The Effect of High School Financial Education Mandates on Future Educational Debt Outcomes

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Abstract

Recent research has highlighted the impact that state mandates requiring financial education for high school graduation have on improving students' and young adults' decision making on student loans and educational debt. This paper expands on that work by focusing on the longer-term effects of such mandates on young adult's difficulty repaying student debt using multiple waves of the Federal Reserve's SHED survey. Using variation in the timing of financial education mandates across states and multiple waves of the SHED between 2013 and 2019, a difference-in-differences model finds that financial education mandates marginally decrease the likelihood that young adults aged 22-30 fall behind on their educational debt payments. However, after examining the impact on subsets based on reported levels of financial wellbeing, the effect is large and significant only for individuals who report at least 'doing OK' financially but no longer significant for those either 'struggling to get by' or 'just getting by', after controlling for income. Additionally, after also running more robust difference-in-differences methods and event study models meant to account for differences in treatment timing, the main effect is no longer statistically significant, but the effect for sample that is 'doing OK' is robust. This suggests that state mandates for high school financial education may have a broad impact on future student debt hardship, but that the benefits are likely to be concentrated among those who are not facing financial hardship. Future research should investigate more closely how different subsets of individuals fair from broad policy tools like state educational mandates and how financial wellbeing, income, and other factors interact to moderate any effects that mandates may have. Research should also compare how the impacts of financial education courses compare to other potential interventions, such as just-in-time preparation and financial counselling for young adults as they choose to borrow and begin to have to make payments on their debt.

Introduction

State mandates requiring financial education for graduation have become an increasingly popular tool used by state policymakers to attempt to improve students' financial capabilities. Urban (2022) reports that as of 2020, 35 states had some form of graduation requirement that included completing financial education training. At the most aggressive end of that spectrum, five states required a full semester of personal finance courses. These mandates have been used to study the impact of financial education on young peoples' proximate and future debt decisions (Stoddard & Urban, 2019; Brown, et al. 2016).

One of the first major financial decisions many young people make close to the time of receiving financial education in a High School setting is borrowing for college. In some cases, understanding loan risk may foreclose choosing to pursue higher education. Despite the importance of these decisions, many students misunderstand aspects of their decisions when borrowing and repaying their educational debt (Hoyt 2020). Lin, Lusardi and their coauthors (2016) find that many college graduates regret decisions that they made regarding their student loans. Artavanis and Karra (2020) found that college students generally have low levels of financial literacy, suggesting that additional financial education may help to improve student debt decisions and repayment behaviors. Given that young college students tend to take on high levels of debt when they have limited to no earned income and uncertain future earnings potential, decisions made on loan types early in life can compound debt over time, leading to persistent financial problems later in life.

To the extent that the problem is one of financial knowledge and capabilities, high school-based financial education courses plays an important role in improving decision-making by providing specific knowledge relevant to student loan decisions close to when those decision must be made. Past research

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by Stoddard & Urban (2019) found that, as a result of high school financial education requirements, students shift to lower-cost financing options and rely less on credit card balances to help fund their educations. Research using similar methods has also found that financial education mandates improve young adult's credit management (Cole et al. 2015, Urban et al. 2020) and repayment behavior (Brown et al. 2016) and reduce the likelihood that they use alternative financial services (Harvey 2019).

This study seeks to expand on these findings by exploring the relationship between mandated high school financial education and difficulties making payments on education debt. It examines the extent to which potential improvements in initial higher education financing may translate to future, self-reported difficulty making educational debt payments for young adults aged 22 to 30. It examines the differential effect based on reported subjective financial well-being and the time elapsed since receiving financial education classes. State mandates for financial education in high school may serve different types of individuals depending on their future financial circumstances and have shorter-term impacts that diminish over time. Uniform state mandated financial education may be challenging to consider as a standard curriculum since family experience, capacity, future financial circumstances, and skills vary, and the learning outcomes appear to diminish over time.

To pursue these questions, the study exploits variation in the adoption of high school financial education mandates alongside consecutive entries in the Federal Reserve's SHED database from 2013 to 2019. In particular, it examines the SHED question asking if an individual is behind on payments or in collections for their educational debt in that given year and sees if evidence of potential exposure to financial education in high school as a result of a state mandate explains whether or not answers to that question are true. This paper uses a difference-in-differences design along with state, year, and graduation cohort fixed effects to test the effect of mandates on student debt payment difficulties. Given recent developments in the difference-and-differences literature concerning the potential of negative weights for treatment effects when there is staggered treatment, an event-study type analysis is also included to explore how the magnitude of the effect varies (Roth et al. 2023).

