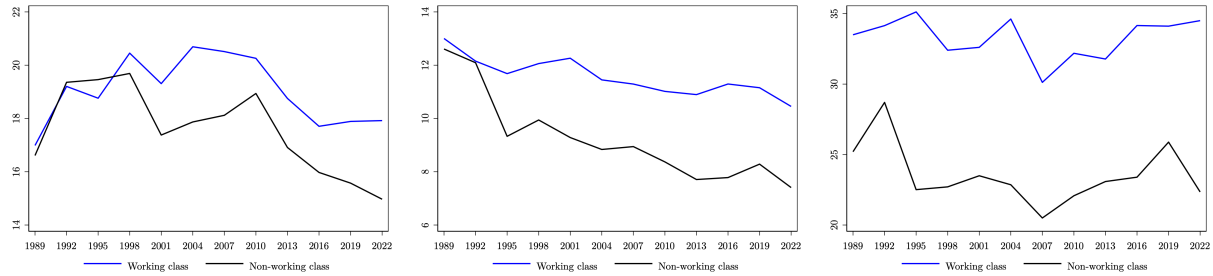
4.1 The burden of debt repayment

Finally, we turn to the burden of debt. We begin with debt payments and show that, despite a lower stock of overall debt, working-class households face a greater squeeze from debt than non-working-class households. To do so, we follow the discussion above by grouping debt into two categories: debt that can contribute towards wealth building and debt that facilitates consumption. The first category includes mortgage payments for the household's primary residence[5]; payments for other loans used to purchase the primary residence; mortgage payments for investment or vacation properties; payments towards home-improvement loans; and student debt payments. The second category includes all remaining reported payments, including payments towards lines of credit, either secured by the primary residence or not; payments on up to six vehicle loans (and two mop-up vehicle categories); payments on up to seven consumer loans; payments on loans against the value of life insurance policies; and –since 1998 – payments on up to six loans against the value of pension plans.[6]

[5]Households generally report their mortgage payments inclusive of taxes and escrow. While these components are not strictly debt payments, they can be considered necessary payments to maintain these forms of wealth. [We are currently working on using information in the SCF on terms of loans to distinguish required mortgage payments from total payments inclusive of taxes and escrow].

[6]We restrict the discussion in this section to categories of loans with reported payments. The SCF does not provide information on payments on credit cards, BNPL loans (which were introduced into the SCF in 2022), margin

Figure 6: Payments to Income Ratio



(a) Wealth-building payments

(b) Consumption-facilitating payments

(c) Consumption-facilitating payments + rent + vehicle lease payments

Notes: This figure shows the average payment-to-income ratios for working- and non-working-class households between 1989 and 2022, calculated using SCF sample weights. Wealth-building payments include payments made towards mortgages on any property, other loans to purchase the primary property, home improvement loans, and education loans. Consumption-facilitating debt payments include payments towards all lines of credit, vehicle loans, consumer loans, loans against value of life insurance, and loans against the value of pension plans. All payments are calculated on an annual basis. Sample restricted to households with non-zero payments for each category. See Section 2 for details on the class definitions, and Section 4.1 for details on categories of payments.

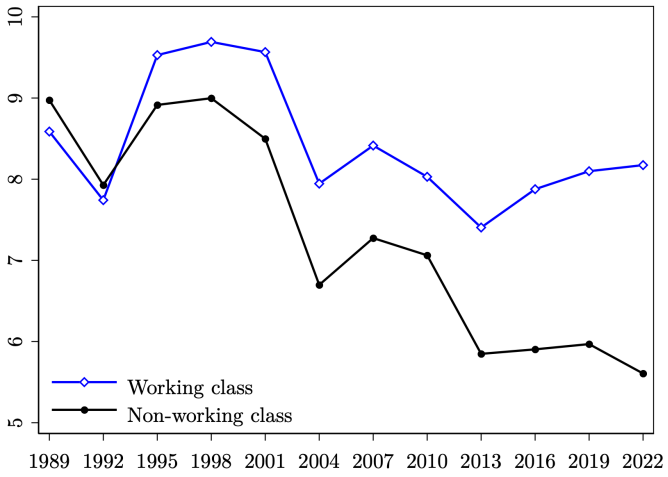
Using this categorization, Figure 6 presents payments for working- and non-working-class households that carry debt. Figure 6a begins by showing differences in payments towards wealth-building debt by social class over time. Working-class households that have debt tend to pay 19.1% of their income towards debt payments that build wealth, compared to 17.4% for non-working-class households. Since 2001, in particular, there seems to be a wedge in payments, with working-class households payments exceeding those of the non-working class.

