

Personal Tax Changes and Financial Well-Being: Evidence from the TCJA

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Abstract

Personal income tax decreases due to the Tax Cuts and Jobs Act improved financial well-being across survey and administrative measures. A plausibly causal design shows that larger tax decreases made people more likely to say that they were “living comfortably” financially. People also opened more new credit accounts and had fewer delinquencies in credit bureau data. Middle-income households and middle-credit-score consumers saw the largest and clearest benefits from the tax decreases. Survey measures reveal improvements in financial well-being not captured by administrative data.

Keywords: Taxes; subjective well-being; household finances; credit; financial well-being

JEL Numbers: H24, G50, I31

Abbreviations: ACS, American Community Survey; CCP, Federal Reserve Bank of New York/Equifax Consumer Credit Panel; CFPB, Consumer Financial Protection Bureau; CRISM, Equifax Credit Risk Insight Servicing and ICE, McDash®Data; EITC, Earned Income Tax Credit; GDP, Gross Domestic Product; GED, General Educational Development; IRS, Internal Revenue Service; JCT, Joint Committee on Taxation; NBER, National Bureau of Economic Research; SHED, Survey of Household Economics and Decisionmaking; TAXSIM, Tax Simulation Model (NBER TAXSIM model); TCJA, Tax Cuts and Jobs Act

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I Introduction

In the United States, personal income taxes have changed under almost every Presidential administration since the second World War. Rich literatures document important effects of personal taxes, including many studies of indirect effects due to tax avoidance.¹ However, less is known about the causal impact of tax changes on measures of financial well-being. This relationship is of interest, not least because causal evidence could inform a large and sometimes contentious literature about descriptive correlations between income on broader subjective well-being.² It is relevant to ask, does additional income from tax reductions make people feel more comfortable about their finances?

In this paper we use the 2017 Tax Cuts and Jobs Act (TCJA) as a natural experiment to study the effects of changes in average tax rates on several measures of financial well-being. We leverage considerable variation in TCJA-related personal tax rate changes induced by plausibly exogenous factors including pre-determined characteristics like homeownership, parenthood status, and pre-existing local income and property tax rates. Comparing effects on subjective financial well-being with other, more well-studied outcomes including credit scores, credit utilization, and delinquencies, shows how information about subjective financial well-being gives a fuller picture of how tax changes affected personal finances. Our design also provides plausibly causal evidence stemming from the TCJA's relatively low-salience and gradual, but long-lived changes in personal tax rates. These income tax changes are likely to be more representative of typical income fluctuations stemming from aggregate policies than highly salient, lump-sum tax rebates or stimulus payments, frequently studied policies in the literature (Agarwal, Liu and Souleles, 2007; Sahm, Shapiro and Slemrod, 2010; Gross, Notowidigdo and Wang, 2014).

¹For example, Keane (2011) surveys a literature on changes in labor supply in response to taxation and Saez, Slemrod and Giertz (2012) survey a literature on adjustments in overall taxable incomes.

²A major debate has been whether overall subjective well-being reaches a saturation point or continues to increase with higher incomes (Easterlin (1974), Stevenson and Wolfers (2013), and Killingsworth, Kahneman and Mellers (2023)). Diener, Oishi and Tay (2018) provide a recent summary of the extensive literature in psychology on subjective well-being, including a cross-country examination of associations between progressive taxation and subjective well-being by Oishi, Schimmack and Diener (2012). In terms of subjective financial well-being, Lachowska (2017) shows that 2008 tax rebates had substantial effects on high-frequency measures of subjective well-being, and van Praag, Frijters and Ferrer-i-Carbonell (2003) relate financial well-being to broader measures of subjective well-being.

While we expect tax decreases to have weakly positive effects on financial well-being, their effects on many other financial outcomes can be theoretically ambiguous due to the potential of countervailing consumption and savings responses. Consumers might use their increased disposable income to spend, save, or pay down debt, therefore generating a-priori unclear effects on credit outcomes like new loans or total loan balances. Some consumers may even increase their spending in anticipation of continued tax cuts or a further relaxation of liquidity constraints.³ One example is a consumer who purchases a durable good like an appliance or a car using credit that they intend to pay off over time. Consumers might also choose to accumulate savings or lower their credit balances by paying down existing debts. All else equal, we would expect delinquencies to weakly decrease because lower income taxes increase consumers' disposable incomes and hence their ability to pay their bills on time.⁴ Furthermore, any theorized effects could be attenuated in our data if the salience of the tax cuts is low.

Using rich panel survey data from the Federal Reserve Board's Survey of Household Economics and Decisionmaking (SHED), we show households that received larger tax cuts subsequently reported larger improvements in subjective financial well-being—a higher propensity to report “living comfortably” after the TCJA. An event-study analysis shows null effects and no pre-trend leading up to 2017 and a roughly stable positive effect in 2018 and 2019. We do not detect effects on emergency savings or whether a household would cover an unexpected \$400 expense with cash or an equivalent.

To determine if these improvements are limited to self-reported measures, we draw on large-scale administrative data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP) dataset and investigate more quantitative financial well-being outcomes (Bhutta, Skiba and Tobacman, 2015; Hu et al., 2018; Argys et al., 2020; Black et al., 2023). Our results show that consumers with larger tax cuts were modestly more likely to open new accounts and had

³While it is unclear exactly how long lasting consumers expected the TCJA changes to be, theory suggests a larger consumption response to this long-lived tax change relative to the previously studied, one-time tax rebates in 2001 and 2008 (Agarwal, Liu and Souleles, 2007; Sahm, Shapiro and Slemrod, 2010; Gross, Notowidigdo and Wang, 2014).

⁴Since missing payments yields costly fees, additional interest accrual, and higher interest rates on loans (both for current loans, in the case of penalty interest rates for credit cards, and for any new loans via lower credit scores), individuals face a strong incentive to use the income to help keep their loans current and stay out of delinquency.

slightly fewer delinquent accounts following the enactment of the TCJA. Increases in new accounts may indicate greater access to credit after TCJA, which taken together with the survey results, suggests higher credit access is consistent with improvements in subjective financial well-being. We find no estimated effect on delinquencies or credit scores overall. The lack of credit score changes alongside other outcomes suggests that tax cuts improve subjective well-being without altering the overall credit risk profile from a lender's perspective. Our results are generally robust to alternative specifications and methods for measuring the TCJA tax rate decrease, including an estimate of business-income-related tax changes in the Equifax analysis sample.

Finally, we explore heterogeneity in effects by income in the SHED and credit score in the CCP.⁵ In the SHED, subjective well-being increases most substantially for individuals in the middle of our income range—those with incomes between \$50 and \$100 thousand per year. In our CCP analysis, we find the most economically significant results for individuals with credit scores around the middle of our range, between 620 and 720. For this group, we find an increase in consumer credit balances as well as new accounts, a decline in delinquencies, and an improvement in credit scores. These results suggest that the additional income generated by the TCJA tax cuts was the most meaningful in improving financial well-being for those with middle incomes and credit scores.

Our most direct contributions are to literatures on the effects of tax changes, as well as income shocks more broadly, on household finances. A sizeable body of work analyzing the effects of tax or fiscal policy changes involving lump-sum payments has shown that consumers react by changing consumption, which might be financed by additional debt, as well as by paying down existing debt. In a study of Singaporeans, consumers reacted to the announcement of a one-time, fiscal-policy-related income shock by increasing their spending, primarily using credit cards (Agarwal and Qian, 2014). Agarwal, Liu and Souleles (2007) and Sahm, Shapiro and Slemrod (2010) find evidence that borrowers use tax rebates to pay down debts; Skiba (2014) and Gross, Notowidigdo and Wang (2014) show that receiving a tax rebate reduces the short-term likelihood of taking out a payday

⁵Income is directly measured in the SHED and credit scores are not available during our sample period for individual SHED respondents. In contrast, the CCP contains individual-level credit scores but not individual-level incomes.

loan and increases the short-term likelihood of filing for bankruptcy, respectively. Several related studies focus on changes to Medicaid enrollments induced by fiscal policy, with Hu et al. (2018) and Miller et al. (2021) showing that Medicaid expansions had notable effects on financial well-being, including reducing unpaid credit balances in collection and over-limit credit card spending, though the expansions had little effect on credit scores or other credit delinquency measures. Argys et al. (2020) find that sudden disenrollment from Medicaid resulted in a notable decline in well-being as measured by credit scores and delinquencies.

Effects of the TCJA on financial well-being are of particular interest because tax cuts from the TCJA are more generalizable to common and policy-relevant income fluctuations than are commonly studied tax changes like lumpy rebates or stimulus checks.⁶ Under the TCJA, households quickly saw small incremental changes in their disposable incomes as the Internal Revenue Service (IRS) updated withholding tables after the TCJA was enacted.⁷ The changes were so small that multiple public opinion polls showed that few people believed they owed less in taxes under the TCJA (Tax Policy Center, 2019). Still, Scharlemann and Van Straelen (2024) show the TCJA had meaningful household financial effects, finding the legislation increased a household's probability of mortgage refinancing conditional on refinancing incentives. Hotchkiss, Moore and Rios-Avila (2024) estimate a family utility model of the TCJA's effects, concluding that welfare of all families increased after the TCJA but the largest effects were for high-income households, those with self-employment income, those with children, and those that rent their home. The small and long-lived changes in disposable incomes brought by the TCJA most resemble the incremental increases to income driven by many other policy-relevant phenomena. In terms of one of those policies, minimum wage hikes, Aaronson, Agarwal and French (2012) find greater spending on durables, often debt financed. Dettling and Hsu (2021) show that higher minimum wages are associated with greater access to low-cost credit, as well as reduced payment delinquency. Similarly, Jones and Michelmore (2018) and Shaefer, Song and Williams Shanks (2013) find evidence that

⁶Sahm, Shapiro and Slemrod (2012) finds meaningful differences in spending responses depending on whether the change was a stimulus payment or a change in tax withholding.