The main DiD analysis shows that, after controlling for potential demographic and time-varying economic trends that may disrupt parallel trends assumptions, individuals in states who were exposed to mandated financial education in high school were approximately 5.5% less likely to be behind or in collections for their educational debt. The subset analysis found that the effect was larger for those who did not report "living comfortably", the top level on the SHED's self-reported financial well-being scale. However, looking more closely at that subset, the analysis finds that the effects are largest and constrained to those individuals who report that they are at least "doing okay" and that there is no statistically significant impact of state financial education mandates for those who are "just getting by" or "struggling to get by". These findings suggest that state mandated financial education to graduate high school may have some positive impact on educational debt outcomes for young adults at the margins, but that these cannot overcome poor financial situations. The two-staged DiD models and event study provide further evidence that any effects from financial education are consolidated among those at least 'doing OK'. To some extent, reporting at least 'doing OK' may capture some outcomes of financial education, but the fact that there are balanced treatment and control groups across the financial wellbeing subsets suggests that many individuals receiving high school education may not be benefitting as intended. As student debt payments continue, other policies beyond an emphasis on financial education should assist those who are less financially secure.

Background

The cost of higher education in the USA has created a persistent economic challenge for the nation because many students incumber themselves with very high debt that reinforces traditional wealth gaps and perpetuates a delay in wealth creation (Perry, Steinbaum, & Romer. 2021). According to NCES data on 2017-18 college graduates, 51.8% of completers received loans at some point to an average cumulative amount of $23,020 (National Center for Education Statistics). The total outstanding federal loan balance is $1.620 trillion and is held by more than 43 million borrowers or about 13% of the total US population (Hanson 2023). Looking at SHED data between 2013 and 2019, 19.16% of respondent who have debt for their own education indicate being behind on payments or in collections—the same figure is 15.19% for borrowers aged 22 to 30 (Federal Reserve). With the emergence of federal plans to restart federal educational debt payments affecting many of these borrowers, greater attention will be needed for

what drives debt repayment struggles for the remaining borrowers and what policies may help to mitigate those challenges. If high school financial education requirements have an impact on longer-term outcomes as well as initial decision making, then there is a case for more states to adopt similar practices and to expand financial education related to student debt within and outside of high school.

Factors Influencing Individuals' Educational Debt Behaviors

Many studies of college students' and young adults' financial behaviors and well-being. A review of studies conducted in the 2010s by Bartholomae and Fox (2021) found that college student financial behavior was an outcome of personal characteristics, family relationships, and socialization processes. Research has explored the importance of parent and family communication on student loans and how they are experienced during repayment (Miller et al. 2021; Balmuth et al. 2021). Others have emphasized the role of individual characteristics like problem-solving skills, self-leadership, and financial self-efficacy (Festa & Knotts 2020; Shim et al. 2019). External support and counseling are also correlated with better educational debt outcomes, but many borrowers are reluctant to seek it out (Miller et al. 2022).

In addition, financial capability and knowledge have been linked to educational debt stress. Fan and Chatterjee (2019) found that individuals receiving financial education at some point were less likely to have made a late student loan payment and were less likely to be concerned about making future payments. However, other studies have shown that those with student loans generally have lower financial knowledge scores (Li, 2018) and that current students and dropouts have lower financial capability scores than graduates (Xiao et al., 2021). Taken together, these results suggest a need for financial education, over and above current high school mandates, to promote better future educational debt outcomes.

There are descriptive strands of research that show low levels of financial literacy and repayment behaviors among college students. Artavanis and Karra (2020) find low levels of financial literacy among college students that correlates to being more likely to underestimate future payments, making them more at risk when confronted with future economic shocks. Studies have found that financial education moderates the negative effect that student loans have on perceived financial satisfaction (Xiao & Tae Kim 2022).

Research on State Financial Education Mandates' Impact on Financial Behaviors

Multiple studies have used variation in state-level financial education mandates to explore how educational mandates may result in better financial decision-making for high school students. One early study focused on young adult's credit behavior, finding limited to no results of math and economics education mandates (Bernheim, Garrett & Maki, 2001). However, follow-up studies using fixed-effects and including financial education mandates found that financial education and math education improved young adults' credit behaviors (Brown et al. 2016). Brown and colleagues find that mathematics and financial education decreases reliance on nonstudent debt and improves credit card and other debt repayment behaviors. Interestingly, Brown and colleagues found that economics education modestly increases the likelihood of holding outstanding debt and increases repayment difficulties. More recently, Urban and coauthors studied the impacts of financial education mandates on the credit report outcomes for those aged 18 to 21 for whom effects of the policy are likely to be greatest. They find that financial education mandates led to fewer defaults and higher credit scores, though the average results mask important state-level heterogeneity (Urban et al. 2020).

