

# The Effects of Financial Education on Financial Well-being

Jeremy Burke<sup>1</sup>   J. Michael Collins<sup>2</sup>   Carly Urban<sup>3</sup>

<sup>1</sup>University of Southern California

<sup>2</sup>University of Wisconsin-Madison

<sup>3</sup>Montana State University, IZA

# Disclaimer

This research was supported by a grant from the FINRA Investor Education Foundation. All results, interpretations and conclusions expressed are those of the research team alone, and do not necessarily represent the views of the FINRA Investor Education Foundation or any of its affiliated companies.

# Motivation

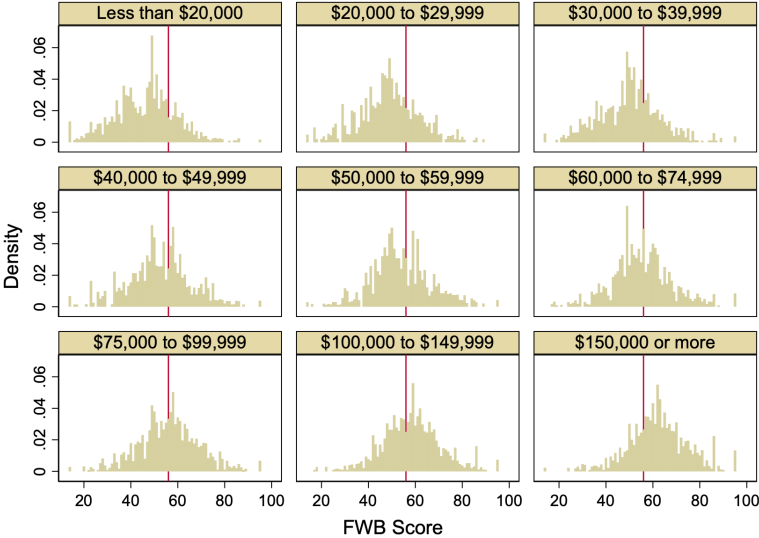
- The COVID-19 pandemic puts a spotlight on the financial precarity of many families.
- Policymakers have suggested one way to improve the financial security of future generations: requiring personal finance education in high schools.
- Financial security requires a strong objective financial situation (savings, earnings, ability to manage one's money) and the skills and confidence to make sound financial decisions.
- Recent work has developed measures of subjective financial well-being (FWB).
- This paper asks "Does state-mandated financial education affect subjective FWB?"

# What Is Subjective Financial Well-being?

Studies by U.S. Consumer Financial Protection Bureau to define FWB 2015–2018:

- feeling in control over day-to-day, month-to-month finances;
- having the capacity to absorb a financial shock;
- being on track to meet financial goals; and
- having the financial freedom to make the choices that allow one to enjoy life.

# FWB Intended to Be Independent of Income:



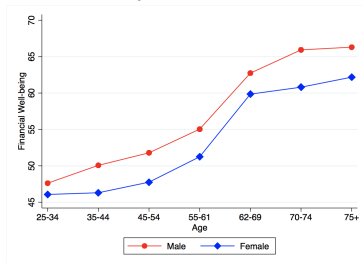
# What Do We Already Know State-mandated Financial Education Can Do?

- Studies show state-mandated financial education in high school:
  - ▶ increases credit scores and delinquency rates (Urban et al 2019 and Brown et al 2016);
  - ▶ improves postsecondary financing decisions (Stoddard and Urban 2019);
  - ▶ increases student loan repayment (Mangrum 2019);
  - ▶ decreases high cost borrowing (Harvey 2018);
  - ▶ increases savings and debt-to-income ratios for low-income populations (Harvey 2018)
- ...but what about subjective measures?

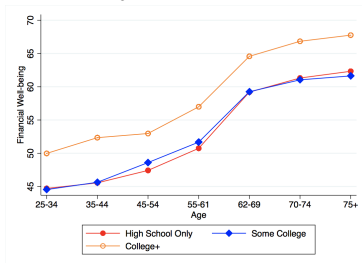
# Motivation

Gaps exist in FWB over the life course by education level and gender.

## By Gender



## By Education



# Research Questions

- Does state-mandated financial education affect FWB?
- Are the effects different for those who end education with a high school diploma? Or by gender?



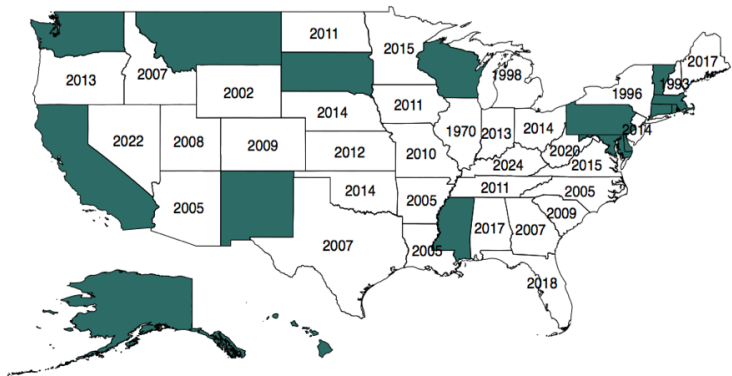
# Contribution

- 1 First to look at the causal effect of state-mandated financial education on a subjective measure of financial well-being.
- 2 Investigate the effect of state-mandated financial education on a longer-run outcome (through age 45), as policies with graduation requirements have been in existence for a long enough time to estimate these effects.
- 3 Heterogeneous effects: by educational attainment and gender.