⁷See the updated withholding tables, which are available on the IRS's website at: <https://www.irs.gov/pub/irs-prior/p15-2018.pdf>

transfer payments improve household financial stability.⁸

Another contribution of this work is showing effects on a qualitative measure of subjective financial well-being alongside more quantitative outcomes from survey and administrative data sources. Our analysis validates that increases in subjective financial well-being were accompanied by increases in the numbers of credit accounts and increased credit balances. These other measures validate that subjective financial well-being can be useful in cases where more detailed data are not available. Our results also illustrate how subjective financial well-being can provide additional information that can help categorize the extent that consumers experience changes positively, much like subjective well-being more generally (Lachowska, 2017). In our case, the increase in subjective financial well-being alongside a zero result for credit scores shows how focusing only on credit scores can miss a measurable improvement in how people experience financial well-being. Using subjective financial well-being as an outcome of interest is particularly useful in cases where it is difficult to determine the extent that consumers experience a particular financial development as being harmful, such as the extent that having uncollected medical debt affects financial well-being (Brevoort, Grodzicki and Hackmann, 2020) or the extent that banning payday loans helps or harms consumers' financial well-being (Bhutta, Skiba and Tobacman, 2015).⁹

The remainder of the paper proceeds as follows. We present background information on the TCJA in Section II, describe the datasets and the empirical strategy in Section III, discuss the results in Section IV and conclude in Section V.

II Policy Background

The TCJA made numerous changes to the U.S. federal income tax code, including both personal and business tax provisions. The law was enacted rapidly—it was introduced on November 2,

⁸Specifically, Jones and Michelmore (2018) show that Earned Income Tax Credit (EITC) payments increase savings balances; Shaefer, Song and Williams Shanks (2013) show a negative relationship between EITC generosity and unsecured debt.

⁹Nanda and Banerjee (2021) review the studies of subjective financial well-being and document a significant uptick in recent studies, primarily within the field of marketing.

2017, and became public law on December 22, 2017—and the personal income tax provisions applied to the tax year beginning January 1, 2018. Among the key changes to the personal tax code were (1) reducing income tax brackets (see Table A.1 for pre- and post-TCJA tax brackets), (2) increasing the standard deduction, (3) reducing the deductibility of mortgage interest from \$1,000,000 to \$750,000 of mortgage debt, (4) limiting the deductibility of state and local income and property taxes to \$10,000, (5) raising the threshold for the alternative minimum tax for households, (6) raising and expanding the child tax credit, and (7) allowing for the deductibility of qualified business income for pass-through corporations.¹⁰ The Joint Committee on Taxation (JCT) projected that these personal tax provisions would substantially reduce tax revenue—by \$1,127 billion from 2018 to 2027 (Joint Committee on Taxation, 2017*b*). The JCT also projected the bulk of the total reduction in tax revenue in the \$100,000 to \$200,000 and the \$200,000 to \$500,000 taxpayer income categories—by \$51 billion (approximately \$1,700 per taxpayer unit) and \$47 billion (approximately \$5,100 per taxpayer unit), in these income categories, respectively, in 2019. For taxpayers with income less than \$50,000, the TCJA was projected to reduce tax revenue by about \$14 billion (\$150 per taxpayer unit) in 2019 (Joint Committee on Taxation, 2017*a*).

III Data and Empirical Specification

III.I Data sources

To study how financial well-being changed following passage of the TCJA, we use two main data sources that include individual-level financial outcomes. In addition, we apply information that facilitates the use of a detailed microsimulation model of the U.S. tax code provided by the National Bureau of Economic Research (NBER)—the TAXSIM model—to compute an estimated tax change for each household or individual.

First, to understand subjective financial well-being, we turn to data from the Survey of House-

¹⁰While many of these provisions were schedule to expire at the end of 2025, many were made permanent in July 2025 as part of Public Law No. 119-21, the “One Big Beautiful Bill” Act.

hold Economics and Decisionmaking (SHED), conducted by the Board of Governors of the Federal Reserve System each year since 2013. Depending on the year, 6,000 to 12,000 individuals answer a broad range of questions related to household financial positions and well-being, including a rating of their overall financial well-being, as well as detailed questions about banking and credit, ability to cope with unexpected expenses, housing positions, and retirement preparation.

Since respondents to the SHED are drawn from a broader online panel survey, we can observe a subset of them across multiple years.¹¹ We focus our analysis on the period from 2015 to 2019. We begin the sample in 2015 (three years before the TCJA went into effect) to provide for an ample pre-period and to focus on a period when SHED questionnaires are relatively stable. We end the sample in 2019 (two years after the enactment) to avoid capturing the effects of the COVID-19 pandemic in 2020.¹² To keep our focus on tax decreases, we restrict our sample to people whom we observe in 2017, which is the year we use to calculate the size of people's TCJA-induced tax decreases based on pre-legislation characteristics.

To gain further insight into how U.S. household finances changed following the TCJA, we use information reported in the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP). The CCP dataset is an individual-level, anonymized panel of consumer credit records, drawn at the end of each quarter from Equifax—one of the three major credit bureaus in the United States. The data include detailed information drawn from credit reports, including loan balances, credit limits, and payment status. Aside from variables on age and geographic location, the dataset is generally limited to information about credit status. Individuals who do not interact with conventional credit markets will not appear in this dataset at all. As such, assessing evidence from both administrative and survey data together give us a fuller picture of the effects of the TCJA tax changes.

We use a 10 percent sample of the overall CCP and create a panel with characteristics similar to those of the SHED panel: limiting the period to 2015 to 2019, requiring an individual to be in the

¹¹The sample in each year is drawn from continuing members of the Ipsos KnowledgePanel—an online panel of individuals originally recruited primarily via address-based sampling, with some members being recruited prior to 2009 via random digit dialing.

¹²A robustness appendix shows that we have similar results when we include a wider array of years.

dataset in 2017 as well as at least one year following, and using end-of-year observations to smooth through fluctuations in financial positions over the course of the year. We also require an individual to have a reported Equifax Risk Score (a type of credit score) and to have a non-missing value for the number of new accounts established in a year, in order to ensure a person’s credit records are sufficiently populated to make inferences across time. We also require the sample to be consistent across the various alternative specifications discussed in the robustness section. More details on construction of both the SHED and CCP data samples are presented in the Data Appendix.

III.II Computing estimated tax changes

Since the TCJA changed many aspects of the tax code simultaneously, the goal of this paper is to study how the overall changes in an individual’s tax liability affected financial well-being. Our primary independent variable of interest, therefore, is the decrease in an individual’s estimated average tax rate under the pre-TCJA tax code in 2017 compared with the post-TCJA tax code in 2018. Given that the TCJA changed so many tax provisions, a household’s tax rate change was heavily influenced by pre-determined local economic factors—like local income and property tax rates, mortgage interest rates, and conformity of the state tax code with the federal tax code—as well as pre-determined personal economic factors—like income, homeownership, home prices, having a mortgage, and the number of dependents.

For both the SHED and the CCP analyses, we estimate pre- and post-TCJA tax rates using characteristics measured in 2017, before the tax law change, inputted into the TAXSIM model (Feenberg and Coutts, 1993). This procedure gives us measures of tax decreases that are due to interactions between pre-determined individual characteristics and the specifics of the policy change. Using pre-TCJA characteristics to calculate the tax change also avoids incorporating any endogenous effects of the TCJA on individual’s behavior, like labor supply or homeownership decisions, into the tax change calculation. Finally, given the substantial interactions between the federal and state tax codes, we calculate the change in the total household average federal-plus-state tax rate—the federal-plus-state personal income tax liability divided by total income—to

capture the overall change in tax burden for households in each of these groups.

For the analysis using individual-level survey data from the SHED, the estimated tax rates are primarily based on pre-TCJA individual characteristics directly reported in the SHED that are inputs to the tax calculation—income of the respondent and their spouse or partner, marital status, number of children, whether the person reports that they care for an adult, monthly mortgage payments, and state of residence. In addition to the individual-level variables, we include some limited census-tract-level statistics on mortgage interest derived from the Equifax Credit Risk Insight Servicing and ICE, McDash®Data (CRISM) dataset and property taxes from the U.S. Census Bureau’s American Community Survey.¹³

In the CCP, we do not observe information on individuals’ incomes or other household-level tax inputs. Instead, we use TAXSIM to calculate hyperlocal, representative tax rates at the census tract level, separately for mortgage holders and non-holders as well as for single and joint tax filing status. We input pre-TCJA data on census-tract-level median household or worker incomes and median property taxes from the American Community Survey and on census-tract-level median mortgage payments from CRISM.¹⁴ Specifically, we assign different representative tax rate changes to individuals in the CCP based on (1) the individual’s census tract of residence in 2017, (2) whether we observe a mortgage for an individual in 2017, and (3) household size in 2017, which is used to assign single or joint filing status. In robustness checks, we also present results using alternative inputs for computing representative tax changes, including estimates of dependents and business income. We provide a detailed description of the tax change calculations and data sources for the SHED and CCP analyses in the Data Appendix.

