The Effects of Economic and Financial Coursework on Education Attainment and EITC claims in the United States: 1998-2019

By

Jacob J. S. Hunt

B.Sc., Dalhousie University, 2019

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

MASTER OF ARTS

in the Department of Economics

We acknowledge with respect the Lekwungen peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

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Abstract

This paper examines the effects of offered and required coursework covering financial and economic topics in U.S. high schools over the past 20 years. Using a difference-in-differences framework, I look at the effects of economic and financial curricula on several post high school outcomes such as education attainment of potentially exposed groups, tax credit filing behaviour, and differences in poverty status. Analysis is done with 3 levels of geographic fixed effects; at the state level, county level, and contiguous county pairs that straddle state borders where discontinuities in coursework offerings or requirements are present. The results of this study do not suggest that potential exposure to economic or financial courses, whether they be offered or required, has any significant economic or statistical impact on education attainment for the affected population at the high school or post-secondary level. Exposure to coursework does not have a large economic impact on poverty reduction in potentially affected populations, but does result in some increase in both the likelihood of claiming the Earned Income Tax Credit, as well as the amount claimed.

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Dedications

I'd like to dedicate this paper to:

My family and friends who have supported me in my scholarly endeavours, both those I knew before moving to Victoria, and new ones I have made since starting my journey here.

My partner, Kristen, for her contributions to the fields of "Big" and "Little" economics.

And Dr. Maggie Jones, whose endless patience, support, and encouragement have helped shape not only my work, but my perspective on what it means to be an economist, and how endless tiny changes can eventually lead to something meaningful.

Introduction

In 1998, 16 U.S. states required a course covering economic topics to be offered to high school students, with only 1 state requiring a course in personal finance to be offered. Since then, the number of states that offer a dedicated course in economics has risen to 25, with 24 offering a course in personal finance, with some overlap of states that offer both simultaneously. The increased adoption of economic and financial coursework in some states provides an opportunity to examine the impacts that such courses have on students who have the option to take them while they are in high school, assuming that the aim of implementing such changes in high school curriculum is to increase economic and financial literacy among students.

Previous studies on how coursework or additional information may affect tax filing behaviours have found a small but positive impact on tax filing behaviours, but the role of economic and financial coursework may also have larger implications for post high school education outcomes. Does offering a course covering such topics encourage students to pursue education beyond high school, or does it present another barrier for students that might be just on the margin of graduating? Are students who took a course in finance or economics that enter the work force right after high school claiming more tax credits that they may be eligible for compared to those who never took such a course? The Council for Economic Education (CEE) maintains a record of which states have financial and economic curriculum in place, and a basic structure of how it is offered, dating back to 1998. Using this data in congruence with US microdata provided by the Integrated Public Use Microdata Series (IPUMS), I explore whether prolonged exposure to such topics, which I define as the approximate length of a year of high school, has long term effects on observable financial habits and the amount of schooling acquired by students. The limitations present in the data allows for a cursory look at how the current financial and economic courses offered and required in some U.S. states might affect student's lives after they leave high school.

Providing financial and economic coursework in high schools may result in an increased uptake in social assistance programs for those who are eligible, but also a reduction in the overall use of such programs. Programs like the Earned Income Tax Credit and other programs aimed at assisting low

income earners should experience increased uptake among those who are eligible, and a reduction in unclaimed benefits. Additional benefits that tax filers may be eligible for, such as childcare or spousal benefits, may also experience an increase in uptake due to better tax filing knowledge, though these are not examined in the presented analysis. Increased exposure may result in changes to other financial characteristics of the students, potentially allowing them to stop relying on social assistance programs more quickly than students who are not exposed to this additional information, or to avoid relying on them at all. This research aims to uncover the aggregate impact of these two competing effects, with more financial knowledge making potentially exposed students more aware of tax credits they may be eligible for, and how this increase in knowledge potentially leads to better financial habits, and less reliance on tax credits.

Required coursework in either subject may create barriers for students who are on the margin of obtaining their high school diploma. This could delay when they complete their degree, or dissuade them from completing it at all. My results suggest that neither required or offered coursework in economics or finance present a significant barrier to high school graduation. If students choose not to obtain their degree and enter the labour force, the number of possible low income tax credit claimants increases due to an increase in the supply of low-skilled labour. If these new workers lack the knowledge of how to navigate the tax system and the tax credits they are eligible for, tax credit uptake may decrease. Another potential outcome is an increased rate of students who enroll in post-secondary education programs. Students who had not previously considered pursuing higher education could find themselves drawn to the material covered in classes and may want to continue learning about such topics. An increase in financial knowledge may also result in better information on the returns to higher education for students, resulting in higher post-secondary attendance rates. My results also suggest that those potentially exposed to coursework regarding finance and economics while in high school do not have higher rates of post-secondary education attainment compared to those who were not exposed to coursework while in high school.

The rest of this paper is structured as follows: the Literature Review presents relevant past findings, and gaps that will be addressed in my work; the Data section details the main data sources I use for my analysis, as well as the limitations present; Summary Statistics provides an overview

of the sample used and comparisons between the treatment and control groups; Empirical Methods details the models used in my analysis, a description of all the geographic controls implemented, as well as the main assumptions made to overcome data limitations; the Results section details the main findings of my main specifications, as well as alternative specifications to ensure the validity of my results; the Conclusion section summarizes my results and includes recommendations for extensions of this research.

Literature Review

Economic and financial literacy can be defined as a person's understanding of economic and financial terms and principles, which can influence daily decisions involving spending, savings, and investment strategies. Misinformation and a lack of economic knowledge has been found by several studies to be one of the primary reasons the Financial Crisis in 2008 occurred, and why the following Great Recession persisted as long as it did (Jappelli, 2010; Sironi, 2017). Previous studies regarding financial and economic education in high school finds there to be a small positive effect on knowledge of certain topics but offers little insight into whether it offers measurable long-term gains for those who participate. Henager and Cude (2019) find that measures of financial literacy have significant effects on long-term financial behaviour, as measured by the possession of a retirement account or other investments, as well as short term behaviour, as measured by having an emergency fund or budget (p. 568). These results were consistent across all age groups in respect to their control group, ages 18 to 24, with the exception of the 55 to 64 years of age category (p. 569). They note that their results are based on survey data, so self-reporting may cause some bias in their results, and does not provide a concrete measure of increased financial or economic stability.

The results of Henager and Cude (2019) support the findings of Bhattacharya and Gill (2019), who report that the provision of a focused 8-week course on monetary and financial topics increased test scores for the treated sample over their pretest scores. Test scores between classes that focused on either monetary management or financial investment were not significantly different from one another (p. 222), suggesting that the exposure to topics related to finance is more important than the specific areas covered. Studies looking at differences in mathematics curriculum have come to similar conclusions, finding that those who were taught broad concepts on several topics scored better than those who were only exposed to specific topics on tests (Grouws et. at, 2013). Bhattacharya and Gill also note that their sample is subject to self selection bias, since teachers had full authority on whether their classes participated in the study, as well as if their classes would be part of the control or treatment group. Their results do not suggest that the enrolment in financial courses in high school has immediate or long-term effects on earnings or financial practices.

Economic literacy has also been found to be highly correlated with a person's level of education attainment (Walstad, 1997). After a small recession in 1990, Walstad (1997) used the opportunity to analyze public preferences of economic policies in the United States. He found that economic knowledge was the most consistently correlated variable with policy preferences of the sample population, measuring economic literacy by the participant's responses to a short questionnaire covering basic topics about economics and finance. Walstad concluded that education played a significant role in determining how well one performed on the test, with participant's score increasing as the post-secondary education attained by respondents increased. His results suggest that those who do not take a course in economics past the high school level do not score higher than those who have never taken a course in economics.

Walstad's methodology was replicated by studies after the Great Recession and came to similar conclusions. Evans (2015) follows the same structure as Walstad's (1997) analysis, including new policies for the participants to evaluate that were related to the contributing causes of the Great Recession. Evans found economic literacy to be one of the more consistent and significant predictors of policy preferences, but unlike Walstad (1997), also found political affiliation and race to be strongly correlated as well. Grimes et. al (2014) used the same questions as Evans (2015) and introduced an element of self assessment for participants to express how knowledgeable they felt with economics. They conclude that those who are more generous about their comfort with economics are more likely to answer economic questions incorrectly, and those with little to no post-secondary education were more prone to inflating their own understanding (Grimes et. al, 2014). Jappelli (2010) follows a similar methodology to the previous studies, focusing on a European sample. They find that economic literacy within a country is positively correlated with the percentage of the adult population with a college education.

Previous attempts at objectively measuring a person's financial or economic literacy have suffered from reporting bias, as individuals who self report to have a high level of economic knowledge score more poorly on economic questionnaires compared to those who report to have little or poor understanding of such topics (Grimes et. al, 2014). One potential solution is to examine how potential exposure to such courses might encourage students to pursue more education after leaving

high school, or how it affects uptake of certain social programs and tax credits that recent high school graduates could be eligible for. This may help remove elements of bias present in the self reporting nature of some of the discussed studies. Assuming that many high school graduates who choose to work directly after leaving high school are working in positions with lower wages than those who choose to enter the labour force with a higher level of education, the most accessible and impactful tax credit available to low wage earners in the Earned Income Tax Credit.

The Earned Income Tax Credit (EITC) was introduced in the United States in 1975 to provide additional support to workers with a low net income, here defined as the income individuals take home after taxes and any applicable deductions. The EITC has been expanded significantly since its introduction and is currently one of the largest social programs in the United States. The structure and eligibility of the Earned Income Tax Credit depends on filing status, gross income, and number of dependents. All tax filers are subject to a maximum amount of income they can make before they become ineligible for the EITC. Joint filers have a higher threshold of combined income before they become ineligible, and both types of filers, single and joint, experience a higher income threshold as the number of dependents increases. For all filers, the amount of investment income generated as of 2019, defined as income generated by rents, interest, capital gains or royalties must be less than $3,600 to qualify (Internal Revenue Service, 2019). Table 1 provides a breakdown on the income brackets associated with filing status and number of dependents as well as the maximum amount each type of filer is eligible to receive as of 2019.

In "Teaching the Tax Code: Earning Responses to an Experiment with EITC Recipients" (2013), Chetty and Saez examine the possible relationship between teaching the tax code to tax filers and potential increases in the size of the EITC received by eligible filers. They find little increase in the amount of EITC claimed by tax filers as a result of this additional information but acknowledge that looking at the change between a single year is not conclusive of the role that additional information may have in the long run. Chetty, Saez and Friedman (2012) find that the EITC has inconsistent impacts on earning behaviour across the United States, attributing this to differences in knowledge on the shape of the EITC phase in and phase out schedule.