Outside of credit report data, other studies examine the propensity of young adults to use alternative financial services and finds that financial education mandates reduce the likelihood and frequency of payday borrowing (Harvey 2019). Most relevant to the questions explored in this paper is research that examines the relationship between financial education and student debt decisions. In a paper by Stoddard and Urban, they find that financial education graduation requirements shift students from high- to low-cost financing. In particular, the mandates increase aid applications, acceptance of federal loans, and decrease the likelihood of holding credit card balances and that less affluent students work while enrolled and borrow private loans (Stoddard & Urban 2019). This study builds on that research

by assessing the impact that those initial positive decisions may have on future payment difficulty in needs for loans to go to collections.

Data

This analysis takes advantage of a new dataset and R package of financial education resources (Dwyer, Field & Attaway 2021). This package includes the full collection of SHED survey responses between 2013 and 2019 and state-level economic and demographic data used in this analysis.

Data on financial education mandates was drawn from the open data associated with an analysis conducted by Urban and Schmeiser (2020) indicating whether or not a state had a financial education requirement for all years between 1970 and 2022. Given our subset examines 22- to 30-year-olds who graduated at least four years prior to taking a SHED survey between 2013 and 2019, we exploit the variation in adoption of state mandates that occurred between 2001 and 2015.

Demographic data and individual-level data on educational debt difficulties came from the SHED surveys conducted between 2013 and 2019. These were also merged with a dataset that contained state-level economic covariates. The outcome of interest came from a question that asked if an individual was behind on payments or if they were in collections for any educational loan taken out for their own education. In the 2013 version of the survey, this was asked as two separate questions for being behind and in collections, but in all subsequent years the questions were combined. The outcome was coded as 1 for those who answered yes and as 0 for those who answered no and the small number of individuals who refused to answer.

The total sample of SHED surveys is 57,958. However, this analysis examined only those who graduated high school and would therefore be exposed to a financial education mandate if their state passed a mandate prior to them graduating. It also only examines the effect on those who report having educational debt used to fund their own education. After making those limitations and constraining the sample to young adults aged 22 to 30, the total sample size is reduced to 3,133.

Methods

This study follows a similar methodology to others that exploit the introduction of financial education mandates. It uses a difference-in-differences design to compare how the staggered introduction of financial education mandates across and within states resulted in differential likelihood of individuals to report being behind on their student debt payments or in collections. In particular, it uses the following model:

$$Y_{i,s,t} = \beta_0 + \beta_1 FinEd_{i,s,t} + \beta X_i + \beta X_s + \delta_s + \delta_c + \gamma_t + \varepsilon_{i,s,t}$$

Here, $Y_{i,s,t}$ is the independent variable of interest. In this case it is a binary indicator of whether individual, i, in state, s, and year, t, reports being behind on their student debt payments or in collections in a given SHED survey year. β_1 is the coefficient of interest and represents the effect of the treatment $FinEd_{i,s,t}$, which is coded as 1 if individual i graduated from high school in a state that had a financial education mandate after the mandate was introduced. A set of time-varying and individual coefficients for each individual is controlled for by X_i. These covariates include dummies for gender, race and ethnicity, being married, and employment status. It also includes a categorical variable for income levels reported in the surveys. There are also state-level covariates for unemployment and GDP denoted by X_s, as these may vary over time within states across the set of years for which individuals were surveyed. The model includes state-level fixed effects and year fixed effects to control for all time-invariant sources of variation that may exist at the state levels. Finally, graduation cohort fixed effects are included to control for differences that may occur nationally for different graduation cohorts in the sample. For example, those graduating in and around the Great Recession may face fundamentally different challenges with their student debt than other cohorts, even after controlling for other factors. Standard errors are clustered at the state level for the analysis that follows.