# Financial Education Graduation Requirements

- Use updated state-level financial education requirements (from Schmeiser and Urban, 2014).
  - ▶ Located at [www.montana.edu/urban/research.html](http://www.montana.edu/urban/research.html)
- Include states that require students to:
  - 1 take a standalone course in personal finance prior to high school graduation,
  - 2 take a class that integrates personal finance into another class (e.g., economics),
  - 3 complete substantial standards in personal finance as part of a larger content area (e.g., social studies).
    - ★ We define substantial to mean more than simply adding interest rates to a social studies curriculum, or having a set of math lessons that includes personal finance examples without actually teaching personal finance.

# Map of Financial Education Graduation Requirements



Note: Year is the first graduating class required to complete personal finance coursework.

# High School Financial Education

What happens in high school financial education courses?

- Calculating and comparing debt with different interest rates,
- Understanding credit scores,
- Incurring long-term debt: mortgages, auto loans, student debt,
- Using credit cards,
- Examining how incomes may fluctuate and insuring against risk,
- Comparing salaries across occupations and making monthly budgets.

# How Might High School Financial Education Courses Affect FWB?

**Expectation Change** Learning about future income and budgeting could give 17-18 year olds a better expectation of future financial situations. This could either (1) change goals or (2) change ability to meet current goals (perhaps more realistically).

**Behavior Change** Learning about how to make smarter financial decisions early in life (e.g., not rack up credit card debt on unnecessary consumption early in life) could improve financial situations early in life, increasing FWB in the long-run.

## National Financial Capability Study (NFCS)

- Nationally representative study (also state-representative).
- 2018 data includes FWB scale measure.
- Restrict sample to 18–45, population for which we can document policy effects in a pre- and post-period.
- Final samples: 12,228 (2018).

# Method: Difference-in-Difference

- We compare students in states with financial education graduation requirements before and after the requirements took effect.
- We then compare students in states without financial education graduation requirements across the same time periods.
- Comparing the differences in growth rates gives us the causal effect of financial education on FWB.

# Method: Difference-in-Difference

2006



NM has no financial education graduation requirement.



2007



2006



TX introduces graduation requirement with graduating class of 2007.

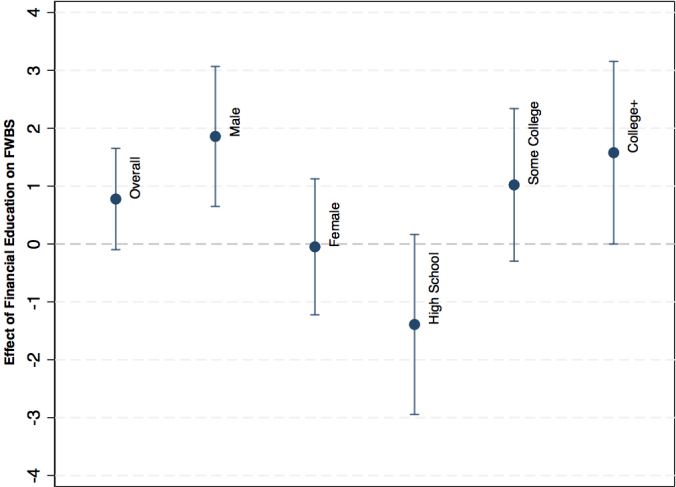


2007

16



# Results



## Results: Which Questions Drive the Effects?

Group	financial education mandate...
Men	<ul style="list-style-type: none"><li>↓ concerned money they have won't last.</li><li>↓ likely to feel like they will never have the things they want in life because of their money situation.</li><li>↓ likely to feel like their finances control their lives.</li></ul>
Women	see no changes.

# Results: Which Questions Drive the Effects by Education?

Group	financial education mandate...
HS Diploma Only	↑ likely to feel like they will never have the things they want in life because of their money situation.
Some College	↑ likely to say they have money left over at the end of the month.
College Degree +	↓ likely to feel like they will never have the things they want in life because of their money situation. ↓ concerned that the money they have or will save won't last.

# Interpreting Effect Sizes

Compare to another shock: job loss.

- Prior study: job loss reduces FWB by 4.2 points for the full population.
- State-mandated financial education increases FWB for men in the full sample by 1.8 points, roughly one quarter of the effect of job loss. This is 44% of the effect size of a job loss.
- Caveat: job loss is episodic; financial knowledge is ideally retained/augmented over life course.
- Further, only 48% of schools within states that have graduation requirements comply. This makes the effect of the education itself likely double the estimated size.

# Changes to *Objective* Financial Situations

- We see some improvements in objective financial situations due to state-mandated financial education:
  - ▶ increased likelihood of holding a rainy day account or checking/savings account for both men and women.
  - ▶ increased likelihood to figure out how much is needed for retirement, among people with at least some college.
- While there are no clear gains for those who only hold a high school diploma, there is also no harm to FWB due to financial education.

# What is Not Driving Our Effects?

We can rule out the following alternatives:

- household formation: effects are similar for single and married individuals.
- changes in income: financial education does not really affect earnings.
- one specific state: drop each state one at a time and results do not change.
- objective financial situation: controlling for asset levels or household income does not change effects.

# Conclusions

- Based on previous research, state-mandated high school financial education improves financial behaviors.
- It also improves FWB for men and those with at least some college.
  - ▶ Both effects are observed over many years post-high school.
- People who end their education with a HS diploma in states with mandated financial education policies show gains for other outcomes, but not FWB in our study. It lowers FWB...
  - ▶ Financial education may raise awareness of financial fragility and result in lower expectations about one's financial future, particularly for individuals from economically disadvantaged groups.
  - ▶ Policies promoting financial education in high school may be increasing the FWB gap between those with and without a college education by contributing to differences in aspirations and disparities in life trajectories.