Table 1: 2019 EITC Brackets and Maximum Income Qualifications

Filing Status	No Dependents	One Dependent	Two Dependents	Three or More Dependents
Single, Head of Household, or Qualifying Widower	$15,570	$41,094	$46,703	$50,162
Married, Filing Jointly	$21,370	$46,884	$52,493	$55,952
Maximum Amount allowed based on number of dependents	$526	$3,526	$5,828	$6,557

The first row details the maximum amount of net income a single filer can make before no longer qualifying for the EITC. The middle row details how the maximum amount changes when filing jointly, and the final row details the maximum possible amount a filer can collect. It is clear to see that joint filers and those with an increasing number of dependents are eligible for a higher amount of EITC, as well as having a higher threshold of net income collected before becoming ineligible for the credit.
Source: Internal Revenue Service: Do I Qualify For the EITC? (2019)

The provision of additional information has been shown to have some influence over uptake of social programs and changes in filing behaviours. IRS data from 2005 suggests that only 75% of eligible filers claim the EITC when filing their taxes, and that the salience of the program is lowest among those with fewer dependents and lower education (Bhargava and Manoli, 2012). Chetty and Saez (2013) observe that providing additional information about the structure of the EITC to eligible filers does not have a significant impact on the amount of EITC received by these filers between their 2007 and 2008 tax refunds. These findings are supported by Liebman and Luttmer (2011), who find that offering additional information by mail or through an online tutorial about Social Security did not significantly alter the filing behaviours of their sample, but caused a slight increase in the labour supplied by the treated group. Both studies conclude that the additional provision of information regarding the social programs in question reinforced previous beliefs that the treated group had about their eligibility, primarily that working more hours or delaying retirement will result in a higher payout.

These studies involved a single exposure to additional information for the test group, but repeated exposure to information regarding eligibility and filing is shown in Bhargava and Manoli (2012) to have a possible effect on program salience. Their study relied on sending out a combination of 2 of 6 possible information pamphlets to low income tax filers; one describing the EITC, and a follow-up worksheet to assist with tax filing and claiming the EITC sent a few months later. 22%

of the recipients of this additional information claimed the EITC in the next filing season, resulting in an average gain of $511 per filer. They conclude that the widespread adoption of such a system could improve the salience of the EITC and reduce the stigma associated with claiming it. Similar outcomes were obtained in Bettinger, Long, Oreopoulos and Sanbonmatsu (2012), which examines the impact of direct assistance with filing for student aid. Low income earning adults receiving tax preparation assistance were additionally exposed to additional information regarding the Free Application for Federal Student Aid (FAFSA), as well as aid estimates and tuition costs of local post secondary institutions. They find that students whose parents were exposed to this additional information and assistance were 8 percentage points more likely to have completed 2 years of post secondary education in the 3 years after initial assistance was offered, and that those families that received the additional information but did not receive assistance with applying for FAFSA did not experience this increased rate of education in their children. These findings suggest that repeated exposure to tax filing information, in tandem with assistance in filing and procedure, is a viable option to increase the financial literacy and uptake of programs by low income households.

The literature discussed shows that economic literacy heavily influences policy preferences among the U.S. public, and that increasing education in economics can positively influence economic literacy. Increased education is also associated with a decrease in self inflation of knowledge, and an improvement in a country's overall economic literacy. Literature focusing on the provision of additional information to hopefully increase economic and financial literacy calls for an increased presence of financial curriculum in high schools while simultaneously displaying the ineffectiveness of providing additional information to tax filers in the hopes of altering their behaviour. The lack of repeated or prolonged exposure to supplemental material is an inherent problem with many of these studies, and provides an opportunity to see whether prolonged exposure, which I define as the approximate length of a year of high school, or some kind of required curriculum can have a positive impact on those that depend on social assistance programs. Linking the adoption of financial and economic coursework in high schools in the United States with the rate of EITC claims and other post high school education outcomes may provide evidence that prolonged exposure to financial concepts is critical for social programs to be effective and efficient.

Data

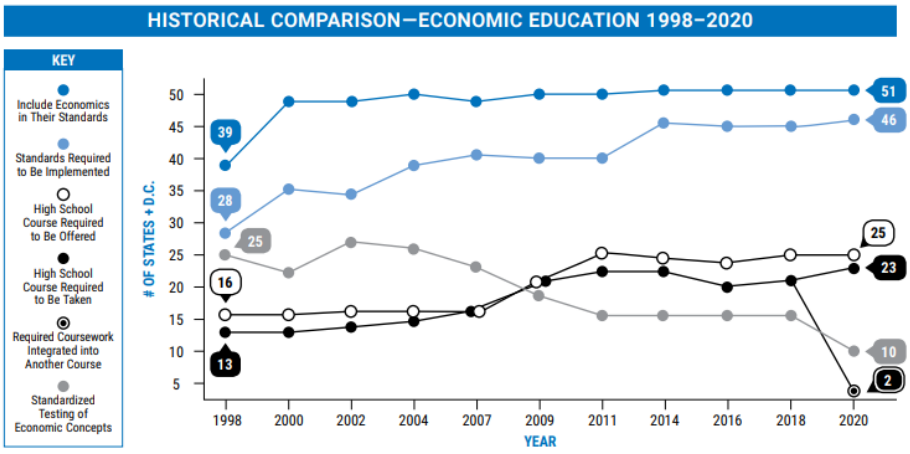
In this section, I detail each of the main data sources used in my analysis. The Council for Economic Education's (CEE) Survey of the States provides the state level coursework and curriculum data for each US state over the past 20 years, and the Integrated Public Use Microdata Series' Current Population Survey (IPUMS-CPS) for individual level demographic, education and tax data. I also discuss the limitations present in each of these data series, and how I attempt to overcome them.

The Council for Economic Education

The CEE began publishing the Survey of the States in 1998, reporting on the current status of economic and financial curriculum in all states including the District of Columbia. The measures include whether topics about economics or finance are in a state's curriculum, whether a class is offered to students, required to be taken by students, and if standardized testing is in place in either subject. The survey is updated roughly every 2 years. Since there is not significant variation in later sample period years between states of having standards in place, only course offerings and courses required to be taken by students are used as potential factors on post high school outcomes in my analysis. Data from the 2020 Survey of States was not available when this analysis began, so the data used only covers up to 2019.

Figures 1 and 2 detail the adoption of economic (Figure 1) and financial (Figure 2) coursework from 1998 to 2020. As of 2020, all 50 states and the District of Columbia include economics in their curriculum standards, while only 46 states require that those standards be implemented in course delivery. 25 states currently offer a course in economics, and 23 states require that students take a course in economics. 2 states currently integrate required coursework into another course, and 10 states implement standardized testing in economics. No data is available detailing whether passing the implemented standardized testing is a requirement for students to pass the course, or for graduation.

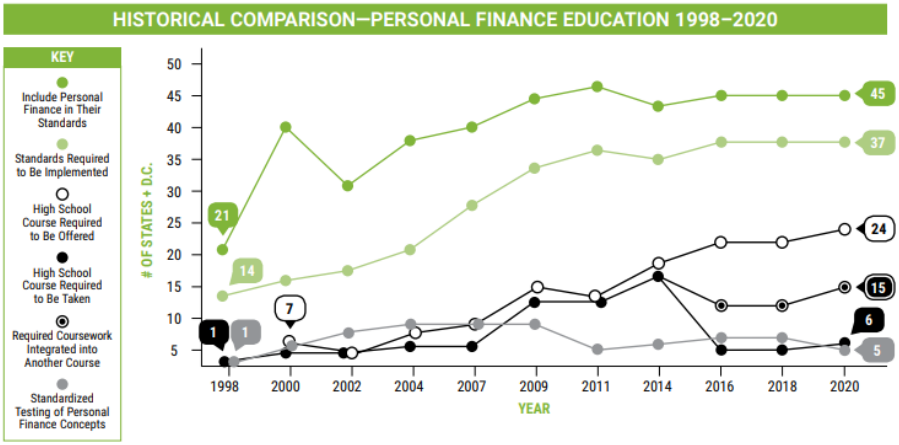
Figure 1: Economic Curriculum in United States, 1998-2020



Source: The 2020 Council of Economic Education's Survey of the States (2020)

For personal finance, 46 states including the District of Columbia include it their curriculum standards as of 2020, with 37 states requiring that those standards be implemented in course delivery. 24 states currently offer a course in personal finance, and 15 states require that students take a course in personal finance. 6 states currently integrate required coursework into another course, and 5 states implement standardized testing in personal finance. I cannot discern how this testing is implemented, or whether passing such testing is required to pass the the course or for graduation.

Figure 2: Financial Curriculum in United States, 1998-2020



Source: The 2020 Council of Economic Education's Survey of the States (2020)

The data provided by the Survey of the States is limited in that it offers no insight into the structure of the curriculum or how classes in finance and economics are set up. This refers to both what the curriculum covers in terms of content, and whether the curriculum offered is a module of another class or a dedicated course solely focusing on economics or personal finance. Data on how many states require a high school course in finance or economics to be taken by students is split into two series differentiating between a whole course, or the coursework being integrated into another course in 2014 for personal finance, and 2018 for economics. Due to the lack of differentiation across the entire sample period, these are treated as equivalent moving forward. Qualifications put in place for teachers of these courses are also not discussed, so an assumption of baseline competence in coursework delivery is used for this analysis. Research has shown some indications of teacher value added in terms of standardized testing scores (Chetty, 2014), but given the lack of consistent standardized testing data, incorporating measures for value added based on teacher ability is not possible. The CEE is currently developing a database that compiles the standards and curriculum structures in the 48 contiguous states and the CEE's own recommended lesson plans for each state (Council for Economic Education, 2021). As of this writing, this database is currently unavailable, but could be useful in extensions to this research if more details on how states implement standards and what is included in the become available.