In turn, Figure 6b presents debt payments for loans that facilitate consumption. Again, despite holding similar quantities of consumption-facilitating debt relative to income, working-class households face a greater squeeze since 1995. Overall, working-class households pay 11.6% of their income towards debt payments for debt that facilitates consumption, as opposed to 9.0% for non-working-class households which carry such types of debt.

Finally, in Figure 6c we consider the financial squeeze from not only debt payments, but also

loans, loans against pensions before 1998, or for certain other land contracts for other real estate. For each of these categories, the SCF Summary Extract imputes payments by assuming that all households pay the same share of their loan balance each month: for credit cards, for example, the Summary Extract assumes monthly payments equal to 2.5% of the outstanding card balance. For BNPL loans, the Summary Extract assumes monthly payments of 33% of the outstanding balance. By excluding these categories of debt, which as a group held more intensively by the working class, from our payments figures in this section, we are likely underestimating the payments gap between classes.

Figure 7: Average interest rate by class status



Notes: This figure shows the average interest rate in percent terms across working- and non-working-class households between 1989 and 2022 calculated using SCF sample weights. Sample restricted to households with non-zero debt. See Section 2 for details on the class definitions and Section 4.2 for details on interest rate calculations.

rent and vehicle lease payments, each of which facilitate the consumption of housing services or transportation, respectively, in the same way that debt can, but which do not build wealth. When we add rent and vehicle lease payments to consumption-facilitating debt payments, we show that working-class household payments *far* exceed those of non-working-class households. Working-class households pay, on average, 33.3% of their income to repay debt that facilitates consumption, pay rent or lease vehicles; non-working-class households, on the other hand, pay 23.4% of their income towards such uses.

Note that these measures of squeeze likely underestimate the differential squeeze on working-class households. Working-class households carry greater credit card balances as a share of their income compared to non-working-class households. However, we know that credit card terms vary across issuers, so households are likely to face different terms. The same may be true for BNPL loans, another category which has only been included in the SCF since 2022 and one which - based on loan balances – seems to burden disproportionately working-class households.

4.2 The cost of borrowing

We begin with the overall cost of borrowing, defined by the average interest rate on the nine categories of liabilities that collectively comprise households' total debt burden. To calculate this average effective interest rate, we make use of detailed information in the full public data files of the SCF on individual loans and the interest rates on these loans. Thus, the overall cost of borrowing is the weighted average interest rate (weighted by the balance of each loan) of each of the nine categories of debt introduced above.[7] Since each category of debt can consist of multiple loans, these overall borrowing costs reflect up to fifty-seven categories of loans. We provide details on each component interest rate and the number of lines of credit on which that interest rate is calculated in the appendix.[8]

In Figure 7 we show the average overall cost of borrowing by class status between 1989 and 2022. This figure shows that, since 1992, working-class households have payed consistently higher interest rates on their debt. As we report in Table 2, the average across all survey waves is 1.4 percentage points, with the average working-class household facing average annual borrowing costs of 8.5% versus 7.1% for non-working class. Furthermore, the inter-class gap in borrowing costs widens over time. In particular, while average borrowing rates of the non-working class fall in the low interest rate environment after 2010, working-class borrowing rates in fact remain relatively steady. The wedge, therefore, widens over time, reaching 2.6 percentage points in 2022.