Figure 1, Panel A, shows the distribution of tax rate decreases in the SHED sample, and Panel B shows the same distribution for the CCP sample. Each distribution is centered around a 2 per-

¹³Census tracts are small, sub-county geographic areas that include between about 420 and 1,200 housing units, approximating a neighborhood; for more information, see the description on the U.S. Census Bureau’s website at https://www.census.gov/history/www/programs/geography/tracts_and_block_numbering_areas.html.

¹⁴Given that we use *median* census-tract values for income, mortgage payments, and property taxes as inputs to the tax change calculation, we would expect individuals’ actual values for these variables to be distributed fairly evenly around the median. For this reason, it is reasonable to expect that measurement error in the tax change variable (Meyer et al., 2020) is not correlated with the true, unobserved tax change, leading to attenuation bias in our coefficient estimates due to the classical error-in-variables assumption.

centage point decrease and exhibits considerable variation. Because the tax decreases in the SHED are based on individual-level responses, we capture a higher variance in tax decreases using the SHED, an advantage of having individual-level data on incomes. The SHED data, however, also show some signs of binning due to income categories being collected as a categorical variable.¹⁵ Estimated tax decreases in the CCP data also show considerable variation, reflective of substantial dispersion in hyperlocal measures of income, property taxes, and mortgage payments, in particular. In the CCP sample we observe a mean tax decrease of 1.8 percentage points, a median of 1.9, and a range from 0.93 at the 10th percentile to 2.7 at the 90th percentile.

Panels C and D of Figure 1 present box plots of tax rate changes within the income bins of individuals recorded in the SHED—for the SHED and CCP samples, respectively. For both samples, the tax rate reduction tends to rise with income (Tax Policy Center, 2017), but there is substantial variation in the tax reduction within each decile.

To give a sense of the substantial geographic dispersion of the TCJA tax cuts, Figure 2, Panel A shows the average tax cut by U.S. county for individuals in the Equifax sample while Panel B shows the average tax cut by census tract in Rhode Island for individuals in the Equifax sample. We observe substantial geographic variation both within and across U.S. states as well as within U.S. counties.

III.III Outcomes of interest

Our main outcome of interest, subjective financial well-being, is meant to encompass feelings of security, agency, and satisfaction around financial decisions. We measure financial well-being using the following survey question, which is available through all years of the SHED: “Overall, which one of the following best describes how well you are managing financially these days?” Respondents answer “(1) Finding it difficult to get by, (2) Just getting by, (3) Doing okay, or (4) Living comfortably.” We operationalize the survey responses with dummy variables for reporting

¹⁵The variable had 21 distinct categories in 2017, so it does provide significant variation, despite being binned. For simplicity, we use the midpoint of each bin in the tax decrease calculation, omitting observations in the top-most bin, which is unbounded.

a specific category or higher.¹⁶ As described by Consumer Financial Protection Bureau (2017), financial well-being is related to economic outcomes, financial behaviors, and psychological outcomes in combination with one another.¹⁷ So two people with identical levels of lifetime consumption and wealth can have different levels of financial well-being without any mismeasurement. Since we focus on changes within individuals, we expect that our results will primarily be influenced by economic outcomes—most notably after-tax incomes. However, changes in subjective well-being also reflect interactions with various behavioral responses that could affect how much positive effect a given change in income will have on financial well-being.

In addition to financial well-being, we include several financial and economic outcomes from the SHED. In terms of possible future financial goals we include homeownership—an important vehicle for wealth accumulation. In terms of current financial security, we include both an influential question asking if someone would pay an unexpected \$400 expense solely with cash or its equivalent and a question asking if someone has an emergency fund to cover larger unexpected expenses. Somewhere in the middle between financial goals and current needs, we include the presence of student loans, which has also been cited as a barrier to wealth accumulation (Mezza et al., 2020) in spite of the fact that student loans can finance human capital investments that can improve one’s income prospects. We also include whether the respondent was working to measure a possible effect on labor supply and pre-tax earnings.

Table 1 reports summary statistics for the sample of SHED respondents, just before the TCJA was enacted in late 2017. Most people report relatively high levels of financial well-being, with 33 percent giving the highest category, living comfortably, and 41 percent saying that they are doing okay. Additionally, 70 percent of adults are homeowners and 13 percent have student loans.¹⁸

¹⁶Federal Reserve Board (2018) and Federal Reserve Board (2021) validate our question relative to a longer battery of questions proposed and used by the Consumer Financial Protection Bureau (2017) to measure the concept of financial well-being.

¹⁷The full definition of financial well-being from Consumer Financial Protection Bureau (2017) that we seek to measure is based on interviews with experts on financial literacy, financial planners, and individual consumers: “Financial well-being is a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow them to enjoy life.”

¹⁸The statistics are generally similar to those for the weighted cross-sectional survey presented in Federal Reserve Board (2018). However, there does appear to be positive selection that could be due to the lack of weights (which we include as a robustness check) and the requirement that people are randomly selected into the sample and then agree

To understand whether the effect of larger tax changes on subjective financial well-being translates to meaningful differences in other, more commonly used financial metrics, we turn to the CCP data and analyze outcomes related to household credit utilization and performance. First, as a summary measure of household credit positions and credit risk from a lender’s perspective, we study the Equifax Risk Score, a type of credit score (similarly to Bhutta, Skiba and Tobacman (2015)). Henceforth we will refer to the Equifax Risk Score outcome as the credit score. Credit scores are positively associated with the financial health of a consumer; higher scores indicate lower delinquency risk, and lenders typically offer more credit at more favorable terms to those consumers. Next, as measures of credit utilization, we use the number of new accounts opened over the past 12 months and the natural log of total outstanding consumer credit balances. Increased credit usage could affect financial well-being, for example, if an increase in credit balances reflects a consumption response to higher disposable income (Dinerstein, Yannelis and Chen, 2024). Finally, as a measure of credit performance, we use the number of delinquent accounts over a time horizon from 60 days delinquent to in severely derogatory status.¹⁹ Table 2 reports summary statistics in 2017 for all variables used in the main analysis and in robustness checks with the CCP data. We observe that the mean credit score in the dataset is 703, with a slightly higher median level of 726. The mean number of new accounts is about 0.9 in 2017, with a median of zero, and the mean number of delinquencies is 0.3, also with a median of zero.

III.IV Empirical specification

To study how personal income tax changes affect financial well-being, we use a difference-in-differences regression specification with the continuous treatment variable of people’s predicted tax decreases. This strategy allows us to exploit heterogeneity in the size of tax decreases from 2017 to 2018 to see if individuals who had larger tax decreases also experience larger changes in

to be interviewed in multiple waves.

¹⁹These variables were selected to avoid issues with timing and reporting. For example, new mortgages may only appear on credit reports after a lag. We selected 60 or more days delinquent to avoid the fact that not all lenders report 30-day delinquencies. More severe outcomes, like bankruptcies, are slow moving processes that can take years to resolve, but typically are preceded by delinquencies, which we do analyze.

a financial outcome. Essentially, the strategy compares the effect of TCJA’s personal tax decreases for a “treated” group that received larger tax decreases as compared to a “control” group that received smaller tax decreases. The identification assumptions are that well-being of both groups would have trended similarly in the absence of TCJA and that the treatment effect is homogeneous across groups that received different levels of tax rate decreases.

For the SHED, we use individual panel survey data to estimate linear probability models of a series of dichotomous outcomes (Y_{it}) for an individual i in year t . Our coefficient of interest, β , is interpreted as the effect of a 1 percentage point decrease in someone’s average tax rate, calculated using changes in the tax code from 2017 to 2018 using pre-TCJA-determined data from 2017 in TAXSIM. Because the tax decreases went into effect in early 2018, we estimate effects by comparing outcomes in 2018 and 2019 with the same outcomes before and during 2017. In terms of controls, α_i represents an individual fixed effect that captures all time-invariant differences between individuals including education level, gender, race, and ethnicity. Additionally, we include α_{st} , a state-by-year fixed effect that controls for time-varying differences across states—including the local economic cycle. We also include α_{kt} , fixed effects for the interaction between year and four bins of pre-TCJA incomes (j) in 2017 to control for any remaining time-varying differences by income. We additionally include individual-level controls X_{it} for a cubic term in age to incorporate life-cycle factors. Results are unweighted and standard errors are clustered by state using the respondent’s state when we first observe them. The SHED analysis regression specification is as follows:

$$Y_{it} = \beta \text{Tax decrease}_i \mathbf{1}(t > 2017) + \alpha_i + \alpha_{st} + \alpha_{kt} + \gamma X_{it} + \varepsilon_{it}. \quad (1)$$