As of the most recent Survey of the States, the majority of states are recorded as having standards in place for both personal finance and economic curriculum, but the data does not offer a breakdown of what those standards are, or how they are implemented. Without data on how curriculum differs between finance and economic courses, I can not discern what each state classifies as strictly "Personal Finance" or "Economics," as many of concepts in both disciplines, at least at the introductory level, may possess some overlap with each other. To account for this, I do not differentiate between types of offered or required coursework, only that states offered a course in either economics or personal finance at a given point in time, denoted as "Offered Coursework Treatment," or required a course in either economics or personal finance at a given point in time, denoted as "Required Coursework Treatment." It is important to note that these two potential treatment variables are treated as mutually exclusive. If a state has offered and required coursework at the same point in time, all observations from that state and time are denoted as potentially being

exposed to required coursework, not offered coursework. Maps detailing the adoption of both types of treatments in U.S. states from 1998 to 2019 can be found in Appendix A. Tables describing the adoption of both required and offered coursework, as well as gaps that may be present in times of coursework offerings and requirements, can be found in Appendix B.

Integrated Public Use Microdata Series

The Current Population Survey (CPS), available through IPUMS, collects monthly microdata on U.S. individuals and households and provides the data on tax filing behaviours, years of education attained by individuals, and poverty status. Data for most observations is available at the county or metropolitan area level. The majority of variables used in my analysis are binary indicator variables representing various demographic, economic, and educational characteristics of my sample. Data on age, education level, amount of EITC claimed, and poverty status will be used to examine how changes in high school coursework affects earnings and the amount of education obtained by individuals who were in high school when some form of coursework was in place.

Despite having robust tax filing and household composition data, data available from the IPUMS-CPS has limitations. The cohort system that is used for the collection of data makes longitudinal analysis of the same individuals across time impossible. Households are assigned a unique identification indicator when they are introduced to the sample, and are present in the data collecting process for 4 months. After 4 months, they are rotated out of the data collection schedule for 8 months. When households are potentially reintroduced to the data collection rotation, they are given a new identifier (IPUMS-CPS, 2021). The data set does not capture any significant past migration that may have occurred for individuals or households. The only available indicator of migration, either between a different country, state, or household within the same state, is if any of this potential movement occurred in the last year or not. Interstate migration is assumed to be negligible for this analysis.

Demographic data is restricted to gender and race indicators. The data available from IPUMS treats gender as a binary variable, offering only "Male" or "Female" designation. As such, gender is represented by the "Female" binary variable, which is 1 if an observation is recorded as "Female,"

and 0 if not. Race indicators are constructed in the same fashion, with a value of 1 representing an observation belonging to a particular demographic group, and 0 if otherwise. All race indicators are treated as mutually exclusive to one another. The main race indicators available are "White," "Black," "Asian," "Pacific Islander/Hawaiian," and "Indigenous American." IPUMS offers several combinations for race identification, such as "Black/Asian." Due to the low number of observations with any of these combined indicators, all subcategories are labeled and included as "Other" in the data. Observations without age, race, or gender data are dropped from the data.

The economic controls used are similarly defined as the race and gender indicators. With the exception of the amount of EITC claimed by an individual in a given year, all economic variables are binary representing if an individual exhibited certain economic characteristics, such as being in the labour force, filed taxes in the last year, and whether they are below the poverty line. The education variables used, with the exception of confirmed years of education, are also binary, representing having at least a high school degree, greater than a high school degree, and potential treatment exposure for individuals in the sample. "Years of Education" is constructed using some assumptions about the length of time it takes to complete a certain degree type. For example, a value of 10 would mean an individual has completed 10th grade, and a value of 16 would mean the individual has completed a 4 year bachelor's degree. If a student took 7 years to complete a bachelor's degree, but the commonly accepted length of time to complete such a degree is 4 years, they will have an education measure of 16.

Summary Statistics

Summary Statistics are divided between the control and treatment groups. Table 2 contains the summary statistics of the control group, here defined as the group of students not exposed to offered or required economic or financial coursework while they were in high school. Table 3 contains the summary statistics of the offered coursework treatment group, and Table 4 contains the summary statistics of the required coursework treatment group. The results of difference in means tests to test for differences between the control group and the two treatment groups, as well as differences that may exist between the two treatment groups, are presented in Table 5. The presented statistics and test results use the sample used for the state level analysis, meaning that that no observations have been removed due to geographic location. This data set contains 683,370 observations, 43.76% of which were not exposed to any type of economic or financial coursework.

The average age of the control group sample is 25.93 years of age. Observations are restricted to only those who were in high school at the point of potential coursework introduction or implementation across the sample period. This is done to eliminate observations that are not the same age as those who were potentially exposed to coursework. Including a 73 year old from a state that never implemented coursework across the sample period in the data does not inform on the potential effect of coursework, so observations of this nature are omitted.

51.47% of the control group sample is identified as Female, and 77.84% of the sample is identified as White. The next most prevalent race is Black, with 9.99% of the sample. Asian represents 5.59% of the sample, with Indigenous American, Pacific Islander/Hawaiian and Other races each representing less than 4% of the control group sample respectively. Only 11.41% of control group observations claimed the Earned Income Tax Credit, with the average amount claimed being $247.80. 14.48% of the control group sample is identified as being below the poverty line in any given year. 74.96% of the sample is registered as being in the labour force, with 66.36% of observations being employed in the year they were observed in. 80.61% of the sample claims that they filed taxes in the year in which they were observed.

Table 2: State Level Summary Statistics, Control Group

	Mean	SD	Min	Max
Outcome Measures				
Has High School Education	0.9956	0.0662	0	1
Greater Than High School Education	0.3055	0.4606	0	1
Below Poverty Line	0.1448	0.3519	0	1
Amount of EITC claimed	247.7945	901.7797	0	6,431
Any Amount of EITC claimed	0.1141	0.3179	0	1
Demographic Controls				
Years of Age	25.9319	5.7671	18	40
Female	0.5147	0.4998	0	1
White	0.7784	0.4153	0	1
Black	0.0999	0.2999	0	1
Indigenous American	0.0203	0.1411	0	1
Asian	0.0559	0.2297	0	1
Pacific Islander/Hawaiian	0.0090	0.0947	0	1
Other	0.0364	0.1873	0	1
Ecomonic and Education Controls				
In Labour Force	0.7496	0.4332	0	1
Currently Employed	0.6636	0.4725	0	1
Filed Taxes this year	0.8061	0.3953	0	1
Years of Education	13.1102	2.4457	0	22

The average number of years of school completed by the control group is 13.11. This could mean that the average person in the control group has a combination of at least a high school degree, and one year of post-secondary or similar level of education. 99.56% of the sample has at least a high school degree. Greater than High School Education represents if someone has more than 13 years of schooling, of which 30.55% of the control group samples does.

56.24% of the entire sample was potentially exposed to either required or offered coursework while they were in high school. 94.08% of the treatment group was exposed to required coursework, and 5.92% of the treatment groups was exposed to offered coursework. This equates to 52.91% of the entire sample being exposed to required coursework, with only 3.33% of the entire sample being exposed to offered coursework.

Table 3: State Level Summary Statistics, Offered Treatment Group

	Mean	SD	Min	Max
Outcome Measures				
Has High School Education	0.9965	0.0588	0	1
Greater Than High School Education	0.3060	0.4609	0	1
Below Poverty Line	0.1636	0.3699	0	1
Amount of EITC claimed	316.6147	1,026.4982	0	6,431
Any Amount of EITC claimed	0.1370	0.3438	0	1
Demographic Controls				
Years of Age	26.0326	5.5157	18	40
Female	0.5219	0.4995	0	1
White	0.7666	0.4230	0	1
Black	0.1349	0.3416	0	1
Indigenous American	0.0119	0.1086	0	1
Asian	0.0476	0.2130	0	1
Pacific Islander/Hawaiian	0.0050	0.0703	0	1
Other	0.0340	0.1813	0	1
Ecomonic and Education Controls				
In Labour Force	0.7590	0.4277	0	1
Currently Employed	0.6683	0.4708	0	1
Filed Taxes this year	0.8131	0.3899	0	1
Years of Education	13.0758	2.3526	0	22

The statistics of both treatment groups do not differ greatly compared to the control group in terms of demographic and gender composition. The average age for the required coursework treatment group is 25.01 years, and the average age for the offered treatment group is 26.03. Both treatment samples are slightly more than 50% Female, and just over 76% White. Both treatment samples have a high school graduation rate greater than 99%, though lower or equal rates of having more than a high school level of education compared to the control group. Those in the required treatment group have on average 12.83 years of education, with 25.99% of the sample having more than a high school education. Of those exposed to offered coursework, the average years of education is 13.08, with 30.6% of the sample having more than a high school education. 11.55% of the required coursework treatment group claimed any amount of the EITC, with an average amount claimed of $263.71. 13.7% of those exposed to offered coursework claimed any amount of the EITC, with an average amount claimed of $316.61. Both groups were more likely to claim any amount of the tax credit compared to the control group, and on average, claimed more of it.

Table 4: State Level Summary Statistics, Required Treatment Group

	Mean	SD	Min	Max
Outcome Measures				
Has High School Education	0.9935	0.0803	0	1
Greater Than High School Education	0.2599	0.4386	0	1
Below Poverty Line	0.1696	0.3752	0	1
Amount of EITC claimed	263.7060	946.9953	0	6,431
Any Amount of EITC claimed	0.1155	0.3196	0	1
Demographic Controls				
Years of Age	25.0101	5.5097	18	40
Female	0.5124	0.4998	0	1
White	0.7609	0.4265	0	1
Black	0.1425	0.3496	0	1
Indigenous American	0.0135	0.1154	0	1
Asian	0.0582	0.2340	0	1
Pacific Islander/Hawaiian	0.0036	0.0597	0	1
Other	0.0213	0.1445	0	1
Ecomonic and Education Controls				
In Labour Force	0.7038	0.4566	0	1
Currently Employed	0.6197	0.4855	0	1
Filed Taxes this year	0.7400	0.4386	0	1
Years of Education	12.8284	2.4684	0	22

The results of the differences in means tests presented in Table 5 show that there are statistically significant but economically small differences between the control group and both treatment groups, as well as the treatment groups compared to one another. Between all 3 groups, differences in high school attainment rates are just above .3 percentage points, while differences in having more than a high school level of education are close to 4.5 percentage points. Differences between the offered treatment group and the control group are consistently smaller in magnitude and weaker in statistical significance compared to differences in coefficients between the control group and those exposed to required treatment, as well as the differences between the required and offered treatment groups. These economically small differences between treatment and control groups are also present in the main results presented later in this paper. Summary statistics of the county and county pair samples can be found in Appendix C. Due to similarities in between these restricted samples and the sample discussed in this section, the summary statistics for the county and county pair samples are not divided by treatment and controls, and no differences in means tests are conducted.