Table 2 also reports the average cost of borrowing by class status on each of the nine categories of debt discussed above. These calculations show that – with the exception of credit cards, for which working-class households pay slightly lower interest rates than non-working class households (12.7% vs 12.9%) – working-class households face higher unconditional costs of borrowing on all categories of debt. Thus, the average cost of borrowing differential does not simply indicate a compositional effect, wherein working-class households tend to hold larger stocks of more expensive

[7] The analysis in this section is restricted to households with non-zero debt.

[8] More specifically, we calculate the overall cost of borrowing borrowing on the basis of up to fifty-two loans for which interest rates are directly reported and up to five additional categories of mop-up loans (on HELOCs, educational loans, car loans, lines of credit, and other vehicle loans) which report a balance but not an interest rate, and to which we assign the average interest rate across the remaining loans in that respective category of debt. These mop-up adjustments apply to a small number of households (1.6%) and, as such, do not affect the estimated cost of borrowing (the difference is in the hundredth of a percent).

Table 2: Unconditional means of interest rates, different categories of debt

Variable	(1) Working class	(2) Non-working class	(3) Difference
Overall cost of borrowing (%)	8.46	7.10	1.36***
	(7.74)	(5.96)	(0.03)
Interest rate, mortgages (%)	6.84	6.03	0.81***
	(2.73)	(2.40)	(0.02)
Interest rate, HELOCs (%)	7.35	6.40	0.96***
	(3.31)	(2.88)	(0.06)
Interest rate, other residential debt (%)	7.59	6.63	0.96***
	(3.30)	(2.99)	(0.05)
Interest rate, credit cards (%)	12.74	12.89	-0.15***
	(7.88)	(7.32)	(0.05)
Interest rate, educational loans (%)	6.52	6.02	0.50***
	(3.68)	(3.18)	(0.05)
Interest rate, vehicles (%)	8.79	7.01	1.78***
	(5.54)	(4.63)	(0.04)
Interest rate, other installment loans (%)	9.72	8.17	1.55***
	(17.85)	(14.85)	(0.21)
Interest rate, other lines of credit (%)	13.20	10.40	2.80***
	(18.11)	(5.86)	(0.31)
Interest rate, borrowing against life insurance (%)	5.78	5.35	0.44***
	(3.16)	(2.40)	(0.08)
Observations	58,755	118,429	177,184

Notes: The table shows interest rates in percent terms across working- and non-working-class households between 1989 and 2022 calculated using SCF sample weights. Sample restricted to households with non-zero debt. Overall cost of borrowing calculated as the weighted average of the different categories of debt. *, **, and *** indicate significance at the 10, 5, and 1 percent levels, respectively.

categories of borrowing. Interest rates on mortgages are 0.81 percentage points higher for working-class households than in the non-working class. The same is true for home equity lines of credit secured by the primary residence (0.96 percentage points higher) and for other residential debt (0.96 percentage points higher). Working-class households also pay higher average rates on educational loans (6.52% versus 6.02% for the non-working class), vehicle loans (8.79% versus 7.01% for the non-working class), and other installment loans (9.72% versus 8.17% for the non-working class). Borrowing through other lines of credit is also more expensive for working-class households (13.20% versus 10.40% for non-working class households), as is borrowing against the value of life insurance (5.78% versus 5.35% for non-working-class households).[9]

4.3 Conditional borrowing costs

Thus, working-class households face higher unconditional borrowing costs than non-working-class households, even for the same types of debt. While this gap in borrowing costs is large, working- and non-working-class households differ along a series of important demographic and economic dimensions that may contribute to their cost of borrowing (Wodtke, 2016; McCormack, 2019; Addo and Darity, 2021; Davis and Konstantinidis, 2024). In Table 3, we therefore ask whether other demographic or economic characteristics that are correlated with class absorb the inter-class difference in borrowing costs. To do so, we regress the interest rate on class status while controlling for a progressively wider set of covariates describing age, race and ethnicity, education, income, and access to credit markets. In these regressions, the independent variable of interest is a binary variable equal to one if a household is working class, and the dependent variable is the interest rate. Thus, the coefficient on working-class status in an unconditional regression equals the unconditional average interest rate differentials above.