For the CCP analysis, we use a similar specification with some adaptation for the different strengths of the administrative credit bureau data. As before, our coefficient of interest β measures the effect of a 1 percentage point decrease in a household’s average tax rate, beginning in early 2018, on an outcome Y_{it} . We include fixed effects for the interaction between year and bins of pre-TCJA credit scores in 2017 (α_{kt}) and year fixed effects to flexibly control for any individual-level pre-TCJA differences in credit risk that might influence future credit performance. We again

include individual fixed effects (α_i) to account for time-invariant, individual-level differences. In contrast to the SHED specification, the high number of observations in the CCP dataset allows us to include much more detailed county-by-year fixed effects α_{ct} in this specification. These fixed effects control for highly localized, time-varying shocks to household financial conditions, such as the potential for changes in local-area hiring conditions due to the TCJA corporate tax rate changes (Kumar, 2019; Kennedy et al., 2026). Standard errors are clustered at the county level to allow for arbitrary correlation of errors within a local geography. The CCP analysis regression specification is as follows:

$$Y_{it} = \beta \text{Tax decrease}_i \mathbf{1}(t > 2017) + \alpha_i + \alpha_{ct} + \alpha_{kt} + \gamma_l \text{Age bin}_i + \varepsilon_{it}. \quad (2)$$

In both specifications, variables for the treatment group and a post-period dummy are subsumed by the individual and the state-by-year or county-by-year fixed effects (compared with a standard difference-in-differences specification as in Bertrand, Duflo and Mullainathan (2004)). We discuss robustness to the specifications in Section IV.

There are four basic reasons why we believe that our empirical strategy merits a causal interpretation, in keeping with econometric treatments (Callaway, Goodman-Bacon and Sant’Anna, 2024).²⁰ First, individual fixed effects control for any time-invariant differences between individuals in the sample period, including differences in baseline financial well-being and expectations of permanent pre-tax incomes. Another way of saying this is that all of our estimates are identified based on changes after the tax cut was implemented, not cross-sectional differences in other factors like the incomes of people who received a tax cut. Second, we control for any time-varying differences by pre-period incomes or credit scores, so even if well-being (or another outcome) was improving more among some of these groups, it would not drive our results. Income changes are also unlikely to be driving the effects because we find very similar effects when we control for

²⁰In our context, Callaway, Goodman-Bacon and Sant’Anna (2024) show that the “strong parallel trends” assumption requires traditional parallel trends by treatment status, as well as some additional restrictions that treatment effects are homogeneous across various levels of the tax reduction. Note that since the tax changes all occurred in 2017, our estimation strategy is unaffected by variation in treatment timing as in Roth et al. (2023).

post-TCJA pre-tax incomes as a robustness exercises in the SHED analysis. Third, as discussed above, geography-by-year fixed effects will nonparametrically control for *all* time-varying changes due to local conditions, including employment, incomes, and economic as well as political sentiment and the effects of local vote shares. Finally, we provide graphical evidence that the parallel trends assumption holds prior to the enactment of the TCJA for key outcome variables and we conduct several robustness exercises in Online Appendix Section A. We also do not see any graphical evidence of anticipation effects prior to TCJA enactment.

IV Results

IV.I SHED results

In our analysis of the SHED data, we find evidence that tax reductions led to increases in the share of people who were living comfortably financially. As seen in column (1) in Panel A of Table 3, a 1 percentage point larger tax reduction increases the likelihood that someone will say they are living comfortably by 1 percentage point. The next two columns show insignificant estimates for the likelihood that someone was more likely to be getting by or better, or doing okay or better, as a result of the TCJA tax decreases. Together, these results indicate that larger tax reductions improve subjective financial well-being at the top of the well-being distribution, which is consistent with previous analyses showing that the TCJA disproportionately benefited the already well-off (Tax Policy Center, 2017; Hotchkiss, Moore and Rios-Avila, 2024).

Our estimated effect size of 1 percentage point suggests that tax decreases can have impacts on financial well-being that are comparable to effects of business cycles and other year-over-year changes. Multiplying the effect size by the 1.8 percentage point average tax reduction due to the TCJA implies an increase of 1.8 percentage points in the likelihood that someone was living comfortably in response to an average-sized tax decrease.²¹ This hypothesized 1.8 percentage point

²¹This 1.8 percentage point increase would be the average effect of the TCJA under the assumptions that treatment effects are homogeneous and there are no general equilibrium effects, in addition to a less restrictive parallel trends assumption.

increase was about twice the 1 percentage point increase in the share of people reporting they were living comfortably from 2017 to 2018 (from 0.33 to 0.34) and was about a third smaller than the total increase from 2017 to 2019 (from 0.33 to 0.36). We also cannot rule out the possibility that the TCJA also had meaningful effects at lower thresholds due to our relatively wide standard errors.²²

Beyond the broad measure of well-being, we find mostly insignificant results. For student loan holdings, which have been cited as a barrier to wealth accumulation (Mezza et al., 2020), column (1) in Panel B of Table 3 shows an insignificant negative effect of 0.1 percentage points. Column (2) shows a weak positive effect on homeownership: a 0.6 percentage point increase that is just significant at the 10 percent level. An event study plot in Figure A.1 shows a statistically significant and economically meaningful uptick in 2019 only.²³ Column (3) presents statistically insignificant and economically modest negative effects on the likelihood that someone would pay an unexpected \$400 expense with cash or its equivalent.²⁴ We similarly find imprecisely measured effects on the likelihood that someone has an emergency fund of three months of expenses in column (4).

One possible mechanism is that tax cuts could be correlated with subsequent differences in labor supply behavior, either because of the tax cuts themselves or because of endogeneity. When we include employment as a dependent variable in column (5), however, we are unable to reject the null that the coefficient is zero. If anything, there is evidence that people who received bigger tax cuts were less likely to be working after the tax cut, which runs counter to the idea differences in employment prospects are driving the results for financial outcomes. This dynamic is also consistent with a robustness result where we find that controlling for incomes after the tax cuts

²²Cross-sectional differences in the fraction of survey respondents reporting living comfortably are much larger than year-to-year aggregate differences, so the effects of the tax reduction are much smaller in comparison. For example, the share living comfortably in 2017 goes from 0.15 for families earning less than \$40,000 per year to 0.62 for families earning more than \$100,000.

²³The relationship between larger tax cuts and increasing homeownership may seem puzzling, since the TCJA removed some of the incentives for home-ownership by raising the standard deduction and imposing caps on both mortgage interest and state-level taxes, including property taxes. However, our results are consistent with the channel of increased after-tax incomes offsetting some of these effects, similar to findings in analysis from the Tax Policy Center (McClelland, Mucciolo and Sayed, 2022).

²⁴This measure is based on asking people to give the potentially multiple ways that they could pay for “an emergency expense that costs \$400” based on their current financial situation. The variable is one if the person would cover the expense exclusively using cash, savings, or a credit card paid off at the next statement. The variable is zero if the person said they would pay for at least part of the \$400 expense by borrowing or selling something, or if they said they would not have been able to cover the expense.

leads to larger coefficient estimates.

An interesting, though suggestive, result is that middle-income households experience a three-times-larger estimated effect of the tax changes on subjective financial well-being than the full sample. Specifically, Table 4 shows a estimated coefficient of 0.031 for households earning between \$50 and \$99 thousand in 2017 in column 3 that is significant at the 10 percent level. The coefficient among lower-income households in column 2 is also very similar to the baseline coefficient in column 1. The point estimate is much smaller, however, among higher-income households shown in column 4.²⁵

Event studies in Panel A of Figure 3 show no evidence of a pre-trend in the share of people living comfortably before the tax changes and a relatively stable effect after the tax change.²⁶ The dark line in Panel A of Figure 3 is roughly flat from 2015 to 2017 and close to zero. The estimated effect jumps up to around 1 percentage point in 2018 and only declines slightly in 2019. The other two levels of financial well-being, shown in Panels B and C, are also undetectably different from zero before the tax cut. As with the regression results, we see no detectable effect of the tax decreases at these other two, lower levels of financial well-being after the implementation of the TCJA.

Overall, we see evidence from survey responses that the TCJA led people to feel more comfortable financially. A factor that lends credibility to the result is that due to the inclusion of individual-level fixed effects, the result is identified off of changes in people’s subjective well-being over time, not cross-sectional differences. So the result cannot be due to permanent differences in people’s dispositions or similarly unchanging differences in how people rate their subjective well-being for a fixed set of circumstances. However, it is still relevant to understand if these differences are reflected in other, more quantitative measures, and we turn to that question using large-scale

²⁵There have been many examinations of whether overall subjective well-being reaches a saturation point or continues to increase with higher incomes (Easterlin, 1974; Killingsworth, Kahneman and Mellers, 2023; Stevenson and Wolfers, 2013, , among others). The results in Table 4 inform these studies in term of using plausibly exogenous changes in incomes due to tax law changes, giving our results more of a claim on causality. Imprecision limits our ability to make a precise determination about a saturation point for subjective financial well-being, however.

²⁶The figure plots the β_k coefficient estimates and 95 percent confidence intervals from the following event-study specification: $Y_{it} = \sum_{k=2015, k \neq 2017}^{2019} \beta_k \cdot I\{k = t\} \cdot \text{Tax decrease}_i + \alpha_i + \alpha_{st} + \alpha_{jt} + \gamma X_{it} + \varepsilon_{it}$. Results are unweighted and standard errors are clustered by state using the respondent’s state when we first observe them. Event studies for other SHED outcomes are presented in Appendix Figure A.1.

administrative credit bureau data from the CCP in the next section.