Table 5: Difference In Means Test Results

	Required Treatment & No Treatment	Offered Treatment & No Treatment	Offered Treatment & Required Treatment
Outcome Measures			
Has High School Education	0.00208***	-0.000935*	0.00302***
	(11.56)	(-2.29)	(7.33)
Greater Than High School Education	0.0456***	-0.000495	0.0461***
	(40.94)	(-0.16)	(14.69)
Below Poverty Line	-0.0248***	-0.0188***	-0.00599*
	(-27.67)	(-7.43)	(-2.37)
Amount of EITC claimed	-15.91***	-68.82***	52.91***
	(-6.98)	(-9.83)	(7.58)
Any Amount of EITC claimed	-0.00146	-0.0229***	0.0215***
	(-1.85)	(-9.74)	(9.17)
Demographic Controls			
Years of Age	0.922***	-0.101**	1.023***
	(65.98)	(-2.65)	(27.14)
Female	0.00230	-0.00721*	0.00951**
	(1.86)	(-2.10)	(2.79)
White	0.0176***	0.0119***	0.00567*
	(16.90)	(4.09)	(1.96)
Black	-0.0426***	-0.0350***	-0.00767**
	(-53.33)	(-15.01)	(-3.28)
Indigenous American	0.00681***	0.00837***	-0.00156*
	(21.18)	(10.95)	(-2.09)
Asian	-0.00228***	0.00823***	-0.0105***
	(-3.98)	(5.59)	(-7.18)
Pacific Islander/Hawaiian	0.00547***	0.00408***	0.00138**
	(27.39)	(8.22)	(2.91)
Other	0.0151***	0.00237	0.0127***
	(35.99)	(1.90)	(10.36)
Ecomonic and Education Controls			
In Labour Force	0.0459***	-0.00935**	0.0552***
	(41.79)	(-3.18)	(18.81)
Currently Employed	0.0440***	-0.00464	0.0486***
	(37.20)	(-1.43)	(15.09)
Filed Taxes this year	0.0661***	-0.00693**	0.0730***
	(64.34)	(-2.58)	(27.20)
Years of Education	0.282***	0.0344*	0.247***
	(46.42)	(2.12)	0.247***

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Empirical Methods

My empirical methodology is a difference-in-differences analysis looking at how the provision or requirement of economic or financial coursework affects exposed student's post high school outcomes, controlling for time, age, and geographical fixed effects. Observations are weighted at the individual level using the specified IPUMS-CPS weights. The general model used is as follows:

$$\mathrm{Y}_{i,s,t,c} = \beta_0 + \beta_1 Treatment_{s,t} + \delta_s + \gamma_t + A_c + X_{i,s,t}\boldsymbol{\beta}_2 + \varepsilon_{i,s,t}$$

$Y_{i,s,t,c}$ represents the dependent variable of interest for individual i residing in geographic region s in time t in age cohort c. The outcome measures used are the amount of EITC claimed by an individual, if they claimed any amount of the credit, the probability of an individual having a high school degree, the probability of an individual having more than a high school equivalent amount of education, and whether an individual is below the defined poverty line. As of 2019, the thresholds for being considered living below the poverty line regardless of family size or joint filing status is below the threshold for qualifying for the EITC, so all filers who are below the poverty line are eligible for the EITC. This also means that some filers who are above the poverty line but still have low income either as a single or joint filer also are eligible. δ_s and γ_t represent geographic and time fixed effects, respectively. Fixed effects for age are represented as A_c. *Treatment* represents if an individual is recorded as going to high school in a state that required or offered coursework in economics or finance in a given year. Treatment effects are treated as mutually exclusive, with a course being required taking precedent over a course being offered. X represents a matrix of characteristic variables, which consists of binary race and gender indicators, labour force and employment status, and tax filing status. $\varepsilon_{i,s,t}$ represents a residual term associated with each observation. Three geographic fixed effect specifications are used based on the sample: state level, county level, and contiguous county pairs that straddle a state border. For each geographic level, restricted data sets are generated using only observations that include that level of geographic specificity. Summary Statistics for these restricted samples can be found in Appendix C. Standard errors are clustered at the state level to allow for differential impacts of shocks between states, and since coursework changes occur at the state level. The results of clustering the standard errors at

various geographic levels are presented in Appendix J, and discussed in the Results section.

Since data is not currently available on how states implemented their financial and economic coursework, only that they did, I am not able to determine the average treatment effect on the treated. Therefore, the measured treatment associated with exposure is the possible intent to treat to account for the fact that a change was made to affect a certain population, but it is not known for certain which members of that population where actually affected by the change. If a state introduced a requirement for either economic or financial coursework, but no data is available on what grade that coursework was offered at, the population of students who were potentially exposed to this change is everyone currently enrolled in high school at the time of introduction, and assuming that the standards stayed in place after their initial introduction, everyone that attended high school in that state after the change was made. This could lead to a situation where a course was potentially offered at a grade lower than some currently enrolled students, meaning that they were not part of the treatment group, but are still handled as if they benefited from the introduction of the coursework. Therefore, underestimating the effects of coursework is a possibility with this data and identification strategy. To mitigate this issue, the sample will be restricted to only those 18 and older, assuming that by this age they would have either completed or left school, regardless of their potential exposure. This will hopefully reduce the number of observations in the data set that are erroneously labeled as having benefited from the implementation of coursework in either finance or economics.

Contiguous County Pair Model

While the entire state may benefit from the introduction of coursework, it is reasonable to assume that populations that are located around a state border are more similar in characteristics to those living geographically closer to them, even if they reside in different states. A community in rural northern Texas is likely to be more similar to a bordering rural community in southern Oklahoma than it might be to the populations of metropolitan areas like Dallas or Houston, despite residing in the same state. The sample used for the contiguous county pair analysis is restricted to counties pairs that lie on opposite sides of a state border, where one state has financial or economic curriculum in place, while the other does not. This approach has been used to examine

the differential timing impacts of state level polices in previous literature, such as minimum wage changes on employment (Dube et. Al, 2010) and medical marijuana legislation on alcohol sales (Baggio et. Al, 2020). County pairs are constructed to include one county that has coursework standards in place, while the other does not. A pair may include 2 counties that have coursework standards in place if standards were introduced at different points in time. Observations from these pairs are restricted to only years after a difference first occurs. For example, if 2 counties that are part of a pair both do not have required or offered coursework from 1998 to 2008, data from those counties is not included for the county pair analysis for those years. If one state requires coursework starting in 2009, and the other state begins requiring it in 2014, data from both pairs is used beginning in 2009 until the end of the sample period.

The specification used for the contiguous county pair sample is nearly identical to the general specification, with some additional conditions to allow for a county to appear more than once if it is part of multiple county pairs across the sample period:

$$\mathrm{Y}_{i,p,t,c} = \beta_0 + \beta_1 Treatment_{p,t} + \delta_p + \gamma_t + A_c + X_{i,p,t}\boldsymbol{\beta}_2 + \varepsilon_{i,p,t}$$

In the general specification, the subscript s denoted geographic fixed effect used in the model to identify where an individual was observed. In the contiguous county pair specification, this subscript is replaced with p to represent the pair that an individual is observed in. This allows for counties to possibly be part of several county pairs simultaneously. Each pair of counties is assigned a unique code for identification purposes. All other parts of the model are identical to the general specification.

Geographic data for observations in the IPUMS data set is aggregated using several sources. Metropolitan areas are designated using U.S. Census Bureau codes, and counties by FIPS (Federal Information Processing Standards) codes. While county level data is not available for all observations, the majority of observations have data available determining if they resided in or close to a metropolitan area. While not an issue for state level analysis where more granular geographic data

is not included, moving to a county level or contiguous county border pair analysis requires the creation of composite counties for each metropolitan area and state that it may be a part of. To include observations that have metropolitan data available but not county, I classify all observations living in a particular city and state as residing in a "pseudo county" and assign a unique code for that city and state combination. Doing so allows for more observations to be included in the county and contiguous county analysis, and potentially mitigate any differences between metropolitan and non-metropolitan observations. If a city is part of numerous states, multiple county codes are generated for each city, one for each state that the metropolitan area is located in, and allows for those cities to be included in the contiguous county pair analysis.

For example, the state of New York has a FIPS code of "36," so a county numbered "061" would have a FIPS code of "36061." For the composite counties, I used the FIPS state code to represent each state that a metropolitan area was a part of, and replaced the last 3 or 4 digits that would have been the FIPS county code with the metropolitan area code. To illustrate, St. Louis is a metropolitan area that is officially located in the state of Missouri, but part of the metropolitan area spills over into the bordering state of Illinois. St. Louis has a metropolitan code of "7040" to represent any observation that resides in this metropolitan area. Missouri has a FIPS state code of "18", and Illinois a FIPS code of "17." For observations that reside in Missouri, their composite county code is "187040," and for those residing in Illinois, "177040." For observations that already had a FIPS county code assigned to them in the IPUMS data, the composite county code is not used.

For the county pair data, pairs were generated for metropolitan areas that straddled state borders using the composite county codes. For St. Louis, and other metropolitan areas that only straddled the state borders of 2 states, the pair code was created by appending the two composite codes. For metropolitan areas that straddle more than 2 states, pairs were generated for each combination of 2 composite counties. If a county previously had an assigned county pair code with another county, the composite county codes I generated is not used. For both the county and county pair data sets, the observations with just a composite county or IPUMS assigned county code are run separately to determine if there are any significant differences between them, and

then run as a combined data set. For the county data set, observations are removed if they do not have a composite county code or an IPUMS assigned FIPS county code. For the county pair data set, observations are removed if they do not possess a composite county pair code or a previously assigned county pair code.

IPUMS has county level data for 408 counties across the sample period, 64 of which lie on a state border and share the border with another county that IPUMS has data on, resulting in 42 unique county border pairs across the sample period. Data on all pairs is not available for all years, due to IPUMS not collecting data in some counties for a given year. Including the metropolitan area data using the constructed pseudo county codes allows for 625 total unique "counties" to be examined, and 51 total county border pairs. Maps depicting which FIPS counties and Metropolitan areas are included in my county and county pair analysis can be found in Appendix A.