We show results in Table 3, which begins with the overall cost of borrowing.[10] Column 1 begins by showing that, conditional on year fixed effects, working-class households face a 1.17 percentage point higher overall cost of borrowing compared to non-working class households. Columns 2-4 add demographic controls for age, race and ethnicity, and education. These columns show that

[9] As we lay out in the appendix, the only interest rate that we have on 'other' debt is that on life insurance loans.
[10] Detailed results can be found in Table A2.

Table 3: Overall cost of borrowing, full results

	(1)	(2)	(3)	(4)	(5)	(6)
WC household	1.172***	1.137***	1.008***	0.578***	0.208***	0.194***
	(0.039)	(0.039)	(0.039)	(0.043)	(0.044)	(0.044)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Age	No	Yes	Yes	Yes	Yes	Yes
Race/Ethnicity	No	No	Yes	Yes	Yes	Yes
Education	No	No	No	Yes	Yes	Yes
Income	No	No	No	No	Yes	Yes
Fin. Situation	No	No	No	No	No	Yes
N	174,246	174,246	174,246	174,246	174,246	174,246
R-squared	0.03	0.03	0.04	0.04	0.05	0.06

Notes: This table regresses the overall cost of borrowing on working-class (WC) status. FE denotes fixed effects. Age, race, and education describe the survey respondent. The education controls describe if the respondent has less than a bachelor's, a bachelor's, or a graduate degree. Income is the natural logarithm of income. The financial situation controls include (a) whether the respondent has feared being denied credit in the past five years, (b) whether they have been denied credit in the past five years, and (c) whether they have a brokerage account. Robust standard errors are in parentheses. *, **, and *** indicate significance at the 10, 5, and 1 percent levels, respectively.

controlling for age (Column 2) reduces the inter-class differential in borrowing costs to 1.14 percentage points, and that controlling for race and ethnicity (Column 3) reduces the difference to 1.01 percentage points.[11] Controlling for education (Column 4) further reduces the interest rate differential to 0.58 percentage points. In turn, Columns 5-6 introduce economic controls. In Column 5 we show that controlling for the natural logarithm of income substantially decreases the interest rate differential to 0.21 percentage points. Thus, as one would expect, higher income households pay lower interest rates, conditional on the other variables included in this column. Controlling for whether a household fears being denied credit, has actually been denied credit in the past, or has a brokerage account (in Column 6) – all characteristics that are associated with households' access to credit markets – is associated with a slightly reduced interest rate differential (0.19 percentage points).[12] Thus, even conditional on economic and demographic characteristics that differ by class status, there is an interest rate differential between the working- and the non-working class.

[11] Notably, Black and Hispanic status are associated with a persistent higher cost of borrowing.

[12] Note that we do not control for wealth: income and wealth capture the *current* financial situation of a household, while the current cost of borrowing may reflect outcomes from earlier periods. In other words, we do not know the level of income or the level of wealth of the household when they got a loan with a certain interest rate. We contend this is a smaller problem in the case of income, since with some exceptions (e.g. rental property, education loans, perhaps vehicle loans for rideshare drivers), it is not immediately obvious how loans generate income flows. However, say, borrowing money to buy a house may increase a household's overall cost of borrowing but also builds wealth, raising questions of endogeneity.

Table 4: Component interest rates

	(1) Mortgages	(2) HELOC	(3) Resdbt	(4) Cc	(5) Veh	(6) Ed	(7) Oth_inst	(8) Oth_loc	(9) Lifeins
WC household	0.022	0.331***	0.017	-0.178***	0.277***	-0.022	0.479**	1.285***	0.366***
	(0.016)	(0.065)	(0.076)	(0.068)	(0.044)	(0.058)	(0.242)	(0.462)	(0.129)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Race	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fin. Situation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	106,968	14,302	22,548	79,491	76,016	23,653	25,496	6,440	4,707
R-squared	0.60	0.51	0.39	0.03	0.23	0.11	0.01	0.08	0.05

Notes: This table regresses the cost of borrowing on possible demographic and socio-economic correlates. Age, race, and education describe the survey respondent. The education controls describe if the respondent has less than a bachelor's, a bachelor's, or a graduate degree. Income is the natural log of adjusted income. The financial situation controls include (a) whether the respondent has feared being denied credit in the past five years, (b) whether they have been denied credit in the past five years, and (c) whether they have a brokerage account. Robust standard errors in parentheses. Each column also includes year fixed effects. *, **, and *** indicate significance at the 0.1, 0.05, and 0.01 percent levels, respectively.