IV.II CCP results

The CCP analysis shows people who received larger tax reductions opened more credit accounts and were less likely to experience a delinquency. A one percentage point tax reduction increased the number of new accounts by 0.03 according to the panel B of column (1) of Table 5. Receiving an average 1.8 percentage point tax reduction thus implies 0.05 new accounts, which is a modest six percent of the 0.9 new accounts opened on average in 2017. Delinquency results are presented in panel D, showing that a one percentage point tax reduction led to 0.005 fewer expected delinquencies. Multiplying this by the same average tax reduction translates to another modest reduction—this time the reduction is three percent of the number of expected delinquencies per person in 2017. Finishing out the full sample column (1), panels A and C show even smaller effects that are statistically indistinguishable from zero for credit scores and consumer credit balances.²⁷

Separating effects across credit score categories reveals economically significant results for each of the outcomes in the middle credit score bin of above 620 to 720—similar to the near-prime credit score group as studied in Goodman and Ramos (2019). Column (3) of Table 5 shows a 1.46 point increase in credit scores in panel A. Panel D shows that a 1 percentage point tax rate reduction decreases the expected number of delinquencies by 0.013. Given the 1.8 percentage point average tax reduction, this point estimate suggests that TCJA lowered the number of expected delinquencies by a third, compared to the pre-TCJA delinquency levels of 0.07. We also estimate moderate increases in new credit accounts and credit balances for this group.

People in the middle-credit-score group saw the clearest benefits from the tax cuts, with higher credit scores and a smaller number of delinquencies. People in this middle-credit-score bin also opened more new accounts and had higher credit balances, which could reflect either improved fi-

²⁷We present results for the natural log of consumer credit balances, which exclude accounts with zero balance. Untabulated results for the natural log of balances plus one are qualitatively similar, with very similar coefficients and statistical significance. Additionally, we find similar effects for delinquencies over other time horizons, such as 30 to 120 days past due, or 60 to 120 days past due.

nancial well-being because of increased confidence, or worsening well-being because of a reliance on borrowing to cover fixed expenses.²⁸ The SHED results, however, are useful for understanding which explanation is the most plausible and interpreting whether higher credit utilization likely indicates improved well-being or not. The increase in the share of people “living comfortably” concentrated in middle-income households supports the hypothesis that people in the middle-credit-score bins are comfortable with taking on the additional credit.

Tax decreases generally had smaller effects for those with low scores. For people with a 620 score or lower, similar to the subprime group in Goodman and Ramos (2019), in column (2) we see more new accounts and higher account balances, but no statistically significant change in the number of delinquencies or credit scores. Increases in consumer credit balances are also less than half the effect size in the middle-credit-score group.

We observe more mixed effects for those with high credit scores (prime borrowers). Credit balances declined and the number of new credit accounts increased in column (4) among people with a credit score above 720. Delinquencies also declined, but nearly imperceptibly, since delinquencies are rare among people with such high credit scores. Credit scores also decreased somewhat for this group. The decline in credit scores is consistent with lenders weighting the negative mark of the new accounts more than the positive marks of lower utilization and the very small overall decrease in delinquencies.

Finally, to evaluate the parallel trends assumption and show how the effects vary over time, Figure 4 presents event-study graphs showing results of the effects of the tax decrease in 2017 on outcomes presented in Table 5: new accounts (Panel A), delinquencies (Panel B), consumer credit balances (Panel C), and credit scores (Panel D).²⁹

The pre-trends suggest that we can interpret effects of the TCJA tax cuts on the number of new

²⁸Dinerstein, Yannelis and Chen (2024) describe a consumption response to greater disposable income and Dodini, Larrimore and Tranfaglia (2024) describe borrowing to cover fixed expenses after a negative income shock.

²⁹The figure plots the β_k coefficients and the 95 percent confidence interval from the following event-study specification: $Y_{it} = \sum_{k=2015, k \neq 2017}^{2019} \beta_k \cdot I\{k = t\} \cdot \text{Tax decrease}_i + \alpha_i + \alpha_{ct} + \alpha_{kt} + \gamma_1 \text{Age bin}_i + \varepsilon_{it}$. The variables are defined in Section III.IV. Standard errors are clustered at the county level. To compare the economic magnitude of the change in each variable, the Y-axis scale for each chart was chosen such that the scales across all four charts reflect approximately the same standard deviation change in the outcome.

accounts and delinquencies as causal. There are parallel trends in the number of delinquencies prior to TCJA. For new accounts, while there was some downward trend from 2015 to 2016, this pattern would suggest pre-trends work against finding a positive effect from the TCJA tax cuts. For credit balances and credit scores, we observe a slight decline in the years leading up to TCJA passage in 2017 and then some small increase in 2018 and 2019; these trends are consistent with the null result we observe overall for these variables.

IV.III Robustness

Robustness exercises for the SHED analysis show that the effects on financial well-being are of similar magnitudes with different controls and sample restrictions. Appendix Table A.3 shows that the estimated effect of a 1 percentage point tax decrease on the likelihood that someone is living comfortably is quite stable across specifications and samples with the baseline result is presented in column (5). Results are similar, though slightly larger, for a specification that controls for incomes after the tax cut. They also are similar when we include controls for time-varying effects of county-level voting behavior to proxy for the effect of alignment with the party of the president on financial-well being. An exception is that effect sizes are larger when we omit the individual fixed effect. Appendix Table A.4 also shows similar effects with variations on our analysis sample. We discuss these results in more detail in Online Appendix Section A.³⁰

For the CCP analysis, we present robustness results for alternative specifications and alternative methods for calculating the tax decrease in Appendix Table A.5 and describe them in detail in Online Appendix Section A. We find that the results for our preferred specification are generally similar in magnitude and significance to those for alternatives such as including county and year fixed effects, including economic control variables like the unemployment rate and employment growth together with county and year fixed effects, and excluding the interaction between 2017 income and the time trend. The exception is that the TCJA's effect on delinquencies becomes sig-

³⁰The relative stability to the inclusion of state-by-year fixed effects and data on county-level voting shows that the larger tax reductions in Republican majority states found by Altig et al. (2020) and the impacts of party alignment found by Cullen, Turner and Washington (2021) are not driving the results.

nificant after excluding the income-by-time-trend interaction, suggesting an income-trend effect at play in delinquency behavior. We also find our results are robust to alternative ways of calculating the tax decrease, including a method for incorporating business income, an alternative method for calculating property tax liabilities, and a method for incorporating dependents into the calculation (though in this calculation, the estimated effect on credit scores is significant and negative).

V Conclusion

This paper provides plausibly causal evidence that larger personal income tax decreases after the TCJA led to improvements in subjective well-being in the two years after their enactment, with effects concentrated at the highest level of well-being: individuals reporting living comfortably. Larger tax decreases also have modest effects on consumer credit outcomes that are consistent with the results on subjective well-being. TCJA tax decreases are associated with a small increase in the number of new accounts and a small decline in delinquencies. On net, we observe no change in individuals' credit scores and credit balances.

Tax reductions had the biggest effects among people in middle-income and middle-credit-score groups. Effect sizes for “living comfortably” among households earning between \$50 and \$100 thousand are three times the effect size for the entire sample. Additionally, people with credit scores between 620 and 720 had substantial decreases in delinquencies, higher credit scores, and increased levels of borrowing that are consistent with increases comfort financially.

Overall, our results are consistent with tax decreases—even tax decreases that are gradual and not highly salient—improving people's financial well-being whether or not the tax decreases notably improve other quantitative measures like cash on hand or credit scores. While we document benefits of TCJA's personal tax decreases, the TCJA was enacted with substantial costs as well: \$1.1 trillion over 10 years, as estimated by the JCT and discussed in Section II. The United States faces considerable fiscal challenges over the coming decades (Congressional Budget Office, 2025). As policymakers weigh the costs and benefits of individual income tax changes in future policy

debates, this research provides insight into one important channel of how tax policy affects household well-being. Still, since the TCJA tax decreases were concentrated among households earning higher incomes, our results leave open the possibility that tax decreases that affect lower income households could have different effects. Households living on lower incomes may use their disposable income due to tax decreases differently—for example, in ways that may leave their levels of financial well-being unchanged, or move them along different margins in terms of borrowing and saving. Additional research could shed light on these differences and further clarify the mechanisms behind our results.