Due to the low number of observations who were potentially exposed to offered coursework, issues arise when reducing the sample to conduct analysis using contiguous county pair fixed effects. Of the pairs available for analysis, there is only 1 county pair available across the sample period where one county has offered coursework in place, and the other county has no coursework in place for students to take. For every other county pair in which one county offers coursework for students to take, the other county in the pair requires coursework in economics or finance be taken by students. Therefore, when using contiguous county fixed effects and the respective data set, the analysis conducted is comparing those who were exposed to required coursework to those who were never exposed, and then comparing those who were exposed to required coursework to those who were exposed to offered coursework. While these regressions are included in my results for completeness, I caution the reader to interpret these results with this issue in mind and encourage them to focus more on the results looking at the effects of required coursework compared to those who were never exposed.

Model Assumptions

For the effects of required and offered coursework to be properly estimated, several assumptions must be met regarding state and county trends, depending on which geographic sample and spec-

ification is used, and other possible confounding effects. Barring all other differences that may be present between states, it is assumed that outcomes for states who adopt coursework at any point over the sample period would have followed a trend parallel to those who never adopted financial coursework if they themselves did not enact coursework changes. Appendix D includes the visual output of running event studies for all outcome measures to check for pre-treatment trend differences between states that introduced coursework at some point over the sample period, and states that never did. Due to nearly half the sample being exposed to some form of required coursework, it is used as the treatment in this case. I use the event study framework presented in Sun and Abraham (2020) and the associated regression packages developed by the authors. The benefit of this framework is its ability to correct for bias that may be introduced by having multiple points of treatment introduction, like what is presented in my research. It is also beneficial since I am able to see if there is any affect of lagged years, or if the treatment effect takes some time for its impact to be realized in the data. The plots for poverty status, claiming any amount if EITC, and having more than a high school education display some trending in the years farthest back in time before treatment, but all series do not display noticeable trends across the years most immediately before the point of treatment introduction. The lagged years farthest away from the point of treatment have the noisiest estimations, likely due to the low number of observations available for those years.

After treatment, lead year coefficients are rarely statistically different from 0, and possess much smaller standard errors. Educational outcomes display a similar lack of trends prior to treatment, and few lead year coefficients being statistically different from 0 in post treatment years. These results suggest that states that introduce required coursework do not experience outcome differences compared to states that never introduced coursework, and that there are no strong trend differences between these two groups prior to some receiving treatment. These results are similar to those produced in the main results, but I encourage the reader to keep these results in mind when interpreting the main result findings. Plots of the event studies can be found in Appendix D.

It is assumed that states who adopted coursework did not provide additional assistance for tax filers who might be eligible for the EITC compared to those that did not adopt coursework. Anticipation effects associated with coursework adoption are also assumed to be negligible. Depending

on the structure and implementation of the course changes, only a portion of a state's student body would possibly be affected, and it is assumed that those who would not be exposed, either from leaving high school or being past the grade or grades at which the coursework was in place, did not change their behaviours. Of those students who could potentially be exposed, it is assumed that between the time that students knew coursework was going to be offered or required and when they would potentially be taking these classes, that they did not review or study material covered in the class in anticipation for potentially taking it in a formal setting. Students would likely be focusing on their current courses or extracurricular activities instead of looking over material for a course that they may or may not have to take, regardless of their potential interest in the subject matter.

In the studies discussed thus far, selection bias is present in the populations who accessed the additional information about the various social programs. The demographics targeted were already enrolled in or were possibly eligible for the programs in question and had to opt into the provision of such information. These studies also suffered from bias within the population who opted into the additional information, since this information often reinforced previous notions they held regarding social programs. It is fair to assume that the adoption of financial and economic coursework at the high school level has little to do with the preferences of the students due to their probable lack of input in regarding the structure and course offerings of their high school education system.

Once implemented, it is assumed that all students face the same type of potential exposure to the changes put in place in their respective states, assuming that changes are implemented in the same fashion in all schools within a state. Exposure to the structure of tax systems, financial practices and economic theory at a young age should theoretically reduce potential bias based on previously held beliefs due to the lack of formed financial habits, and positively impact the perceived returns of better financial habits and practices. For students who plan to work or undertake an apprenticeship right after the completion of their high school degree, increased knowledge about the tax system or other economic mechanisms could result in them taking advantage of tax credits that they may be eligible for, assuming that the majority of jobs available to workers right out of high school will have lower wages. The provision of such information may also allow for students to

apply for jobs that have inherently higher wages and take advantage of the coursework they were involved in if the nature of the job relied on such knowledge, even if indirectly.

The baseline specification, regardless of geographic fixed effects, is restricted to individuals 18 years of age and older, and excludes observations which would never have had the opportunity to be potentially exposed to the financial or economic coursework introduced in a state. Observations are denoted as being potentially exposed to coursework if there are standards in their state when they are between the ages of 13 and 19. The range of these numbers is extended by one year for every year a state has standards in place. In the event that a standard is removed, the sample age range is extended by 1 for a period of 4 years to account for students who were in the 9th grade at the time that the standard was removed. After that 4 year period, the minimum age to be included in the sample from a state increases by 1 year to maintain the same sample age range across time. The maximum range of individuals who could be treated and observed is 18 to 40 years of age.

The human capital model detailed by Becker (1964) suggests that additional financial or economic education for high school students should have a positive impact on the earnings of students. Discussions surrounding signaling versus human capital models often focuses on job market outcomes, which may not be greatly affected by a single course that students take while they are in high school. If both students of potentially high and low inherent ability are required to take a course in finance or economics, students may lose opportunities to differentiate themselves from those of different ability. If this group of students, regardless of ability level, experienced better outcomes than those who were not exposed, it would support the idea of human capital accruement leading to better outcomes. Alternatively, students who are exposed to offered coursework and opt into available courses have another opportunity to differentiate themselves. If those who are exposed to offered coursework experience better outcomes after leaving high school, expressed as either higher wages or greater education attainment, compared to those who were also exposed but opted not to take such courses, it may be indicative of some underlying differences between these two groups. Unfortunately, a direct comparison between members of the offered treatment group, those who did and did not take these courses, is not possible at this time.

Without data on how each state chose to implement either their coursework offerings or requirements, I can not discern how the introduction of this coursework affected the opportunities present for students to take other courses, or if their choices were impacted at all. A course in finance or economics could either be added to the roster of classes for students, replace a course that was previously offered, or could have been a part of the class roster prior to the requirement to offer or have it taken by students being implemented in the state. While it is assumed that courses were introduced in an identical fashion in all schools within a state, it is likely that districts within a state, or even individual schools within a school district, chose to implement this change differently based on resource availability. In cases where a course was offered to students, but not required to be taken, the introduction of a course could alter the options for students by either adding an additional elective to their selection, or by replacing one previously available elective for one in finance or economics. If a course was required to be taken by students, it could potentially restrict the number of elective courses that students could take, either by taking up a slot in a student's schedule that was previously free, or by reducing the number of courses available for students to take if a course in finance in economics replaced a previously available elective.

In the most extreme case, requiring a course in either economics or finance to be taken by students, who would've previously not taken it if given the choice, are deprived of a slot in their schedule in which they would've added another course that they felt they would've benefited from more, either in terms of personal interest or displaying their academic strengths. While it is not known if students were required to pass these courses or any potential testing put in place in order to graduate, and my results do not suggest that coursework introduces a significant barrier to graduating high school, more granular data on how states and districts chose to implement coursework standards is required to quantify the opportunity costs faced by students in the face of potential course offerings and requirements.

Because the CEE's Survey of the States only reports on state level curriculum data beginning in 1998, I cannot determine if a state had standards in place prior to 1998, or if they were introduced in 1998. The same regressions presented in the main results section are rerun excluding data from states who had course offerings or requirements in 1998 to see if similar results are obtained. While

different coefficient estimates are obtained for the treatment affects, the statistical insignificance of treatment remains consistent across both sets of data. Full results are included in Appendix K.

Measurement Error in Explanatory Variables

Assumptions made about potential exposure to course offerings and requirements, the lack of data on changes in residence for observations, and the use of 3 different fixed effects will all contribute to measurement error in my model, biasing my results towards zero, indicating that exposure to coursework offerings and requirements are less impactful than they really might be. Since I do not know for certain at what level coursework was implemented in each state, I assume that everyone in high school either during or after the change was affected by its introduction, when only a portion of the high school population was actually exposed to this coursework. Even in cases looking at course offerings, instances of simply offering a course may not provide useful insights into the differences one class makes if it is still unknown if students took these courses or not. Enrolment data to look at differences between students who took courses in states who both offered and required coursework may be more useful, but would still have inherent issues since it would be comparing a population who did not have a choice in taking the course to those who voluntarily enrolled and were potentially predisposed to be interested in or knowledgeable in the subject matter. Since both treatment groups are likely larger than the actual cohort of students exposed, misassigning treatment to individuals that should be in the control group is going to cause measurement error in my main explanatory variables and result in an underestimation of the true effects that coursework may have. If the potential treatment effects, even if they are incorrectly measured, are largely time and geographically invariant, the use of fixed effects with further attenuate the results towards zero by attempting to capture time invariant differences between population groups.

Assumptions about migration and actual place of residence are going to further exacerbate the issue of measurement error by incorrectly assigning treatment to observations based on where they reside at the time of observation. It is assumed that observations went to high school in the state where they are currently located, but the chances of that being a reality becoming increasingly unlikely the older an observation becomes. Migration and movement for educational, work related,

and familial reasons is inevitable for observations within the sample, and the probability of the state in which people are observed to reside in at the point of observation, especially if they are older than the typical age to be attending high school, is nonzero. Someone may leave their childhood home to attend a post secondary institution, move to another part of a city with cheaper leaving conditions, or move to another state in search of or because of an employment opportunity. Even if interstate migration are comparable between states, which is a strong assumption, the issue of incorrect treatment assignment persists, and could incorrectly estimate the impact that coursework implementation has. A state with no coursework standards in place could have a higher proportion of postsecondary graduates residing in it due to having a smaller population while simultaneously having a large number of post-secondary institutions that attract people to live there, either for education or employment purposes, for example. It also does not account for any international migration that may have occurred for observations that attended high school outside of the United States and assigns them either the treated or control groups without any knowledge of what standards may have been in their previous places of residence.

I caution the reader to keep the detailed assumptions and the issues that arise because of potential measurement error and included fixed effects in mind when interpreting my results and the associated treatment coefficients, knowing that my results suffer from attenuation bias.