4.4 Components

Finally, we consider differences in the cost of borrowing for different categories of assets between working- and non-working class households in Table 4.[13] We focus on the specification in Column 6 of Table 3, which includes controls for race and ethnicity, education, age, the natural logarithm of income, and characteristics associated with access to credit markets.[14]

Table 4 shows is that – with the exception of credit card rates – working-class households also face similar or higher conditional costs of borrowing than their non-working-class counterparts on specific categories of debt. Column 1 shows that interest rates on mortgages are very similar for working- and non-working class households, when controlling for other characteristics that may affect interest rates such as race or income. Working class households pay an interest rate that is higher by 0.02 percentage points, but this difference is not statistically different from zero. [15] Column 2 shows that interest rates on home equity lines of credit secured by the primary residence are conditionally higher for working class households, which pay interest rates that are 0.33 percentage points higher than their non-working-class counterparts for home-equity lines of credit. Column 3 shows that conditional interest rates on other residential property are very similar for working- and non-working class households. Column 4 shows that credit card rates are conditionally 0.18 percentage points lower for working-class households than for non-working-class households: it should be however noted that credit cards are one of the most expensive forms of borrowing. On the contrary, Column 5 shows that working-class households pay substantially higher interest rates on vehicle loans (0.28 percentage points) when controlling for other covariates that may affect access to funding. Column 6 shows that interest rates on education loans are very similar across working- and non-working-class households. Column 7 shows that interest rates on other installment loans are conditionally 0.48 percentage points higher than those for non-working class households. Similarly, Column 8 shows that interest rates on lines of credit not secured by the household's primary residence are 1.29 percentage points higher for working-class households. Finally, Column 9 indicates that interest rates on loans against life insurance accounts

[13] Detailed results can be found in Table A3.

[14] Arguably there are other cases where the decision to take a loan would affect the control variables. The clearest case is education. [We will come back to this issue with more detailed calculations in the next draft].

[15] This result is robust to controlling for the purchase price of the house.

are 0.37 percentage points higher for working-class households than for their non-working-class counterparts.

5 Conclusion

In this paper, we analyze the distribution and burden of debt for the U.S. working and non-working classes between 1989 and 2022. Using a definition of social class centered around occupation and employment relationship, we show that, despite increases in working-class debt, non-working-class households still have a higher debt-to-income ratio and dominate aggregate debt. Still, the debt-to-income ratio is an insufficient measure of squeeze. Non-working-class debt tends to be more concentrated in liabilities that build wealth (such as real estate debt) rather than in liabilities that facilitate consumption (such as vehicle debt, credit card debt, or other installment loans). Moreover, working-class households face higher average required debt payment as a share of their income. By estimating household-level interest rates, we show that working-class households face higher average borrowing costs both overall as well as within certain categories of liabilities – namely when borrowing to purchase vehicles and when borrowing for other types of installment loans.

The findings of this paper highlight that class may provide another mechanism that elucidates stratification in contemporary capitalism. Faced with stagnant incomes and a rising cost of living, working-class households turn to debt as a mechanism of making ends meet – while their non-working-class counterparts may instead use debt as a mechanism of building wealth. Furthermore, when social norms idolize business entrepreneurship and authority in the workplace, lender discretion over interest rates may operate against working-class households while offering otherwise similar non-working-class households favorable terms of access to credit. As such, the findings of the paper call for more attention to the policies and institutions that govern access to credit in the United States and in other capitalist countries.