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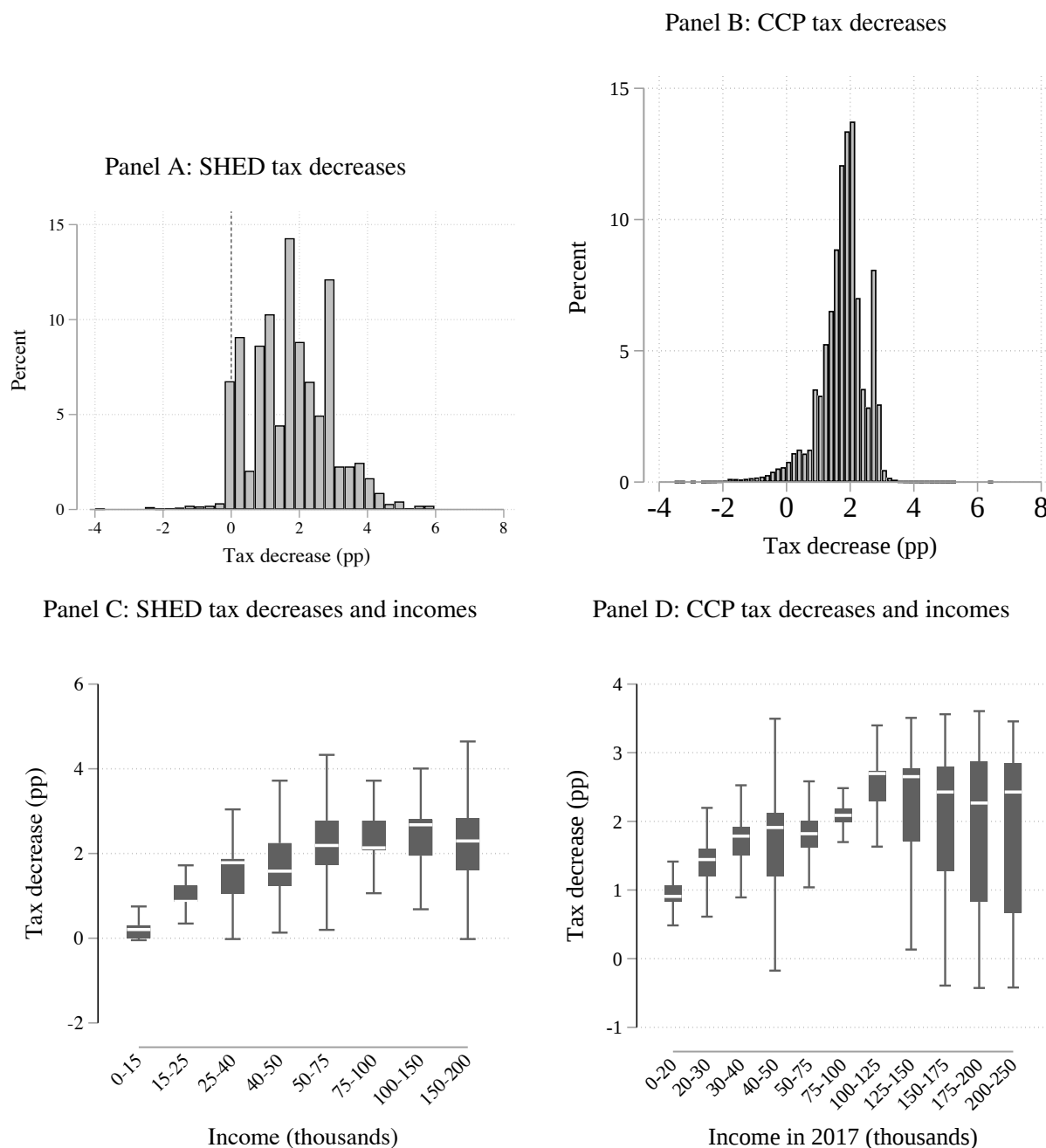
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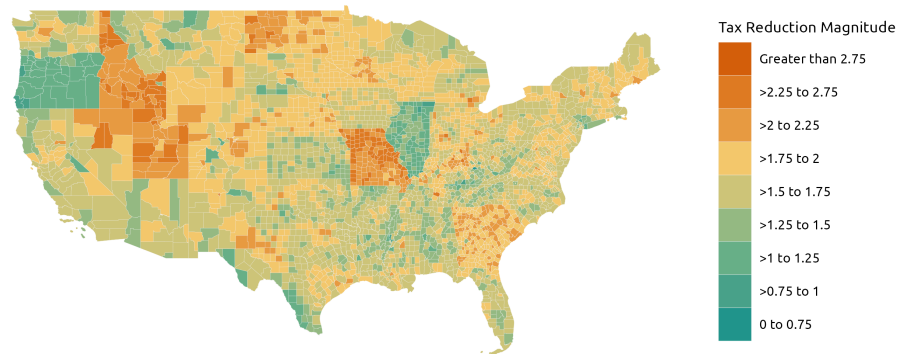
Figure 1: Distribution of TCJA personal tax reductions and relationship between tax reductions and income levels in the SHED and CCP analysis samples



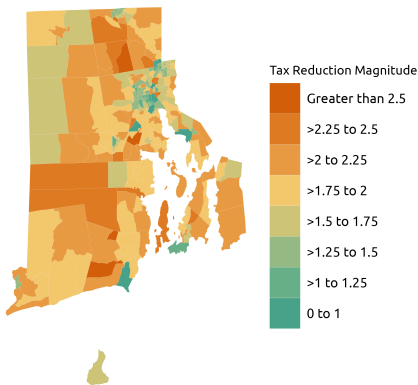
This figure presents histograms of the distribution of the TCJA personal tax reductions in percentage points (pp) for the SHED analysis sample (Panel A) and for the CCP analysis sample (Panel B), as well as box plots of the relationship between the tax reductions and sample income for the SHED and CCP samples (Panel C and Panel D). The box plots for the SHED analysis sample show data for the income bins reported to the survey in 2017. The box plots for the CCP analysis show data for the corresponding bins of census-tract median income (drawn from the U.S. Census Bureau's American Community Survey) assigned to each individual in the sample in 2017. Sample selection is described in Section III.I, and a detailed data description for all variables is provided in the Data Appendix. Data sources are Federal Reserve Board, SHED; Federal Reserve Bank of New York/Equifax Consumer Credit Panel; U.S. Census Bureau, American Community Survey; CRISM; NBER, TAXSIM; and authors' calculations.

