Personal Tax Changes and Household Finances: Evidence from the Tax Cuts and Jobs Act

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How do personal tax rate cuts affect household financial health and credit behavior?

- Taxes are an important fiscal policy lever for policymakers with financial consequences for households
  - Lump-sum tax rebates or stimulus payments well studied (e.g., Agarwal, Souleles, and Liu, 2007; Sahm, Shapiro, and Slemrod, 2010)
  - Evidence on other fiscal policy measures: e.g., UI and minimum wage (e.g., Hsu, Matsa, and Melzer, 2018; Aaronson, Agarwal and French, 2012; Dettling and Hsu, 2021)
  - What about tax cuts that are experienced gradually or with lower salience?

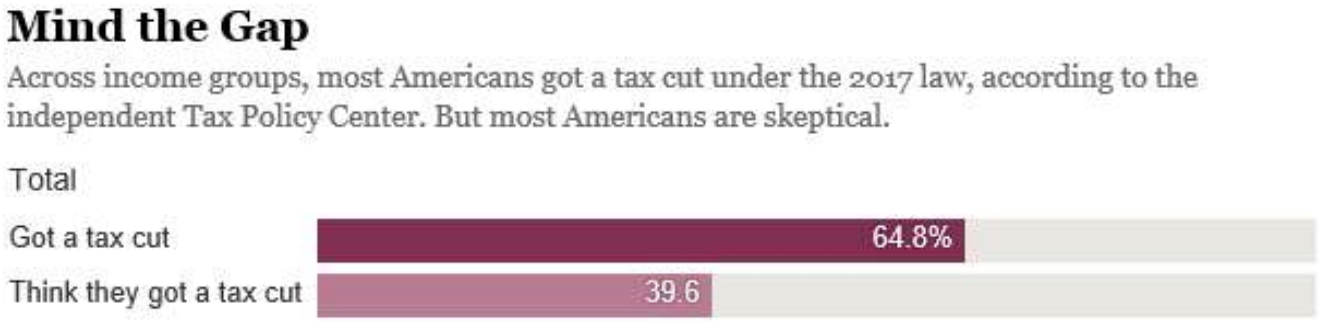
- <u>This paper:</u> Use variation in the size of personal income tax cuts under the 2017 Tax Cut and Jobs Act (TCJA) to study effects on:
  - Subjective household financial well-being
  - Credit scores (Equifax Risk Score)
  - Credit utilization
  - Credit performance

Mechanisms for well-being and credit behavior

- Lower income taxes lead to more disposable income → more easily meet financial obligations → increase well-being
- Ambiguous effect on debt utilization
  - Greater ability to pay down debt/save
  - Also, greater ability to increase debt-financed consumption
- Payment delinquencies expected to fall
  - Greater ability to pay and avoid fees/interest, holding balances constant

But, complicating factors in the TCJA…

- Awareness of income changes may be limited
  - Changes smoothed across pay periods (in contrast to tax rebates)
  - Withholding changes were not well understood
  - Few people believed they owed less under TCJA (but majority owed less)



Source: New York Times (2019): SurveyMonkey, Tax Policy Center

Key features of the Tax Cuts and Jobs Act of 2017

1. Lowered individual income tax brackets and marginal rates
2. Doubled the standard deduction
3. Raised the child tax credit
4. Limited the deduction of state and local income taxes (SALT) to $10,000
5. Changed the mortgage interest deduction limit from $1m to $750,000

Empirical strategy

- Actual changes in tax rates due to TCJA varied widely across geographies and households
  - Impute tax burdens using NBER TAXSIM before and after TCJA using personal characteristics (where available) and local characteristics
  - Individual-level or census-tract-level treatment: varying size but uniform timing
- Analyze effects of larger tax cuts on subjective and objective measures of financial well-being:

$$Y_{it} = \beta_1 TCJA\_TaxCut_i \mathbf{1}(t > 2017) + \alpha_i + \alpha_t + \gamma X_{it-1}$$

Data

- Survey of Household Economics and Decisionmaking (SHED)
  - Fielded annually since 2013 by the Federal Reserve Board, in October and November
  - Roughly 10,000 individuals per year
  - Smaller, more irregular panel component -- roughly 1/3 each year
  - Uses subjective self-assessments along with objective outcomes
  - Directly asks people about their finances
  - Focus on subjective financial well-being
- FRBNY Consumer Credit Panel (CCP)/Equifax
  - Anonymized 5% sample of U.S. credit reports, collected quarterly, panel framework
  - Comprehensive debt information plus age, census block of residence
  - No income or other demographic information due to Fair Credit Reporting Act
  - Data from Q4 2015-2019
  - Focus on credit scores (Equifax Risk Score), new accounts, payment behavior