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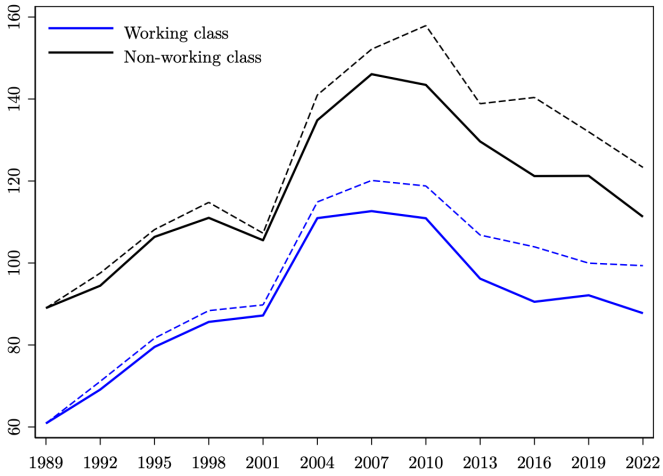
A Appendix

A.1 Extra figures and tables

Figure A1: The debt-to-income ratio with and without deferred education loans



Notes: The figure compares the average debt-to-income ratios across working- and non-working-class households exclusive of deferred education loans (the solid lines) and inclusive of these loans (the dotted lines) between 1989 and 2022 calculated using SCF sample weights. See Section 2 for details on the class definitions.

Table A1: Total debt and its incidence by class status

Variable	(1) Full sample	(2) Working class	(3) Non-working class	(4) Difference
Debt-to-income ratio (%)	106.87	90.53	119.90	-29.37***
	(133.26)	(127.77)	(136.09)	(0.57)
Total debt (thousands, 2022 dollars)	127.65	68.89	174.51	-105.62***
	(284.30)	(115.81)	(360.07)	(1.20)
Income (thousands, 2022 dollars)	132.47	70.51	181.88	-111.37***
	(518.05)	(88.73)	(686.04)	(2.21)
Debt-to-income ratio (non-zero debt) (%)	127.66	113.72	137.84	-24.12***
	(136.23)	(133.68)	(137.18)	(0.66)
Share of households with debt (%)	0.84	0.80	0.87	-0.07***
	(0.37)	(0.40)	(0.34)	(0.00)
Net worth (thousands, 2022 dollars)	716.77	185.70	1,140.35	-954.65***
	(5,177.08)	(828.17)	(6,872.29)	(22.12)
Observations	220,070	74,114	145,956	220,070

Notes: The table shows across-household means for working- and non-working class households with non-zero income for 1989 to 2022 and calculated using SCF sample weights. Debt includes all liabilities that are currently in repayment. Income is total income. Dollar values are in thousands of 2022 dollars and all other variables are in percent terms. *, **, and *** indicate significance at the 10, 5, and 1 percent levels, respectively. See Section 2 for details on the class definitions.

A.2 Detailed tables

Table A2: Overall cost of borrowing, full results

	(1)	(2)	(3)	(4)	(5)	(6)
WC household	1.172***	1.137***	1.008***	0.578***	0.208***	0.194***
	(0.039)	(0.039)	(0.039)	(0.043)	(0.044)	(0.044)
Age		-0.019***	-0.016***	-0.015***	-0.006***	0.000
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Black			1.100***	1.018***	0.719***	0.512***
			(0.060)	(0.060)	(0.061)	(0.062)
Hispanic			1.035***	0.865***	0.656***	0.559***
			(0.078)	(0.078)	(0.078)	(0.077)
Other race			0.958***	0.777**	0.209	0.130
			(0.352)	(0.353)	(0.351)	(0.348)
Bachelor's degree				-0.992***	-0.659***	-0.536***
				(0.039)	(0.037)	(0.038)
Graduate degree				-0.374***	-0.089**	-0.095***
				(0.035)	(0.035)	(0.035)
Total income (ln)					-0.972***	-0.845***
					(0.024)	(0.025)
Fear denied credit						0.936***
						(0.067)
Denied credit						0.611***
						(0.050)
Brokerage account						-0.302***
						(0.032)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	174,246	174,246	174,246	174,246	174,246	174,246
R-squared	0.03	0.03	0.04	0.04	0.05	0.06