Figure 2: Geographic distribution of TCJA tax cuts in the Equifax sample

Panel A: TCJA tax changes by county

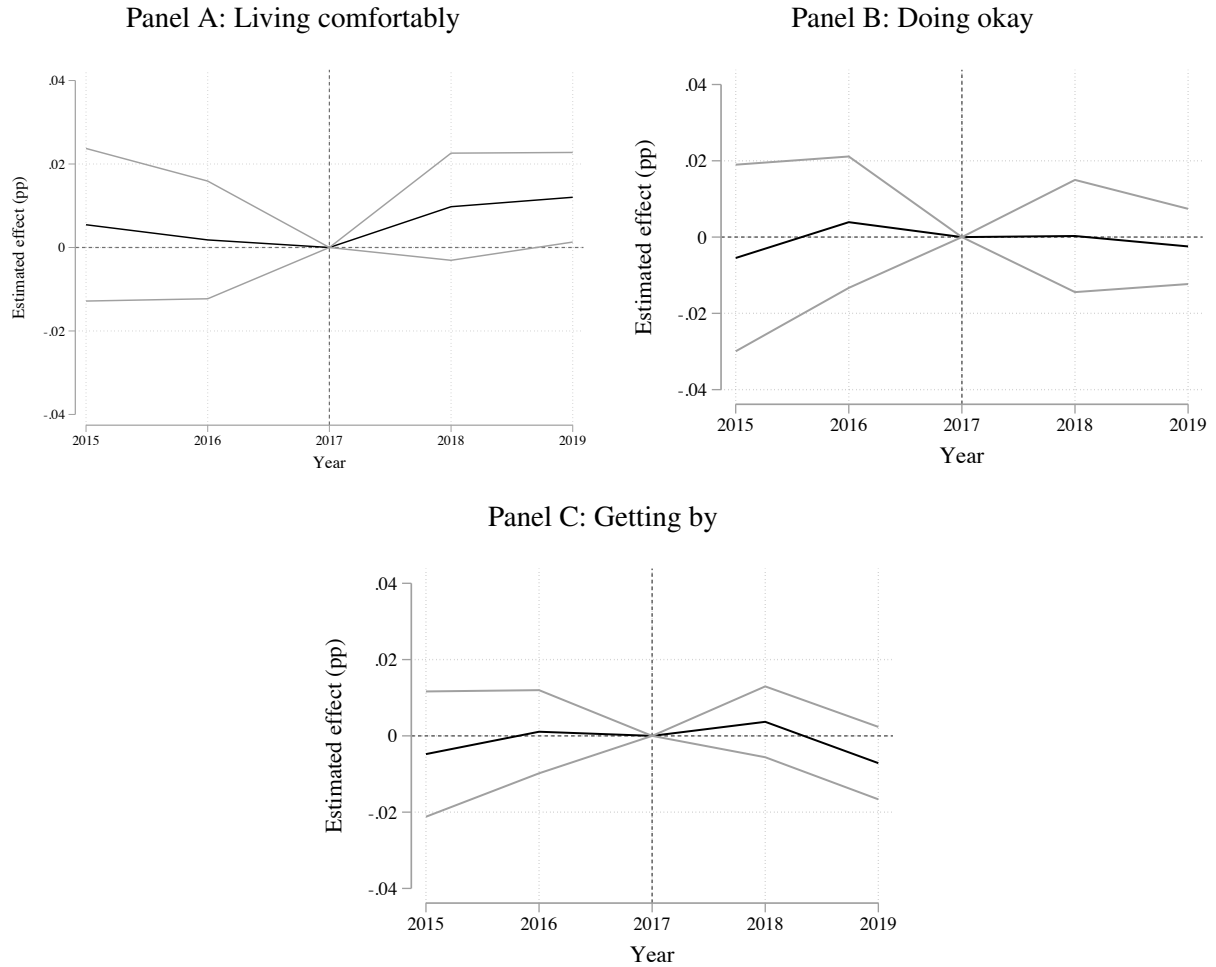


Panel B: TCJA tax changes by census tract:
Rhode Island



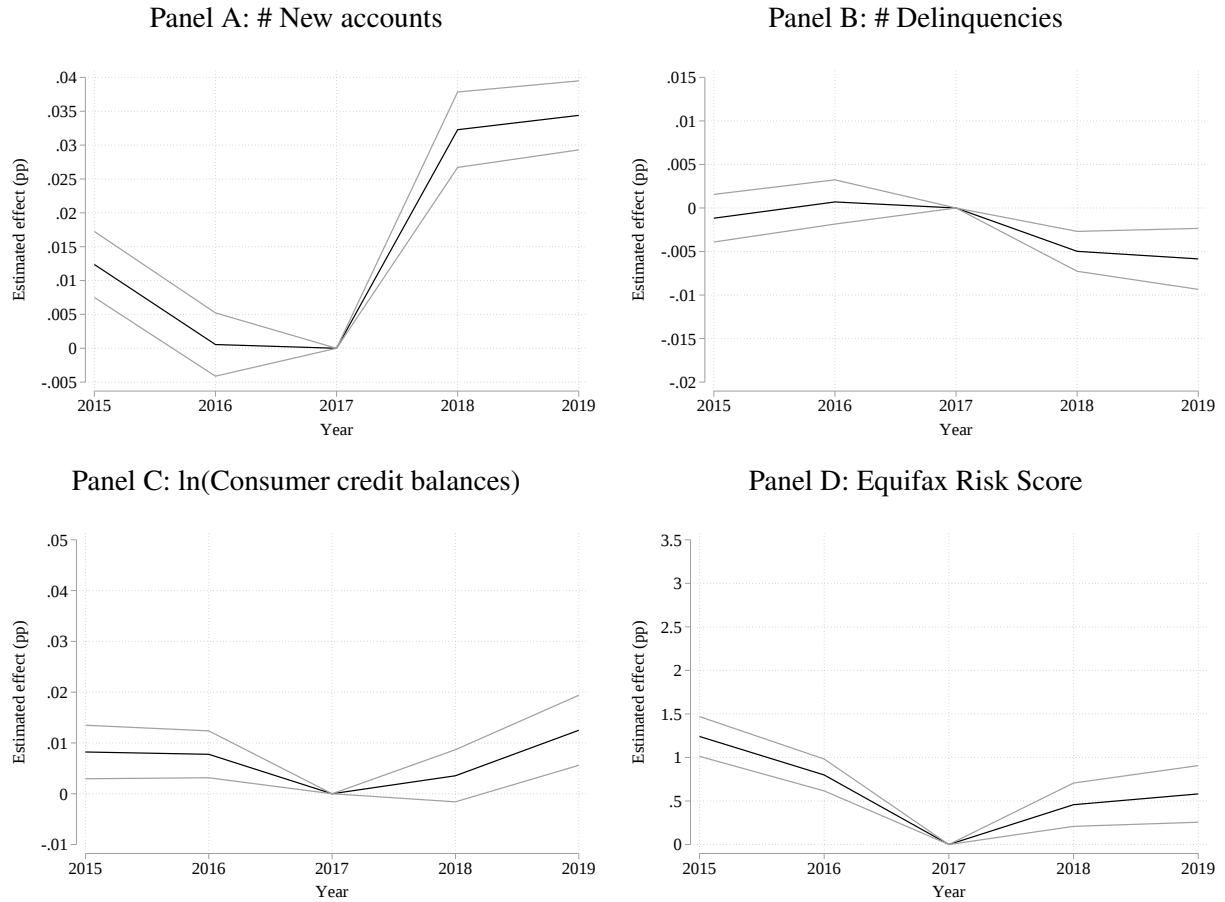
This figure presents maps showing the geographic distribution of TCJA tax cuts in the Equifax sample. Panel A presents a map of the average county-level TCJA tax cuts for individuals in the sample for the United States. Panel B presents the average census-tract-level tax change for individuals in the sample in Rhode Island. Sample construction is described in Section III.II. Data sources are Federal Reserve Bank of New York/Equifax Consumer Credit Panel; U.S. Census Bureau, American Community Survey; CRISM; NBER, TAXSIM; and authors' calculations.

Figure 3: Event studies of effects on financial well-being



This figure presents event-study effects of the TCJA tax decrease on various categories of households' subjective financial well-being: whether a household reports they are "Living comfortably" (Panel A), "Doing okay" or better (Panel B), or "Getting by" or better (Panel C). The black lines in the figures indicate coefficient estimates, and the gray lines indicate 95 percent confidence intervals obtained by estimating a specification similar to Equation (1), but interacting the TCJA tax decrease per individual with dummy variables for the years 2015, 2016, 2018, and 2019 (as described in footnote 26). In the years before the tax change, people who would experience larger tax reductions following the TCJA had no significant differences in their probability of saying they were living comfortably. In the years following the tax change, the reported likelihood of living comfortably increased. Sample selection is described in Section III.I, outcome variables are described in Section III.III, and a detailed data description for all variables is provided in the Data Appendix. Data sources are the Federal Reserve Board, SHED; CRISM; NBER, TAXSIM; and authors' calculations.

Figure 4: Event studies of effects on consumer credit outcomes



This figure presents event-study estimates of the TCJA tax decrease on consumer credit outcomes: the number of new consumer credit accounts (Panel A), the number of accounts 60 days delinquent to in severely derogatory status (Panel B), the natural log of consumer credit balances (Panel C), and the Equifax Risk Score (Panel D). The black lines in the figures indicate coefficient estimates and the gray lines indicate 95 percent confidence intervals obtained by estimating a specification similar to Equation (2), but interacting the TCJA tax decrease per individual with dummy variables for the years 2015, 2016, 2018, and 2019 (as described in footnote 29). To compare the economic magnitude of the change in each variable, the Y-axis scale for each chart was chosen such that the scales across all four charts reflect approximately the same standard deviation change in the outcomes. We observe patterns that suggest the parallel trends assumption holds particularly for the number of new accounts and for consumer credit balances. Sample selection is described in Section III.I, outcome variables are described in Section III.III, and a detailed data description for all variables is provided in the Data Appendix. Data sources are Federal Reserve Bank of New York/Equifax Consumer Credit Panel; U.S. Census Bureau, American Community Survey; CRISM; NBER, TAXSIM; and authors' calculations.

Table 1: Summary statistics: SHED analysis

	Number of observations	Mean	Median	Standard deviation
<u>Variable of interest</u>				
Tax reduction (percent)	5,409	1.79	1.78	1.18
<u>Outcome variables</u>				
Living comfortably	5,409	0.33	0.00	0.47
Doing okay	5,409	0.41	0.00	0.49
Just getting by	5,409	0.19	0.00	0.39
Struggling to get by	5,409	0.07	0.00	0.25
Student loans	5,409	0.13	0.00	0.34
Home owner	5,409	0.70	1.00	0.46
Would cover \$400 with cash or equivalent	5,409	0.62	1.00	0.48
Has emergency fund	5,409	0.55	1.00	0.50
<u>Individual control variables</u>				
Income less than \$25,000	5,409	0.23	0.00	0.42
Income \$25,000 to \$49,999	5,409	0.24	0.00	0.43
Income \$50,000 to \$99,999	5,409	0.30	0.00	0.46
Income \$100,000 to \$199,999	5,409	0.23	0.00	0.42
Less than high school	5,409	0.03	0.00	0.16
High school or GED	5,409	0.25	0.00	0.43
Some college	5,409	0.35	0.00	0.48
College or more	5,409	0.38	0.00	0.49
Working	5,409	0.56	1.00	0.50
Nonmetropolitan	5,409	0.14	0.00	0.35
White	5,409	0.74	1.00	0.44
Black	5,409	0.10	0.00	0.30
Latino or Latina	5,409	0.11	0.00	0.31
Woman	5,409	0.47	0.00	0.50
Age	5,409	53.81	56	16.91

This table presents summary statistics for variables used in the analysis of the effect of the TCJA tax decrease on variables from the SHED. Column (1) presents the number of observations, column (2) presents the mean value, column (3) presents the median, and column (4) presents the standard deviation. The sample shown in the table consists of values from the 2017 survey for people included in the baseline SHED analysis data sample (as included in the specification shown in Table 3). Sample selection is described in Section III.I, and a detailed description for all variables is provided in the Data Appendix. Data sources are the Federal Reserve Board, SHED; and authors' calculations.