This identification and estimation strategy makes several important assumptions. The first is that there are parallel trends between the control and treatment groups. While there may be reason to doubt

that this holds, in this model it only has to hold conditional on the covariates that were included (see Roth et al. 2023). Therefore, parallel trends or similar development of educational debt hardship are assumed to hold for treatment and control groups (absent treatment) conditioned on gender, race, education level, marital status, and income. Second, treatment status is also determined based on graduation year which is set at the year that the surveyed individual turns 18. This method is used by others examining the impact of state mandates for financial education (Stoddard & Urban 2019). A third and important assumption is that individuals are presumed to have graduated High School from the state in which they were surveyed. Past research has shown that about 93% of individuals stay in the same state from 18 to 22 (Brown et al. 2016), but there may be reason to question whether this trend continues into adulthood and may vary for college graduates or attendees. Overall, the range of elapsed time between treatment and survey response in the SHED data varied from 4 years (by design given that the sample of interest begins at age 22) to 12 years. This limitation should be investigated in more detail in future work using panel or other survey data where respondents report the state in which they graduated high school.

There are reasons to believe that the effect of the treatment may be heterogeneous over that elapsed time. For example, two individuals surveyed in 2014 may have very different educational debt outcomes depending on whether they were received financial education teaching in 2010 or in 2002. Including graduation cohort fixed-effects helps to control for this in the overall model, but the recent difference-in-differences literature has found that static specifications like the one used here can yield invalid treatment effects when there is heterogeneity of treatment effects across time resulting in some longer-run treatment effects receiving negative weights in the aggregate model (Goodman-Bacon 2021). To address this concern, and improve the intuition of some of the findings, the study also reports event-study style estimates that vary given the time from the treatment following the two-stage difference-in-differences method detailed by Gardner (2022). This removes so-called 'forbidden comparisons' between treatment groups in a specific time period and previously treated groups and only allows treatment groups to be compared to either never treated or yet-to-be-treated units.

Results

Descriptive statistics for the sample of 22- to 30-year-olds with educational debt are found in Table 1 below. Of the full sample, 978 live in a state where a financial education mandate was in place at the time they graduated high school and the other 2,155 comprise the comparison group. In general, the treatment and comparison groups are similar, with the only potential differences of not being that the control group is very slightly older and more likely to be married and employed. Overall, I do not expect these differences to affect the variables of interest, particularly because they are all controlled for in the model either directly or through the use of survey and cohort fixed effects.

Table 1

Balance Table of Covariates and Outcome Variable

Variables	Control Mean	Treatment Mean	P Value
Bachelors	0.58	0.57	0.63
Behind on Student Debt Payments	0.16	0.13	0.01
Income Below 50k	0.45	0.44	0.50
Black	0.12	0.14	0.15
Hispanic	0.15	0.16	0.30
Employed	0.81	0.78	0.11
Female	0.66	0.67	0.57
Married	0.28	0.25	0.10
Age	26.90	26.03	0.00

The descriptive statistics in Table 1 also highlight the differences in the outcome variables of interest for the study. While 16.3% of those in the control group report being behind on their educational debt payments or in collections, 12.7% of those in the treatment group report the same.

Main Static DiD Model:

The results from the main model used to explore the relationship between state mandates requiring financial education to graduate high school are reported in Table 2. Linear probability models and logistic regression models are reported for both a naïve regression that only includes the fixed effects and the full model with the individual- and state-level covariates. The results are significant at the five percent confidence level for both the GLM and the logit model with covariates, though the naïve regressions are only significant at the ten percent level.

Table 2

Effect of Financial Education Mandates on Being Behind on Educational Debt Payments (Full Sample)

Dependent Variable	Behind on Student Debt Payments			
Model:	(1) Naïve DiD	(2) DiD w/ Covariates	(3) Naïve Logit	(4) Logit w/ Covariates
Variables				
Financial Education	-0.0495 *	-0.0547 **	-0.3345 *	-0.5340 **
	(0.0269)	(0.0263)	(0.2027)	(0.2408)
Fixed-Effects				
State	Yes	Yes	Yes	Yes
Graduation Year	Yes	Yes	Yes	Yes
Survey Year	Yes	Yes	Yes	Yes
Observations	3,133	3,133	3,106	3,106

Note. Standard errors displayed in parentheses and clustered at the state level
*$p < .10$. **$p < .05$. ***$p < .01$

Table 2 illustrates that there may be an effect between financial education mandates and longer-term student debt outcomes. The linear probability models indicate that the likelihood of being behind on educational debt payments during their SHED response is about 5.5% lower for individuals who graduate high school in a state after they passed a financial education mandate.