Notes: This table regresses the overall cost of borrowing on working-class (WC) status. FE denotes fixed effects. Age, race, and education describe the survey respondent. The education controls describe if the respondent has less than a bachelor's, a bachelor's, or a graduate degree. Income is the natural logarithm of income. The financial situation controls include (a) whether the respondent has feared being denied credit in the past five years, (b) whether they have been denied credit in the past five years, and (c) whether they have a brokerage account. Robust standard errors are in parentheses. *, **, and *** indicate significance at the 10, 5, and 1 percent levels, respectively.

A.3 The effective interest rate

The following itemized list introduces the nine categories of debt that we use to calculate borrowing rates:

1. First, we consider the interest rate on the mortgages paid by households that own their

Table A3: Component interest rates

	(1) Mortgages	(2) HELOC	(3) Resdbt	(4) Cc	(5) Veh	(6) Ed	(7) Oth_inst	(8) Oth_loc	(9) Lifeins
WC household	0.022	0.331***	0.017	-0.178***	0.277***	-0.022	0.479**	1.285***	0.366***
	(0.016)	(0.065)	(0.076)	(0.068)	(0.044)	(0.058)	(0.242)	(0.462)	(0.129)
Black	0.292***	0.885***	0.494***	-0.302***	1.059***	0.263***	1.610***	0.644	0.454
	(0.030)	(0.150)	(0.135)	(0.093)	(0.067)	(0.071)	(0.336)	(0.500)	(0.439)
Hispanic	0.162***	0.014	0.039	-0.056	0.469***	-0.260***	0.204	-0.442	0.299
	(0.025)	(0.138)	(0.127)	(0.105)	(0.081)	(0.089)	(0.371)	(0.608)	(0.379)
Other race	-0.880***	1.184***	2.996***	-5.614***	1.697***	0.518	-0.334	2.327	-5.773***
	(0.189)	(0.177)	(0.123)	(0.966)	(0.551)	(0.439)	(0.687)	(1.516)	(0.454)
Bachelor's degree	-0.232***	-0.121**	-0.540***	0.021	-0.751***	-0.181***	-1.835***	-1.068***	-0.132
	(0.014)	(0.054)	(0.065)	(0.076)	(0.043)	(0.055)	(0.203)	(0.266)	(0.126)
Graduate degree	-0.075***	-0.081	-0.089*	-0.500***	-0.090	-0.274***	-0.160	-0.186	0.323**
	(0.014)	(0.052)	(0.051)	(0.102)	(0.056)	(0.054)	(0.229)	(0.288)	(0.151)
Age	0.004***	-0.014***	-0.006***	0.017***	-0.004***	0.018***	0.012*	-0.042***	0.016***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.007)	(0.011)	(0.005)
Total income (ln)	-0.255***	-0.132***	-0.230***	0.020	-0.782***	-0.262***	-0.505***	-0.559**	-0.030
	(0.010)	(0.035)	(0.031)	(0.047)	(0.033)	(0.036)	(0.128)	(0.230)	(0.086)
Denied credit	0.321***	0.086	0.538***	1.477***	1.054***	0.141**	-0.112	1.784***	-0.244
	(0.023)	(0.082)	(0.092)	(0.082)	(0.056)	(0.062)	(0.240)	(0.386)	(0.154)
Fear denied credit	0.462***	0.552***	0.994***	0.482***	1.695***	0.430***	0.405	2.110***	-0.053
	(0.031)	(0.139)	(0.145)	(0.095)	(0.072)	(0.071)	(0.267)	(0.707)	(0.220)
Brokerage account	-0.184***	-0.426***	-0.146**	-0.136	-0.598***	-0.009	-0.392*	-0.934***	-0.466***
	(0.012)	(0.045)	(0.057)	(0.088)	(0.046)	(0.062)	(0.219)	(0.326)	(0.117)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	106,968	14,302	22,548	79,491	76,016	23,653	25,496	6,440	4,707
R-squared	0.60	0.51	0.39	0.03	0.23	0.11	0.01	0.08	0.05