Table 2: Summary statistics: CCP analysis

<u>Variable of interest</u>	Number of observations	Mean	Median	Standard deviation
Tax reduction (percent)	1,128,407	1.76	1.85	0.73
<u>Outcome variables</u>				
Equifax Risk Score	1,128,407	703	726	105
# New accounts	1,128,407	0.88	0.00	1.27
ln(Consumer credit balances)	943,664	9.00	9.44	1.90
# Delinquencies	1,128,407	0.30	0.00	1.10
<u>Control variables</u>				
State level:				
Real GDP growth (percent)	1,128,407	2.60	2.34	1.62
County level:				
Unemployment rate (percent)	1,128,407	3.98	3.80	1.21
Average weekly wage growth (percent)	1,128,407	3.50	3.16	2.70
Employment growth (percent)	1,128,407	1.43	1.32	1.63
Zip code level:				
Ordinary dividends per return (thousands)	1,128,407	1.67	0.75	4.01
Net capital gains per return (thousands)	1,128,407	4.81	1.69	16.15
Individual level:				
Income (thousands)	1,128,407	36.55	33.29	14.13
Age	1,126,782	50	50	19

This table presents summary statistics for variables used in the analysis of the effect of the TCJA tax decrease on consumer credit outcomes. Column (1) presents the number of observations, column (2) presents the mean value, column (3) presents the median, and column (4) presents the standard deviation. The sample shown in the table consists of values from 2017 for all individuals included in the baseline CCP data sample (as included in the specification shown in Table 5). Age is tabulated for individuals with a non-missing age value in the sample and the log of consumer credit balances is tabulated for individuals with a non-zero balance. Individuals with a missing age are included with a separate dummy variable in the baseline specifications. Other variables are tabulated for all individuals included in the sample. Sample selection is described in Section III.I, and a detailed description for all variables is provided in the Data Appendix. Data sources are Federal Reserve Bank of New York/Equifax Consumer Credit Panel; U.S. Census Bureau, American Community Survey; CRISM; Bureau of Labor Statistics, Local Area Unemployment Statistics; Bureau of Economic Analysis, Gross Domestic Product by State; IRS Individual Income Tax Statistics; NBER, TAXSIM; and authors' calculations.

Table 3: Effects of tax reductions on SHED variables

Panel A: Financial well-being					
	Living comfortably	Doing okay	Getting by		
	(1)	(2)	(3)		
<i>Dependent variable mean (2017)</i>	<i>0.33</i>	<i>0.74</i>	<i>0.93</i>		
Tax reduction (percentage points)	0.0098** (0.0048)	-0.00076 (0.0051)	-0.0015 (0.0039)		
Observations	14,698	14,698	14,698		
Number of people	5,519	5,519	5,519		
Individual fixed effects	X	X	X		
Year-by-state fixed effects	X	X	X		
Age cubic	X	X	X		
Bins of 2017 income-by-year fixed effects	X	X	X		
Panel B: Other economic outcomes					
	Student loans	Homeowner	Would handle \$400	Emergency fund	Working
	(1)	(2)	(3)	(4)	(5)
<i>Dependent variable mean (2017)</i>	<i>0.13</i>	<i>0.70</i>	<i>0.62</i>	<i>0.55</i>	<i>0.56</i>
Tax reduction (percentage points)	-0.0014 (0.0023)	0.0064* (0.0038)	-0.00057 (0.0061)	-0.0061 (0.0040)	-0.00040 (0.0057)
Observations	14,698	14,698	14,698	14,698	14,698
Number of people	5,519	5,519	5,519	5,519	5,519
Individual fixed effects	X	X	X	X	X
Year-by-state fixed effects	X	X	X	X	X
Age cubic	X	X	X	X	X
Bins of 2017 income-by-year fixed effects	X	X	X	X	X

This table presents estimates of the effects of a 1 percentage point reduction in an individual's tax rate due to the TCJA on various measures of subjective financial well-being (Panel A) as well as other outcomes (Panel B). Other outcomes include having a student loan outstanding, homeownership status, ability to handle an unexpected \$400 expense with cash or its equivalent, having a 3-month emergency fund, and working. The results suggest that tax reductions increased the likelihood that someone said they were living comfortably financially. Results are estimated from Equation (1). This specification includes individual fixed effects, state-by-year fixed effects, 2017 income-by-year fixed effects, and controls for a cubic in age. Standard errors are clustered by state and are reported in parentheses. ***, **, and * indicate levels of 1 percent, 5 percent, and 10 percent significance, respectively. Sample selection is described in Section III.I, outcome variables are described in Section III.III, and a detailed data description for all variables is provided in the Data Appendix. Data sources are the Federal Reserve Board SHED; CRISM; NBER, TAXSIM; and authors' calculations.

Table 4: Heterogeneity by incomes in 2017 (SHED)

	Baseline (0 to \$199)	\$0 to \$49	\$50 to \$99	\$100 to \$199
	(1)	(2)	(3)	(4)
<i>Share living comfortably in (2017)</i>	<i>0.33</i>	<i>0.16</i>	<i>0.37</i>	<i>0.60</i>
Tax reduction (percentage points)	0.0098** (0.0048)	0.0084 (0.0051)	0.031* (0.016)	-0.010 (0.018)
Observations	14,698	6,798	4,357	3,543
Number of people	5,519	2,605	1,630	1,284
Individual fixed effects	X	X	X	X
Year-by-state fixed effects	X	X	X	X
Age cubic	X	X	X	X
Added bins of 2017 income-by-year fixed effects	X			X

This table presents a heterogeneity analysis of the effect of the TCJA tax reduction on the likelihood of a someone reporting that they were living comfortably financially by the noted income categories in thousands of nominal dollars measures as of the 2017 survey used to compute the tax changes. Regressions are re-estimated for each group and the notes follow from the baseline specification in Table 3. The first column repeats the baseline specification in Table 3 for comparability. The following columns are separated into income bins with the first two exactly matching the \$50 thousand categorizations of income use for the linear trends in different income levels in the main specification. The last column includes two of these bins, in order to present a larger sample size. The income category by year fixed effects are removed from columns 2 and 3 because they are co-linear with the state by year dummies when we only include respondents one of these income categories. Tax reductions have the largest positive effects for people who had total household earnings under \$100 thousand and particularly so for people earning between \$50 and \$100 thousand in 2017, though the small sample sizes limit precision. ***, **, and * indicate levels of 1 percent, 5 percent, and 10 percent significance, respectively. Sample selection is described in Section III.I, and a detailed description for all variables is provided in the Data Appendix. Data sources are Federal Reserve Board, SHED; CRISM; NBER, TAXSIM; and authors' calculations.

Table 5: Effects of tax reductions on consumer credit outcomes

	Full sample	<= 620	> 620 & <= 720	> 720
	(1)	(2)	(3)	(4)
Panel A: Equifax Risk Score				
<i>Dependent variable mean (2017)</i>	703	543	674	787
Tax reduction (percentage points)	-0.1518 [0.1043]	0.4208 [0.2770]	1.4608*** [0.2205]	-0.8502*** [0.0898]
Observations	5,440,746	1,197,571	1,386,194	2,855,801
Panel B: # New credit accounts				
<i>Dependent variable mean (2017)</i>	0.88	1.00	1.16	0.69
Tax reduction (percentage points)	0.0291*** [0.0021]	0.0253*** [0.0057]	0.0191*** [0.0049]	0.0348*** [0.0018]
Observations	5,440,746	1,197,571	1,386,194	2,855,801
Panel C: ln(Consumer credit balances)				
<i>Dependent variable mean (2017)</i>	9.00	9.19	9.27	8.78
Tax reduction (percentage points)	0.0027 [0.0023]	0.0114** [0.0050]	0.0285*** [0.0047]	-0.0086*** [0.0028]
Observations	4,567,236	1,027,999	1,178,818	2,358,927
Panel D: # Delinquencies				
<i>Dependent variable mean (2017)</i>	0.30	1.26	0.07	0.00
Tax reduction (percentage points)	-0.0053*** [0.0012]	0.002 [0.0070]	-0.0130*** [0.0032]	-0.0016*** [0.0004]
Observations	5,440,746	1,197,571	1,386,194	2,855,801
Individual fixed effects	X	X	X	X
County-by-year fixed effects	X	X	X	X
Age control	X	X	X	X
2017 Equifax Risk Score-by-year fixed effects	X	X	X	X

This table presents an analysis of the TCJA tax reduction's effect on consumer credit outcomes for the full analysis sample and for sample splits by Equifax Risk Score categories. The first column shows results for the full analysis sample. In columns 2 to 4, the sample is separated into individuals with a Equifax Risk Score in 2017 of less than or equal to 620, greater than 620 and less than or equal to 720, and above 720, respectively. Results are estimated using Equation (2). Panel A presents results for Equifax Risk Score as the dependent variable. Panel B presents results for the number of new credit accounts. Panel C presents results for the natural log of total consumer credit balances and Panel D presents results for the number of accounts that are 60 days delinquent to in severely derogatory status. This specification includes county-by-year fixed effects, individual fixed effects, and a control for an individual's age bracket. Standard errors are clustered at the county level and are reported in parentheses. ***, **, and * indicate levels of 1 percent, 5 percent, and 10 percent significance, respectively. Sample selection is described in Section III.I, outcome variables are described in Section III.III, and a detailed data description for all variables is provided in the Data Appendix. Data sources are Federal Reserve Bank of New York/Equifax Consumer Credit Panel; U.S. Census Bureau, American Community Survey; CRISM; NBER, TAXSIM; and authors' calculations.