Subset Analysis

In addition to looking at the overall sample, the study also examines if the effects vary for different subsamples, most notably if the treatment holds or varies based on self-reported levels of financial wellbeing. These measures are collected from a question that remained consistent over the survey run other than the addition of the word overall and asked, "Overall, which of the following best describes how well you are managing financially these days?" The allowed responses were "finding it difficult to get by", "just getting by", "doing okay", and "living comfortably". The analysis in Table 3 below breaks out the results for the entire group not indicating that they are living comfortably and then divides that group into a subset that report doing okay and a separate subset that are finding it difficult to or just getting by.

Table 3

Effect of Financial Education Mandates on Being Behind on Educational Debt Payments (Subset Not 'Living Comfortable')

Dependent Variable	Behind on Student Debt Payments			
Model:	(1) Naïve DiD	(2) DiD w/ Covariates	(3) Naïve Logit	(4) Logit w/ Covariates
Variables				
Financial Education	-0.0927 **	-0.0906 **	-0.6435 ***	-0.7501 ***
	(0.0348)	(0.0348)	(0.2376)	(0.2702)
Fixed-Effects				
State	Yes	Yes	Yes	Yes
Graduation Year	Yes	Yes	Yes	Yes
Survey Year	Yes	Yes	Yes	Yes
Observations	2,621	2,621	2,594	2,594

Note. Standard errors displayed in parentheses and clustered at the state level
*$p < .10$. **$p < .05$. ***$p < .01$

The Table 3 estimates show that the effects for the subsample that do not report the highest level of financial well-being experience a stronger effect from being exposed to the financial education mandates than the overall sample. This trend makes sense, given that individuals able to 'live comfortably' would likely struggle less with educational debt payments regardless of their level of past financial education. In Table 4, we further break down this subset and look at the full covariate models for both the groups who report "doing okay" and those "struggling to get by" or "just getting by".

Table 4

Effect of Financial Education Mandates on Being Behind on Educational Debt Payments ('Doing OK' and 'Struggling Financially' Subsets)

Dependent Variable	Behind on Student Debt Payments			
Subset	Report At Least 'Doing OK'		Report Struggling Financially	
Model:	(1) DiD w/ Covariates	(2) Logit w/ Covariates	(3) DiD w/ Covariates	(4) Logit w/ Covariates
Variables				
Financial Education	-0.1277 ***	-1.830 ***	-0.0638	-0.4491
	(0.0334)	(0.6554)	(0.0524)	(0.3431)
Fixed-Effects				
State	Yes	Yes	Yes	Yes
Graduation Year	Yes	Yes	Yes	Yes
Survey Year	Yes	Yes	Yes	Yes
Observations	1,355	1,230	1,265	1,252

Note. Standard errors displayed in parentheses and clustered at the state level
*$p < .10$. **$p < .05$. ***$p < .01$

The coefficients in model 1 and 2 illustrated in Table 4 represent the effect of financial education on the 'doing okay' sample are large and significant. Meanwhile, looking at those who are struggling or just making ends meet, the effect sizes are now close to the original data for the full sample and are not significant at any standard confidence level. This indicates that the state mandated financial education graduation requirements have the strongest effects for groups at the margins, but that those who rate their financial wellbeing as either very good or poor may not see the same benefits.

Robustness in the Two-Stage Model

As mentioned, one potential issue with the identification strategy used here is the staggered treatment of individuals in our sample and their difference elapsed time from financial education program to survey response may bias the treatment effect estimates. One method to address this is to conduct a dynamic two-way fixed effects difference-in-differences model that includes dummy variables for individual's time from treatment. This helps deal with heterogeneous effects across treatment time, but it still may result in negatively weighted treatments that bias the overall estimates when there is heterogeneity among groups in the sample, which we just established in our subset analysis (Roth et al., 2022).

We check the robustness of our estimates by producing dynamic estimates and event-study estimates following the two-stage difference-in-differences method outlined by Gardner (2022). This compares the treatment units in each treatment period only to those who have not yet been treated to calculate separate treatment effects for each relative time from treatment. Given our sample construction, this ranges from four to twelve years post-high school graduation. Because this and similar models rely more heavily on the parallel trends and non-anticipation assumptions that all difference-in-differences models rely on, we also include all covariates and fixed-effects in the full model. Table 5 shows the new overall static estimates for each subset examined before using this specification. The effects were not significant for the full sample or not living comfortably sample, however, the majority of the effect is dominated by those who are doing okay is still seen.