Notes: This table regresses the cost of borrowing on possible demographic and socio-economic correlates. Age, race, and education describe the survey respondent. The education controls describe if the respondent has less than a bachelor's, a bachelor's, or a graduate degree. Income is the natural log of adjusted income. The financial situation controls include (a) whether the respondent has feared being denied credit in the past five years, (b) whether they have been denied credit in the past five years, and (c) whether they have a brokerage account. Robust standard errors in parentheses. Each column also includes year fixed effects.

primary residence. This interest rate is the weighted average interest rate secured via up to three mortgages. Information about each mortgage is reported directly by households in the SCF.

2. Second, we calculate borrowing costs on *home equity lines of credit (HELOCs)*, secured against the primary residence. These borrowing costs reflect the weighted cost of borrowing on up to four components of underlying debt: up to three home equity lines of credit (HELOCs), and all remaining HELOCs (mop up HELOCs).[16]

3. Third, we calculate borrowing costs incurred on other residential property as the weighted average of other residential loans, which include up to three mortgages on other residential properties and up to six consumer loans used for investment or vacation properties.[17]

4. Fourth, we calculate the interest rate on credit cards. In the SCF, the interest rate on credit cards is reported as the interest rate on the credit card with the largest balance. While this credit card data is, therefore, limited, we apply this interest rate to the entire credit card balance.

5. Fifth, we calculate the interest rate on vehicles as the weighted average interest rate on up to eight reported loans on cars and other vehicles. The SCF reports the balance on interest rate on four loans for cars and two loans on other vehicles. If households have five or more loans on cars (0.1% of households) and three or more loans on other vehicles (1.4% of households), the SCF only reports mop-up variables for these additional outstanding variables. In such cases, we apply the interest rate on the first four loans for cars or the first two loans on other vehicles to these outstanding balances.

6. Sixth, we calculate the interest rate on education loans, including consumer loans used for educational purposes. These calculations have two components. First, the SCF asks households to report their outstanding balance and interest rate on six education loans. For households

[16]The SCF reports interest rates on the first three of these four elements directly, but does not report an interest rate for the mop up category of 'all remaining' HELOCs. For households with more than three HELOCs (0.001% of our sample) we assume the interest rate on their other HELOCs is equal to the weighted average interest rate on their first three HELOCs. 5.9% of households in our sample have at least one HELOC.

[17]6% of households in our sample have loans on other residential property.

with six or fewer outstanding education loans, we take the weighted average effective interest rate across these six loans where, as noted above, we only consider educational loans in their active repayment period. If a household has seven or more educational loans (0.04% of households), the household reports the balance but not the interest rate on each loan beyond the sixth. In such cases, we apply the weighted average interest rate on the previous six loans. Second, the SCF also asks households if they use consumer loans for educational purposes and reports the balance and interest rate of up to six consumer loans used for educational purposes. Hence, the interest rate on educational loans is the weighted average of up to thirteen loans (six educational loans with interest rates, one mop-up category of educational loans, and six consumer loans).

7. The interest rate on other lines of credit reflects the weighted average interest rate on three lines of credit for which interest rates are reported, as well as on a fourth category of outstanding balances reported without interest rate information and to which we apply the weighted average interest rate of the first three lines of credit. 2.4% of households borrow via other lines of credit, but only 0.003% do so via four or more lines of credit.

8. Other installment loans capture borrowing that is for purposes not mentioned above. We calculate the average rate on other installment loans as the (balance-)weighted average interest rate on up to six consumer loans for which interest rates are reported. 14.7% of households in our sample have at least one consumer loan for purposes other than education or residential property (each of which are accounted for separately above).

9. Finally, other debt includes loans against pensions, loans against life insurance, margin loans, and miscellaneous other debt. 8% of our sample has such debt. However, the only category of other debt for which the SCF reports an interest rate are loans against life insurance (1.6% of our sample). We use this interest rate for all 'other' debt.