Results

Regressions comparing the offered treatment group to the required treatment group are located in column 5 in all tables presented in my main results. All outcome measures are examined at the state, county, and contiguous county pair level. Results for education outcomes and poverty status are presented first, since these outcomes may also affect the economic outcomes also looked at in my research. If the treatment affects high school graduation or other education attainment, the education level of these individuals may impact both their eligibility for the EITC, as well as how much they are able to claim based on their taxable income. The probability of being below the poverty line is looked at first for this reason as well, since those who are below the poverty line have a higher probability of claiming the EITC. The results for all data sets are presented in the following tables. Across all outcome measures examined, demographic characteristics such as race and gender are consistently statistically significant, and are highly correlated with the outcome measures examined. The coefficients of race and gender demographic controls when using either the county or contiguous county pair data sets are near identical to the values obtained when examining the state level data set, with the exception of the Pacific Islander/Hawaiian indicator and Other Ethnicity indicator.

Focusing on high school education attainment, potential exposure to either a course offering or requirement is associated with a small and insignificant change in the probability of having a high school level of education. Table 6 contains the output for these regressions. The treatment effect associated with being exposed to offered coursework while in high school has a small positive impact on increasing the probability of having at least a high school degree, while course requirements has a small negative impact on the probability of having at least a high school degree. Both of these treatment effects are statistically insignificant at all conventional levels. Using the full sample and state level fixed effects, offered coursework increases the probability of having at least a high school degree by 0.149 percentage points, and required coursework reduces this probability by 0.035 percentage points. Restricting the data to just county level observations maintains the small economic impact of both treatment effects, with offered coursework increasing the probability of having at least a high school degree by 0.044 percentage points, and required coursework decreasing

this probability by 0.099 percentage points. Using contiguous county pair fixed effects, those exposed to offered coursework see a 0.087 percentage point increase in the likelihood of obtaining at least a high school degree compared to those who were exposed to required coursework. Required coursework decreases the probability of having a high school degree by 0.088 percentage points compared to the control group. Both treatment effects are statistically insignificant using county pair fixed effects. These results suggest that offering or requiring economic or financial coursework in high school has no measurable economic impact on the sample population's likelihood of completing high school, positive or negative. For students who are on the margin of graduating in states that require coursework, this is encouraging, as it does not create additional barriers to high school completion.

Table 6: "Has at Least High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.00149		0.000438		0.000874	
	(0.00151)		(0.000920)		(0.00280)	
Course Required Treatment		-0.000347		-0.000989		-0.000876
		(0.000831)		(0.000909)		(0.00141)
Filed Taxes this year	0.00435***	0.00511***	0.00404***	0.00515***	0.0131	0.00810***
	(0.000613)	(0.000358)	(0.000627)	(0.000378)	(0.00759)	(0.00148)
In Labour Force	0.00258***	0.00229***	0.00263***	0.00245***	-0.00358	0.000428
	(0.000492)	(0.000401)	(0.000609)	(0.000460)	(0.00597)	(0.00117)
Female	0.00116***	0.00217***	0.00128***	0.00227***	-0.000211	0.00169
	(0.000345)	(0.000355)	(0.000450)	(0.000356)	(0.00110)	(0.00110)
Black	0.00114	0.00279***	0.00158	0.00370***	0.00395	0.00500**
	(0.00107)	(0.000591)	(0.00132)	(0.000611)	(0.00387)	(0.00209)
Indigenous American	-0.00325	-0.00461*	-0.00697	-0.00669*	-0.00722	-0.0393
	(0.00305)	(0.00262)	(0.00503)	(0.00364)	(0.0168)	(0.0366)
Asian	0.000761	0.00245*	0.00129	0.00355***	-0.00795	0.00519***
	(0.00136)	(0.00140)	(0.00152)	(0.000993)	(0.0170)	(0.00102)
Pacific Islander/Hawaiian	0.0000789	-0.00584	0.000540	-0.00393	-0.198	-0.0354
	(0.00204)	(0.00642)	(0.00223)	(0.00588)	(0.182)	(0.0380)
Other	0.000679	0.00101	0.000323	0.000908	0.00519***	0.00238
	(0.00137)	(0.00146)	(0.00156)	(0.00159)	(0.00141)	(0.00360)
Constant	0.990***	0.988***	0.990***	0.987***	0.985***	0.986***
	(0.000721)	(0.000671)	(0.000735)	(0.000742)	(0.00343)	(0.00116)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	321806	660598	226600	511067	18951	99448
Adj. R^2	0.00266	0.00300	0.00486	0.00603	0.0316	0.00838

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 includes the specifications looking at the probability of having more than a high school equivalent level of education. Unlike the probability of completing high school, the Pacific Islander/Hawaiian and Indigenous American demographic controls are highly correlated with a decreased probability of having more than a high school degree. Those who are identified as Pacific Islander/Hawaiian are between 8.74 and 6.14 percentage points less likely to have more than a high school degree with state level fixed effects, between 10.5 and 7.06 percentage points less likely using county level fixed effects, and between 2.09 and 5.04 percentage points less likely using contiguous county pair fixed effects. I These results are statistically significant at all conventional levels. Those who are identified as being Indigenous American are between 13.6 and 12.4 percentage points less likely to have more than a high school degree with state level fixed effects, between 13.0 and 11.7 percentage points less likely using county level fixed effects, and 14.8 and 18.6 percentage points using contiguous county pair fixed effects. These results are statistically significant at all conventional levels.

The effects of exposure to offered and required coursework on the probability of acquiring more than a high school degree, though larger than the effects on completing high school, are still economically small and without consistent statistical significance when using varying geographic fixed effects. Coursework offerings increases the likelihood of having more than a high school level of education by 1.37 percentage points in the affected sample when using state fixed effects, which is significant at the 5% level. The results using county fixed effects results in the potentially affected population being 0.15 percentage points more likely to have more than a high school education. This result is insignificant at all conventional significant levels. Coursework requirements increase the probability of the potentially exposed student population having more than a high school level of education by 0.14 percentage points using state level fixed effects, and decrease this probability by 0.35 percentage points using county fixed effects. Both results are insignificant at all conventional levels. When restricted to contiguous county pairs, individuals who were potentially exposed to offered coursework are 4.29 percentage points more likely to have more than a high school degree compared to those who were exposed to required coursework. This result is significant at the 10% level. Coursework requirements in either economics or finance have a small positive economic impact on the likelihood of obtaining more than a high school degree, increasing this probability

Table 7: "Has Higher than a High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0137**		0.00152		0.0429*	
	(0.00640)		(0.00746)		(0.0189)	
Course Required Treatment		0.00139		-0.00347		0.0320*
		(0.00628)		(0.00773)		(0.0164)
Filed Taxes this year	0.0596***	0.0471***	0.0619***	0.0468***	0.0526***	0.0697***
	(0.00401)	(0.00273)	(0.00537)	(0.00344)	(0.0124)	(0.00945)
In Labour Force	0.0971***	0.0883***	0.0936***	0.0872***	0.0608***	0.113***
	(0.00371)	(0.00354)	(0.00406)	(0.00406)	(0.00644)	(0.00760)
Female	0.0811***	0.0759***	0.0780***	0.0747***	0.0734***	0.0776***
	(0.00284)	(0.00184)	(0.00321)	(0.00180)	(0.00849)	(0.00764)
Black	-0.120***	-0.0880***	-0.133***	-0.0974***	-0.165***	-0.149***
	(0.00978)	(0.00949)	(0.0129)	(0.0114)	(0.0265)	(0.0289)
Indigenous American	-0.136***	-0.124***	-0.130***	-0.117***	0.148**	-0.186***
	(0.00994)	(0.00859)	(0.0121)	(0.00964)	(0.0641)	(0.0304)
Asian	0.180***	0.188***	0.143***	0.161***	0.170**	0.156***
	(0.0184)	(0.0144)	(0.0179)	(0.0149)	(0.0538)	(0.0306)
Pacific Islander/Hawaiian	-0.0874***	-0.0614***	-0.105***	-0.0706***	-0.209***	-0.0504
	(0.0218)	(0.0191)	(0.0222)	(0.0196)	(0.0601)	(0.0496)
Other	-0.0462***	-0.0264*	-0.0543***	-0.0309*	-0.0129	-0.105***
	(0.0140)	(0.0153)	(0.0161)	(0.0158)	(0.0248)	(0.0317)
Constant	0.175***	0.165***	0.205***	0.188***	0.196***	0.234***
	(0.00518)	(0.00505)	(0.00557)	(0.00648)	(0.00948)	(0.0164)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	321806	660598	226600	511067	18951	99448
Adj. R^2	0.216	0.210	0.244	0.232	0.217	0.292

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

by 3.2 percentage points compared to those who were never potentially exposed. This result is significant at the 10% level. Across all specifications, offered and required coursework do not significantly impact post-secondary education attainment in states that implement these changes, and of the changes present, present some evidence that those exposed are slightly more likely to pursue additional education attainment after high school.

Table 8 presents the effects of economic and financial coursework on the probability of being below the defined poverty line. Other economic indicators such as filing taxes in the observation year and being a part of the labour force have a significant negative correlation with an increased probability of being below the poverty line across all three geographic specifications. Female, Black and the Indigenous American controls have consistent positive correlations with the probability of being below the poverty line, with Indigenous American being correlated with an increased

probability of being below the poverty line being between 12.8 and 9.32 percentage points using contiguous county pair fixed effects. All three of these demographic characteristic controls are significant at the 1% level across all three geographic specifications, as are the labour force and filed taxes this year controls.