Table 5

Effect of Financial Education Mandates on Being Behind on Educational Debt Payments Using a Two-Stage DiD Model For the Full Sample and Different Subsets

Dependent Variable	Behind on Student Debt Payments			
	(1)	(2)	(3)	(4)
Subset:	Full Sample	Not 'Living Comfortably'	Struggling Financially	Doing OK Financially
Variables				
Financial Education	0.0066	-0.0346	-0.0390	-0.1233 ***
	(0.0560)	(0.0746)	(0.0842)	(0.0340)
Observations	2,692	2,245	1,070	1,080

Note. Standard errors displayed in parentheses and clustered at the state level
*p < .10. **p < .05. ***p < .01

Comparison of these results with the main model results can be visualized by plotting the coefficients and corresponding confidence intervals for the main model and two-staged model. Figure 3 shows these results for they full sample and each subsample described above, along with a reference for a subsample of individuals who are 'living comfortably'. As can be seen the significant results for the full sample and the 'not comfortable' subsample are not robust in the two-stage model. However, the effects for the 'doing ok' subsample is robust to the updated model. This lends further evidence to the fact that the impact of mandated financial education coursework in high school is concentrated among those at

least 'doing ok' financially and that this may be a necessary mechanism through which financial education can promote better debt outcomes that does not translate automatically to all individuals receiving financial education. Given the large confidence bands for two-staged coefficients for all but the 'doing ok' sample, future research with expanded samples should examine how effects of financial education mandates may vary differently across samples.

Figure 1

Financial Education Effect Sizes and Confidence Intervals for Full Sample and Subsets For Base Model With and Without Covariates and The Two-Stage Estimates


Financial Education Effect Sizes for Full Sample and Subsets Show Larger and More Robust Effects For Those Doing OK Financially
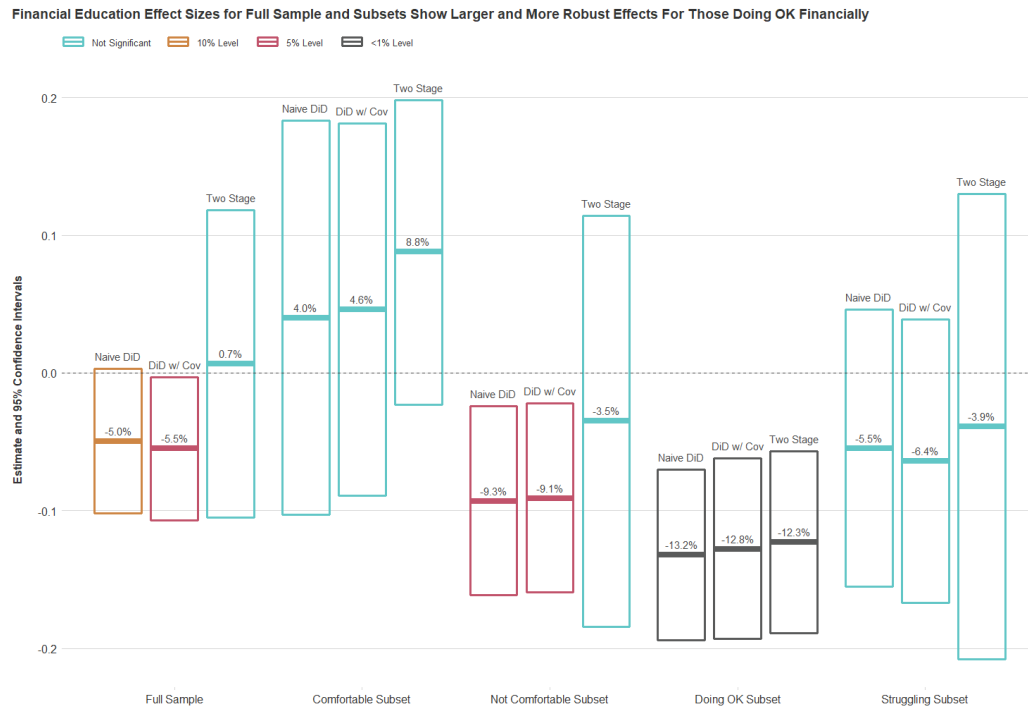
Event Study Findings

The two-staged DiD method also allows for dynamic Figure 3, below, provides event study plots of the covariate of the treatment effect for each year in the not 'living comfortably' sample as well as the 'doing okay' sample, for which there are more interesting findings. Both graphs show close to parallel trends in the pre-treatment periods (null effects for most years), though this appears to be a better assumption for the doing ok subset. In the treatment periods, the effects are significant in the first year but then quickly taper off for the larger sample. For the 'doing ok' sample, the effects are originally much larger in the first years post-treatment and then slowly decrease over time. This result appears to confirm prior findings that financial education mandates have marginal effects on the group of borrowers who are doing ok and demonstrates that these effects shrink as a person is more removed from that education. In general, the plots for the full sample and the struggling sample look very similar to the not comfortable plot below.