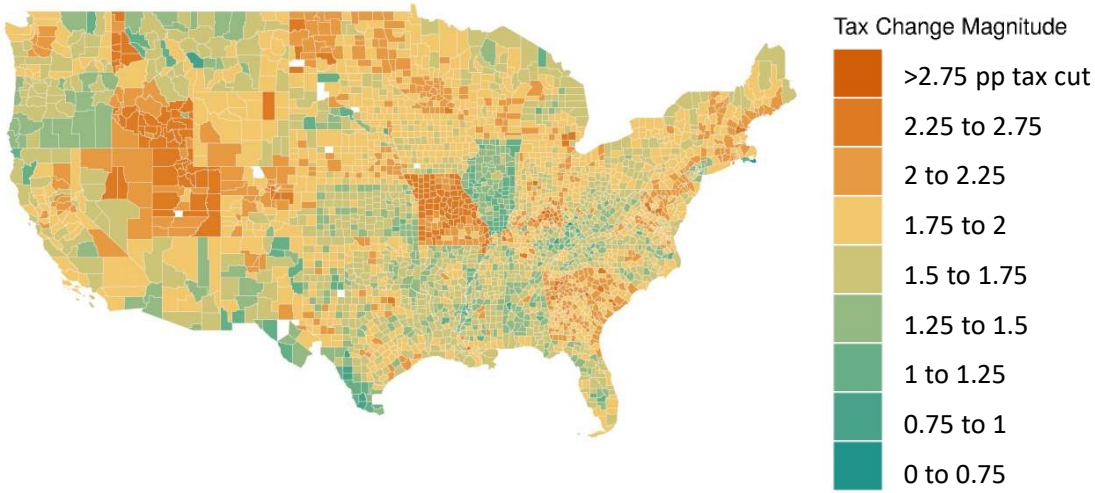
Imputing average TCJA-induced tax rate changes

- $TCJA\ tax\ change = \frac{Total\ Tax^{2018} - Total\ Tax^{2017}}{Family\ income^{2017}}$

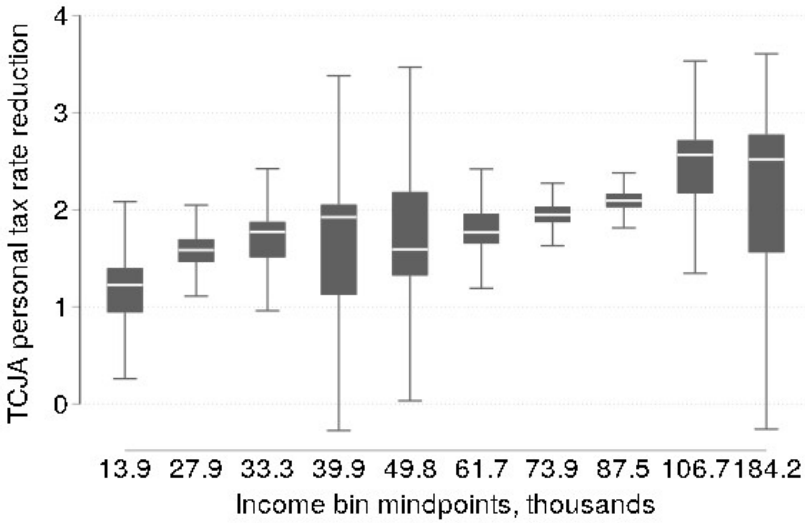
- Tax liability imputed via TAXSIM using pre-treatment characteristics as of 2017
  - SHED analysis: Compute individual-level tax rates
    - Use individual demographic and income characteristics (where available)
    - Use local geographic medians for remaining inputs (merging in data from Census, IRS, etc)
  - NYFRB CCP/Equifax analysis: representative, census-tract-level effective personal tax rates
    - Use local geographic medians for inputs: e.g., incomes, property taxes, mortgage interest
    - Match with individual characteristics on mortgage status and estimate of filing status
- Compute using 2017 tax regime and 2018 tax regime

Substantial variation in income tax cuts in our sample

Tax cuts by county: NYFRB Equifax/CCP sample



Tax cuts and income: NYFRB Equifax/CCP sample



- Median tax cut by county and by census tract varies substantially
- Tax cuts vary considerably within income group as well

SHED: Subjective financial well-being

- Overall, which one of the following best describes how well you are managing financially these days?

Living comfortably	35%
Doing okay	40%
Just getting by	19%
Finding it difficult to get by	6%