Table 8: "Below Poverty Line" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0136*		0.00900		-0.0278*	
	(0.00795)		(0.00535)		(0.0129)	
Course Required Treatment		-0.00238		-0.00459		-0.00671
		(0.00621)		(0.00699)		(0.0126)
Filed Taxes this year	-0.245***	-0.236***	-0.245***	-0.235***	-0.241***	-0.256***
	(0.00574)	(0.00366)	(0.00624)	(0.00387)	(0.0178)	(0.0298)
In Labour Force	-0.0630***	-0.0533***	-0.0589***	-0.0526***	-0.0529***	-0.0671***
	(0.00370)	(0.00193)	(0.00405)	(0.00200)	(0.0135)	(0.0117)
Female	0.0438***	0.0494***	0.0397***	0.0446***	0.0562***	0.0430***
	(0.00228)	(0.00247)	(0.00246)	(0.00213)	(0.00963)	(0.00601)
Black	0.0981***	0.0809***	0.0951***	0.0771***	0.136***	0.0876***
	(0.00901)	(0.00803)	(0.0102)	(0.00799)	(0.00839)	(0.0253)
Indigenous American	0.116***	0.0880***	0.0956***	0.0642***	0.128**	0.0932***
	(0.00995)	(0.0116)	(0.0106)	(0.00970)	(0.0431)	(0.0322)
Asian	0.00349	-0.0135	0.0133*	-0.00304	0.0383	0.0146
	(0.00645)	(0.0119)	(0.00718)	(0.0122)	(0.0224)	(0.0177)
Pacific Islander/Hawaiian	0.0512***	0.0159	0.0513***	0.0211	0.346**	0.0834
	(0.0172)	(0.0192)	(0.0161)	(0.0168)	(0.106)	(0.0523)
Other	0.0368***	0.0162	0.0318***	0.0152	0.0283	0.0613**
	(0.00743)	(0.0128)	(0.00749)	(0.0122)	(0.0270)	(0.0278)
Constant	0.352***	0.344***	0.343***	0.341***	0.346***	0.354***
	(0.00622)	(0.00397)	(0.00706)	(0.00407)	(0.0228)	(0.0352)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	321806	660598	226600	511067	18951	99448
Adj. R^2	0.120	0.110	0.131	0.121	0.134	0.149

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Potential exposure to financial and economic course offerings has little economic impact on reducing the probability of being below the poverty line at all levels of geographic specification, with the exception of offered coursework using state fixed effects, and when comparing required and offered coursework treatment groups. Potential exposure to coursework requirements results in a 1.36 percentage point increase in the probability of being below the poverty line using state fixed effects, and is significant at the 10% level. For coursework requirements, potential exposure using state level fixed effects is associated with a 0.24 percentage point decrease of being below the poverty

line, while at the county level, coursework requirement exposure results in a 0.46 percentage point decrease in the probability of being below the poverty line. Using contiguous county fixed effects, offered coursework reduces the probability of being below the poverty line by 2.78 percentage points for those exposed to offered coursework compared to those exposed to required coursework. This result is statistically significant at the 10% level. Those exposed to required coursework are 0.067 percentage points more likely to be below the poverty line compared to the control group. This result is statistically insignificant at all conventional levels.

Simply having financial or economic knowledge may not be enough to lift those who were exposed to it in high school out of poverty. The lack of consistent significance of offered and required coursework in regards to altering poverty status may result from a lack of opportunities to implement the new skills and knowledge acquired from courses taken in high school. Being impoverished may decrease the ability for individuals to practice good financial habits, such as contributing to a savings account or having an emergency fund. It might also create barriers for them in regards to claiming some tax credits, which often requires some form of consistent employment over the course of a year. If a person is unable to acquire employment despite trying to find a job, then their economic and financial knowledge, or lack thereof, cannot be determined by their tax filing behaviors or tax credit claims.

Table 9 examines the effects of coursework offerings or requirements on the differences in the amount of Earned Income Tax Credit claimed between the potentially exposed population and those who were not exposed. Using the full data set with state fixed effects, potential exposure to coursework offerings is associated with a decrease in the amount of EITC claimed of $9.75, and an decrease of $10.94 in the county restricted regressions. Both these results are significant at the 1% level. Potential exposure to offered coursework while in high school results in an increase in the amount of Earned Income Tax Credit claimed of $9.85 compared to those who were exposed to coursework requirements when using contiguous county pair fixed effects, but is statistically insignificant at all conventional levels. Coursework requirements have a small positive economic impact on the amount of EITC claimed for the potentially affected population at the state and county level, and results in a negative but economically insignificant impact at the contiguous

Table 9: "Amount of EITC Claimed" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-9.749***		-10.94***		9.847	
	(2.830)		(2.982)		(12.92)	
Course Required Treatment		2.431		4.568		-12.18
		(6.250)		(8.674)		(12.04)
Filed Taxes this year	244.8***	261.7***	228.1***	249.4***	269.0***	224.2***
	(12.87)	(12.42)	(10.85)	(11.55)	(32.64)	(30.75)
In Labour Force	-56.28***	-68.32***	-53.63***	-65.53***	15.89	-76.30***
	(5.437)	(8.722)	(5.672)	(8.656)	(11.26)	(10.12)
Female	185.9***	193.4***	173.2***	181.7***	243.1***	157.5***
	(8.025)	(10.54)	(7.015)	(10.21)	(23.65)	(17.74)
Black	209.7***	159.8***	217.7***	161.6***	227.2***	186.5***
	(14.18)	(17.57)	(15.91)	(18.63)	(21.00)	(27.99)
Indigenous American	222.9***	142.0***	217.2***	105.1***	26.88	198.4**
	(23.42)	(23.57)	(31.86)	(27.40)	(68.93)	(70.31)
Asian	-87.08***	-112.0***	-49.69***	-83.62***	-69.96	-58.03***
	(11.54)	(16.75)	(12.23)	(17.27)	(67.51)	(16.35)
Pacific Islander/Hawaiian	142.6***	33.85	140.8***	41.05	381.8*	111.7
	(35.82)	(36.55)	(38.57)	(33.81)	(188.2)	(102.1)
Other	92.34***	61.90***	87.77***	61.85***	22.00	136.4**
	(19.80)	(20.11)	(22.55)	(20.02)	(44.82)	(58.91)
Constant	-44.90***	-37.78**	-47.27***	-40.37**	-137.0***	-40.80
	(14.63)	(17.04)	(12.81)	(16.44)	(28.41)	(26.68)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	321806	660598	226600	511067	18951	99448
Adj. R^2	0.0513	0.0548	0.0544	0.0567	0.0651	0.0557

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

county level with a decrease of $12.18 for potentially exposed observations.

Tax filing status in an observation year has an expected positive correlation on the amount of EITC claimed for all geographic specifications. Being a part of the labour force is correlated with claiming less amounts on the EITC in all specifications. This correlation is statistically significant at all conventional levels for all specifications with the exception of offered coursework at the contiguous county pair level, which lacks significance at all conventional levels. Demographic controls are strongly correlated with the amount if EITC claimed, and are statistically significant at the 1% level in all geographic specifications. These results suggest that states who offer coursework in economics or finance see a small but statistically significant increase in the amount of Earned Income Tax Credit claimed by potentially affected populations.

Table 10 looks at the probability of claiming any amount of Earned Income Tax Credit in any year across the sample period. Like the other outcome measures, economic indicators such as filed taxes this year and being in the labour force have a consistent correlation with claiming any amount across all geographic specifications, with filing taxes being a positive indicator of whether someone claimed any amount of the EITC in a given year, and being in the labour force consistently having a negative impact on this probability. Demographic controls such as Black and Indigenous American are strongly correlated with an increased likelihood of claiming any amount of EITC in a given year, with those who identify as Black being more likely to claim any amount of EITC by between 9.33 and 7.33 percentage points using state fixed effects, between 9.56 and 7.38 percentage points using county fixed effects, and between 12.2 and 8.88 percentage points using county pair fixed effects. Those who identify as Indigenous American are between 8.75 and 5.86 percentage points more likely to claim any amount of EITC in a given year using state fixed effects, but decreases to between 8.82 and 3.3 percentage points when contiguous county pair fixed effects are used.

The treatment effect associated with potential exposure to coursework offerings is economically small in all three geographic specifications, resulting in a change in the likelihood of claiming any amount of EITC less than 1.5 percentage point in all cases. Potential exposure to offered coursework while in high school results in a decrease in the probability of claiming any amount of EITC by 1.36 percentage points using state fixed effects, and 1.17 percentage points using county fixed effects. These results are statistically significant at the 1% level. At the county contiguous pair level, exposure to course requirements increases the probability of claiming any amount of the EITC by 0.21 percentage points compared to those who were not exposed, while exposure to offered coursework results in a decrease of 0.68 percentage points compared to those exposed to required coursework. While the difference is small in comparison to the magnitude of other controls included in the analysis, the caveats currently associated with the offered coursework treatment at the contiguous county level should be taken with some skepticism. My results suggest that required coursework result in economically small and statistically insignificant changes in the probability of claiming any amount of the EITC, with offered coursework reduces this probability when using state and county fixed effects.

Table 10: "Claimed Any Amount of EITC" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.0136***		-0.0117***		-0.00677	
	(0.00306)		(0.00106)		(0.00650)	
Course Required Treatment		0.00108		0.00261		0.00209
		(0.00198)		(0.00237)		(0.00375)
Filed Taxes this year	0.118***	0.120***	0.112***	0.116***	0.139***	0.114***
	(0.00537)	(0.00414)	(0.00491)	(0.00382)	(0.0133)	(0.0148)
In Labour Force	-0.0262***	-0.0259***	-0.0248***	-0.0248***	-0.0170***	-0.0368***
	(0.00293)	(0.00229)	(0.00305)	(0.00207)	(0.00434)	(0.00453)
Female	0.0535***	0.0572***	0.0496***	0.0530***	0.0697***	0.0439***
	(0.00267)	(0.00320)	(0.00262)	(0.00298)	(0.00793)	(0.00572)
Black	0.0927***	0.0733***	0.0956***	0.0738***	0.122***	0.0888***
	(0.00482)	(0.00534)	(0.00541)	(0.00595)	(0.0114)	(0.0120)
Indigenous American	0.0875***	0.0586***	0.0723***	0.0422***	0.0330	0.0882***
	(0.00815)	(0.00736)	(0.0102)	(0.00788)	(0.0305)	(0.0299)
Asian	-0.0324***	-0.0381***	-0.0196***	-0.0285***	-0.0171	-0.0264***
	(0.00485)	(0.00568)	(0.00519)	(0.00607)	(0.0203)	(0.00824)
Pacific Islander/Hawaiian	0.0451***	0.0167	0.0426***	0.0187*	0.107	0.0325
	(0.0160)	(0.0106)	(0.0153)	(0.00948)	(0.0730)	(0.0318)
Other	0.0411***	0.0262***	0.0393***	0.0256***	0.0670***	0.0540***
	(0.00633)	(0.00775)	(0.00728)	(0.00760)	(0.0178)	(0.0170)
Constant	-0.00411	-0.00423	-0.00574	-0.00550	-0.0352**	-0.00686
	(0.00583)	(0.00530)	(0.00547)	(0.00484)	(0.0130)	(0.0115)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	321806	660598	226600	511067	18951	99448
Adj. R^2	0.0739	0.0813	0.0772	0.0831	0.101	0.0823

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

For the post education outcomes examined, it is possible that the included economic indicators are acting as bad controls and are themselves affected by the introduction of treatment in some fashion. For someone to claim any amount of the EITC, since it is a tax credit, they must have filed their taxes in an observation year, and to claim any amount of earned income, they must have been employed and part of the labour force. To examine the extent to which these included economic indicators may influence the coefficient associated with possible treatment, whether it be required or offered coursework, these two controls are removed from the regressions using state level fixed effects, which are rerun to see if substantial differences in treatment coefficients and statistical significance are obtained. The probability of being a part of the labour force and filing taxes in an observation year are also treated as dependent variables, to examine the extent that coursework treatments affect these potential outcomes.