Figure 2

Event Study Plots of Treatment Effects on the Likelihood of Being Behind on Educational Debt Payments

Event Study: Staggered Treatment (Not Comfortable Sample)

Event Study: Staggered Treatment (Doing Okay Sample)
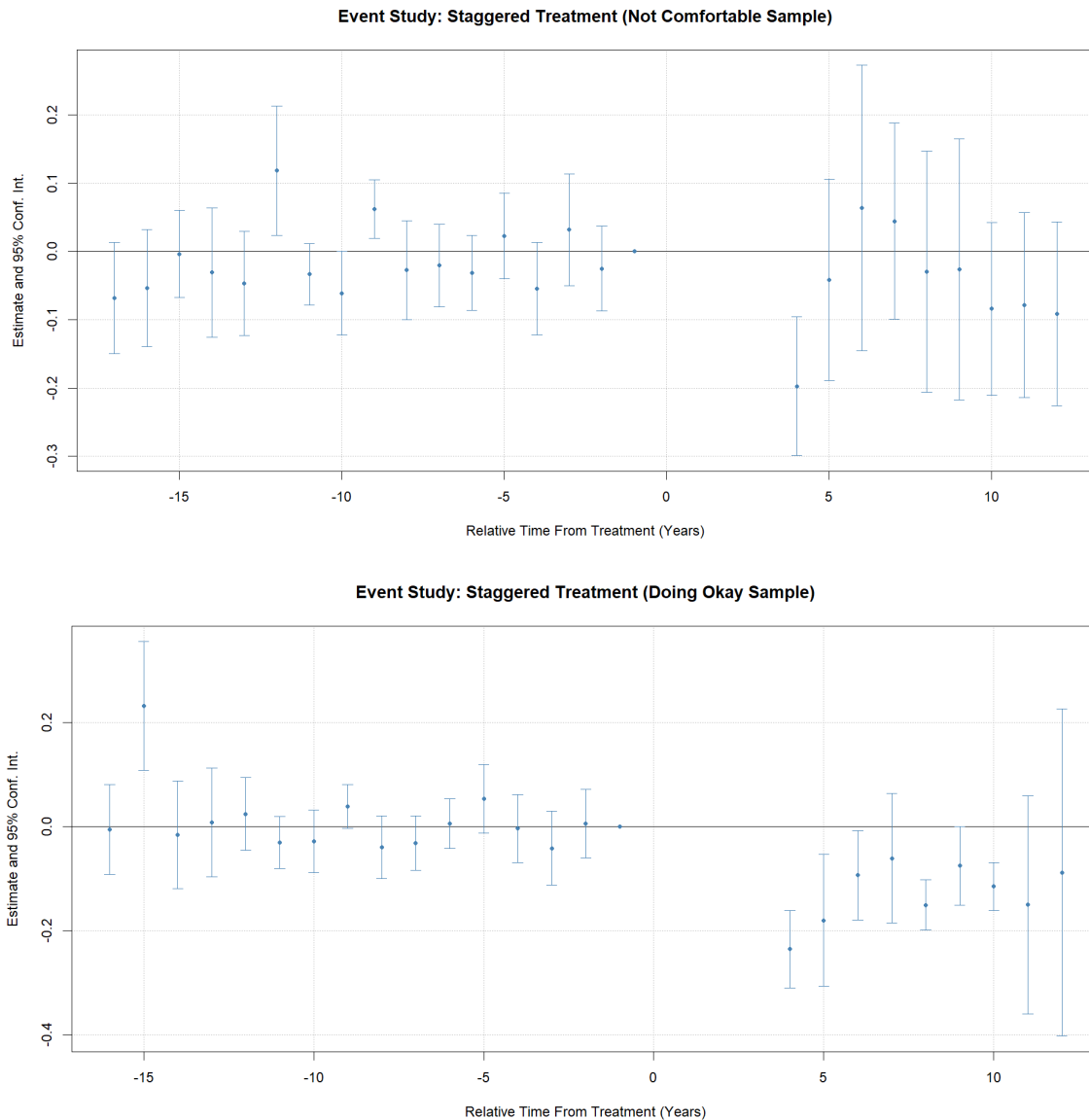
Discussion

This analysis indicates that state mandates requiring financial education for high school graduation can improve students' future education debt outcomes, particularly closer to graduation and for those who report 'doing ok' financially. Unfortunately, the impacts may not be an effective method to reduce the likelihood of debtors falling into arrears or collections programs. These borrowers are precisely in the greatest need of more support.