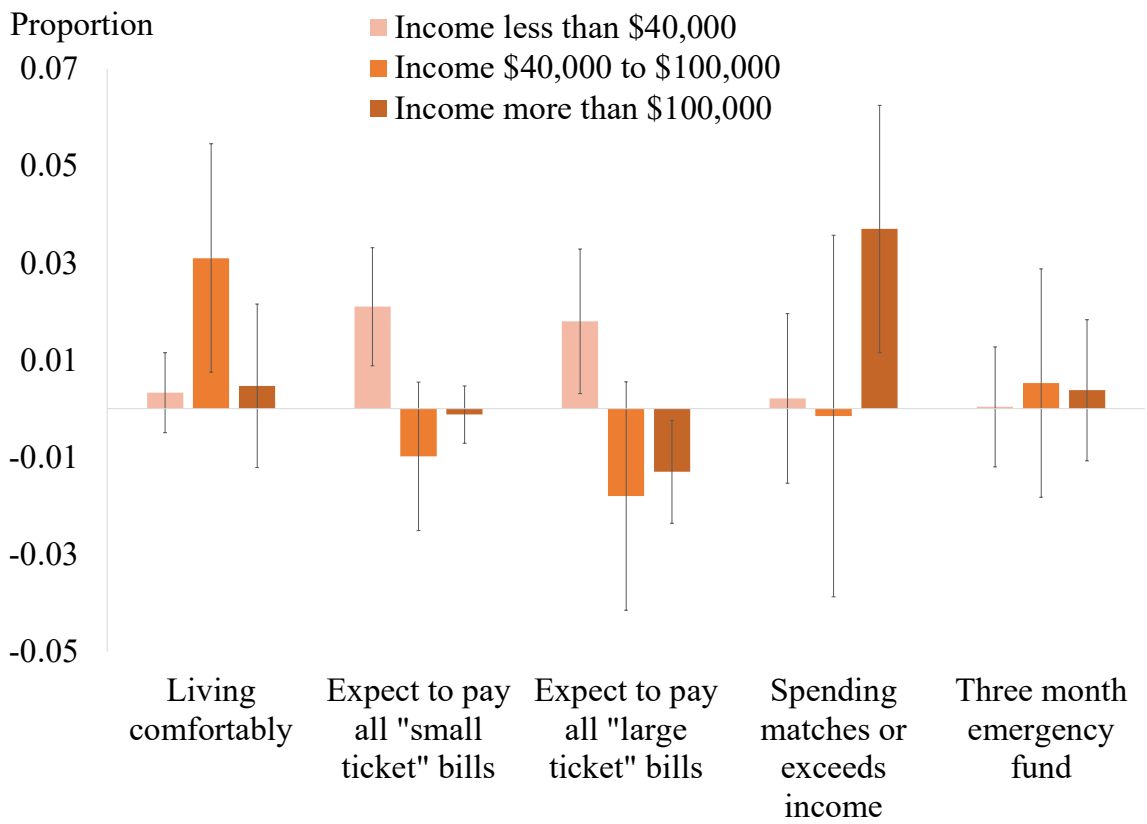
- Convert to a binary variable: Well-being category or higher

SHED: Results on subjective well-being

	(1) Getting by +	(2) Ok +	(3) Comfortable +
Dependent variable mean	*0.94*	*0.75*	*0.35*
Tax reduction (percentage points)	0.00055	0.00095	0.012
	(0.0023)	(0.0034)	(0.0033)
Observations	15,396	15,396	15,396
Number of CrossID	6,555	6,555	6,555
Individual fixed effects	X	X	X
Year fixed effects	X	X	X
Basic Controls	X	X	X
Income bins	X	X	X

- A one pp larger tax cut leads to a 0.012 increase in the probability of "living comfortably"
- No measurable effect at other thresholds: explanations?
  - Tax cuts may only be meaningful for households already doing OK financially
  - Those who are struggling to get by may require a big lift to move into a higher well-being category; tax cuts received incrementally may not be large enough

Effects on well-being and spending vary by income



Note: "Small ticket" bills are utility, telecom, and student loans. "Large ticket" bills are credit card, housing, and auto.

- Increase in "living comfortably" concentrated in mid-income families
- Lower income families experience some likelihood in increase of paying bills
- Higher income families more likely to say spending "matches or exceeds income"
- No effects on emergency savings

NYFRB CCP/Equifax provides additional financial outcomes

- Credit score (Equifax Risk Score)
- New accounts
- Payment behavior (delinquency)

NYFRB CCP/Equifax: Results

$$Y_{ict} = \beta_1 TCJA\_TaxCut_{ic} \mathbf{1}(t > 2017) + \alpha_i + \alpha_{nt} + \epsilon_{ict}$$

Dependent variable:	**Equifax Risk Score**	**New Credit Accounts**	**# Delinquencies, 60-to-120 days**
Dependent variable mean (2017):	703	0.881	0.0905
TCJA Tax Cut	-0.0781	0.0305	-0.0019
	[0.0694]	[0.0022]	[0.0007]
County-by-year fixed effects	X	X	X
Age control	X	X	X
Individual fixed effects	X	X	X
Observations	5,445,477	5,445,477	5,445,477
R-squared	0.892	0.485	0.343

- No change in Equifax Risk Score
- Greater take-up of new loans
- Reduced delinquency

- Magnitudes are small
- Results are generally robust to alternative measurement of the tax variable and to alternative specifications

Conclusions

- The TCJA generated tax cuts of varying sizes across households
- Larger tax cuts are associated with improvements in subjective financial well-being, with effects concentrated at the highest level of well-being (living comfortably)
- No measurable effect on Equifax Risk Score, partially due to offsetting effects from:
  - Higher take-up of new loans
  - Reduced delinquency
- Small effects on financial well-being consistent with the slow incremental increases in income from TCJA

Thank you