As policymakers examine options for helping those holding educational debt, they should consider diversity and heterogeneity of need. The results here indicate that financial education mandates are a blunt device that primarily benefit those with the future financial means to follow standard financial advice around loans. Policymakers should consider how borrowers who are struggling financially can

receive more timely and possibly supplementary education and assistance with negotiating more favorable repayment plans.

Financial education is a lifelong process. The results suggest that high school education impacts diminishes over a twelve year post-high school period, and may require supplementary learning for those who struggle. Others have advocated for 'just-in-time' financial education that takes place right before important financial decisions are made (Fernandes, Lynch, & Netemeyer 2014). High school financial education requirements for graduation, if they take place during the last two years prior to graduation, may serve this role for students making initial borrowing decisions. However, similar services may not exist as students enter into the repayment plans or choose refinancing options to decide what best serves their personal needs and goals.

Mandates may reinforce rather than improve existing inequalities. While the models above controlled for race and income, these may be crucial aspects that interact with the effects of financial education. Given existing disparities in the prevalence and amount of student debt and overall wealth inequality, the extent to which financial education could help reduce those issues is critical. Within the sample used here, Black and Hispanic borrowers are more likely to be behind on student debt and less likely to report at least 'doing ok' financially (see Figure 4).

Figure 3

Percent of Borrowers Who Report Being Behind on Their Student Debt (Left Graph) and Report 'Doing OK' Financially (Right Graph) by Race and FinEd Treatment Status
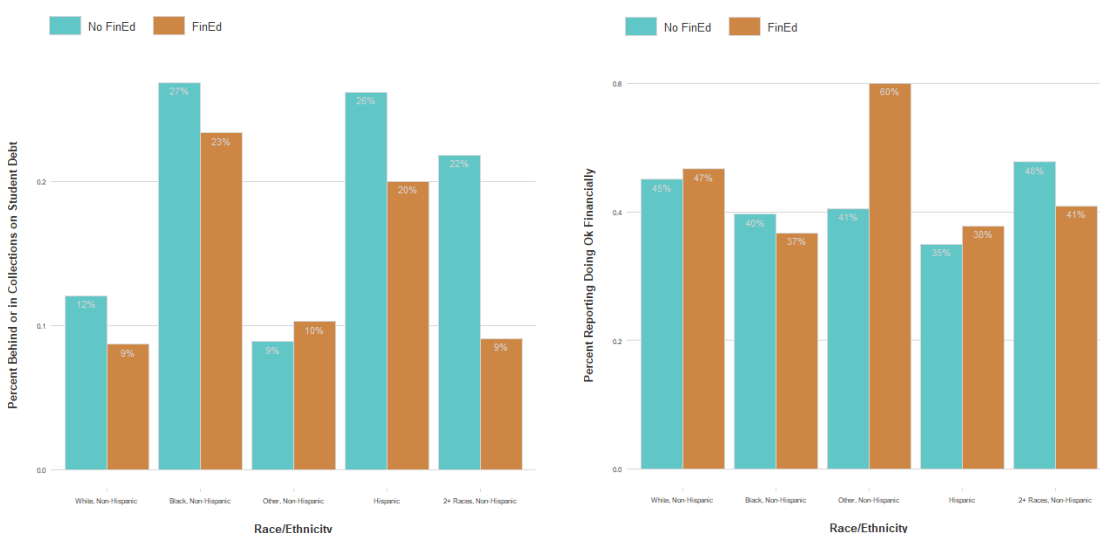
Source: Federal Reserve Survey of Household Economics and Decisionmaking

With the exception of Black respondents reporting 'doing ok', these differences appear to be somewhat modified by the presence of high school financial education mandates. However, this is just based loosely on descriptive statistics and is not sufficient to make up the gap to white respondents. To the extent that Black and Hispanic borrowers are less likely to be doing well financially, policy interventions focused on reducing student debt hardship that work better for that subset of borrowers may unintendedly contribute to existing student debt disparities. Other research has looked at financial literacy and the overall racial wealth gap (Hamilton & Darity, 2017). Future research, where sample sizes allow for it, should investigate these interactions more closely particularly as they pertain to educational debt.

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