The effect of omitting these economic controls on the impact of coursework treatment is economically small across all outcome measures examined. The effect on having at least a high school level of education when potentially exposed to offered coursework is increased by approximately 0.02 percentage points and remains statistically insignificant at all conventional levels. For the economic outcome measures looked at, omitting labour force status and tax filing status reduces the economic impact of offered or required coursework treatments for all outcomes measures, but retains their statistically insignificance. Omitting labour force status and tax filing status increases the difference in EITC claimed by the affected populations by $7.63 for the offered coursework treatments, and $1.16 for required coursework. The likelihood of claiming any amount of EITC when exposed to offered coursework is increased by 0.37 percentage points but remains statistically significant at the 1% level.

Looking at the economic controls as dependent variables shows that offered or required coursework has little economic impact on the affected population in terms of their probability of filing taxes in a given year or being part of the labour force, with one exception. Offered coursework treatment increase the probability of filing taxes in an observation year by 3.42 percentage points and is significant at all conventional levels. Required coursework increase this probability by 0.67 percentage points and it insignificant at all conventional levels. The probability of being a part of the labour force is increase by 1.33 percentage points when exposed to offered coursework, and 0.86 percentage points when exposed to required coursework. Both results are insignificant at all conventional statistical levels. These results suggest that including these economic controls do not greatly impact the influence that potential treatment effects may have on the treated, but account for impacts, both statistical and economic, that are contributed to other controls in the economic controls' absence. The results of these regressions can be found in Appendix E.

Heterogeneous Effects

Appendix F looks at potential heterogeneous effects that may be present in my analysis, here expressed as interactions between demographic indicators and course offering and requirement treatments. The dependent variable of interest used in this analysis is the probability of having a high school level of education. Interaction terms between course offering and course requirement

treatments are generated for all gender and race indicators used in the main regressions. Analysis is done using contiguous county pair fixed effects and its respective data set. For each specification looking at a particular demographic, all observations that do not belong to that demographic group or the baseline group, here defined as white when looking at race indicators, and male when looking at sex indicators, are dropped from the analysis. This should potentially parse out any demographic specific treatment effects that may exist within the used sample, despite the common course offering and requirement effects already being quite minimal in comparison to demographic and economic indicators.

Compared to the baseline specification, requiring coursework has a slight change in significance for females. Both offered and required coursework have a statistically significant, though economically small effect on the probability of having at least a high school level of education relative to men. Coursework offerings decrease the probability of having a high school degree by 0.27 percentage points for an overall impact of -0.001 percentage points. Required coursework decreases the probability of females having at least a high school degree by .355 percentage points relative to men, for an overall impact of 0.096 percentage points. Both treatment effects are significant at the 10% level. Course requirements similarly have a significant impact on populations that identify as Black or Asian. Interaction terms between course requirements and Black is significant at 5% level, and 1% for the Asian interaction with course requirements. For all of interaction terms associated with course requirements, the change in probability of having at least a high school degree is less than 1 percentage point, with the exception of coursework requirements on the subsample identified as Pacific Islander. The results of looking at potential heterogeneous effects suggest that future iterations of this work isolate demographic specific effects that may arise from offering and requiring economic and financial coursework. For all presented heterogeneous effects, the reader should be aware that since the presented analysis uses contiguous county pair fixed effects and its associated data set, that regression using offered coursework as an independent variable are comparing those who were exposed to offered coursework to those exposed to required coursework, not those who were never exposed to either type.

Differences Between IPUMS Counties and Metropolitan Areas

Appendices H and I contain the output from the county and contiguous county pair geographic specifications, breaking down each sample even further by county or metropolitan area designation. For the county level data set, the regressions used in the main specification are run with just observations with a county code but could have a metropolitan code assigned to it, and then with observations with a metropolitan code with no county code. These data sets are treated as mutually exclusive. For the contiguous county pair data set, regressions are run with just observations belonging to a pair with IPUMS county codes, then run with just observations that have metropolitan pseudo counties pairs that I constructed. These data sets are also treated as mutually exclusive. This was done to identify any differences that may be present in the impact of potential coursework exposure on these populations.

The county level regressions do not display a consistent difference in outcomes between purely IPUMS county observations and metropolitan area observations. The magnitude the of economic impacts and statistical significance of characteristic and economic controls of each division of the sample do not display large differences, with the exception of the probability of having more than a high school degree. Using only counties with an IPUMS assigned county code, offered coursework treatment results in an increase of having more than a high school level of education of 0.07 percentage points, and is significant at the 10% level. The metropolitan sample experiences an increase in this probability of 0.01 percentage point, and is statistically insignificant.

The differences present in metropolitan counties compared to IPUMS assigned counties in the probability of having more than a high school education is also present in the county pair sample divisions. IPUMS assigned counties that experienced the treatment of course offerings experienced a 5.92 percentage point increase in the likelihood of having more than a high school education compared to those who were exposed to required coursework, which is statistically significant at the 10% level. Metropolitan counties experienced a increase of 3.38 percentage points, which is statistically insignificant at all conventional levels. The contiguous county pairs data divisions also display some differences in EITC amounts and the probability of claiming any amount, though all differences present, either between those exposed to required coursework compared to the control

group, or comparing each of the treatment groups are statistically and economically insignificant. My results suggest that including an Urban/Rural indicator in extensions to this work would be advantageous if possible to account for differences that may be present between metropolitan more rural areas. Please refer to Appendix H and I for county and contiguous county pair output.

Alternative Standard Error Clustering

Clustering at specific geographic levels imposes assumptions on how potential shocks affect the sample population within the geographic region that clustering occurs at. Despite not using a balanced panel data set containing the same identifiable individuals across time, the main results' standard errors are clustered at the state level to account for any potential serial correlation that may be present between observations from the same state across time. This clustering was chosen to account for the potential shock, the introduction of financial or economic coursework offerings or requirements, occurring at the state level. This assumes that the effect of introducing coursework is the same across the states population that could potentially be affected by this change. It is possible that the introduction of these changes exacerbates differences that may already be present even between counties within a state that affect each counties' ability to fulfill the standards in place for financial and economic courses that students can or have to take.

Alternative geographic level clustering may be preferred if standard errors using alternative specifications are more conservative than the state level clustering used. The tables in Appendix J reproduce the main regression results using the contiguous county pair data set, with different levels of standard error clustering at the state level, county level, and the contiguous county pair level. Though 51 clusters has been cited as being sufficient for analysis based in the United States (Angrist & Pischke, 2009), using county or contiguous county pairs may be advantageous if it minimizes the likelihood of falsely rejecting the null hypothesis of coursework having any impact on post high school outcomes of the treatment group.

The results presented in Appendix J suggest that clustering at the county or contiguous pair level offers an inconsistent advantage over state level clustering. The standard errors associated with offered or required coursework and their effects on education attainment, as well as poverty

status, are minimized when clustering at the county or contiguous county level, with the exception of offered coursework treatment in all 3 cases at the contiguous county level. Given the caveats associated with this specification, this result has should not be looked at as conclusive. The clustered standard errors for EITC claims and the probability of claiming any amount of EITC are increased by clustering at the county and contiguous pair level. Due to the lack of consistent changes to the standard errors across the outcome measures used in my analysis, clustering at the state level is still the preferred method of standard error clustering due to the implementation of coursework happening at the state level. However, the changes in standard error size suggests that alternative strategies and clustering my be advantageous, especially if more granular data can be leveraged to discern differences between counties that are part of pairs with differences in coursework. Please refer to the tables in Appendix J to look at the full output of alternative geographic clustering.

Omitting States with 1998 Standards

Because data from the Council of Economic Education's Survey of the States only starts in 1998, I cannot discern which states that are listed as having standards in 1998 introduced them in 1998 or if they were introduced prior to the Survey of the States' first publication. To check my main specification results, I reran my main regressions excluding data from states that had standards in place in 1998, and only used data from states that introduced coursework in 2000 or later, or never introduced them in my sample period. These results can be found in Appendix K.

Limiting the data to just states who introduced offered or required coursework in 2000 or later or never at all produces some different results when looking at the education attainment of potentially exposed individuals. In the main results, potential exposure to course offerings has a positive impact on the likelihood of having at least a high school education at the state and county level, with course requirements consistently having a negative impact. Using the data set restricted to post 1998 standard introductions, the effect of potential coursework offered exposure mirrors the pattern of the main regression results, with potential coursework offering exposure having a small positive economic impact in all three geographic fixed effect specifications. All of these results are statistically insignificant at all conventional levels, with the coefficients changing by an economically negligible amount.

Unlike the main results, course requirements have a positive impact on the likelihood of obtaining more than a high school level of education in the states who introduced coursework in 2000 or later using state effects. These results maintain their statistical insignificance at all conventional levels. The amount of EITC claimed by individuals potentially exposed to offered coursework in all three geographic fixed effects specifications is greater than what is claimed in their main regression counterparts, with the state data set claiming on average $0.92 more compared to the sample that includes states who had standards in place in 1998, and $1.11 more in the county level data set. The amount claimed by those potentially exposed to offered coursework individuals using contiguous county pair fixed effects increases by $16.53 compared to those either exposed to required coursework, but the statistical significance of this result is unchanged.

The difference in obtained results between these two specifications suggests that it is important to know concretely which year coursework, either required or offered, is introduced in a state to accurately quantify the benefits associated with introducing coursework. Potential extensions to this study may be able to take advantage of more robust data sets that have more granular data on when courses and standards were introduced and implemented in states prior to 1998.

Conclusion

The results from my analysis find that potential exposure to economic and financial coursework has very little effect on post high school education outcomes, here expressed as the probability of having at least a high school education, or obtaining any post secondary education, being above the poverty line, and the amount of Earned Income Tax Credit claimed and the probability of claiming any amount in an observed sample year. My results suggest that offered and required coursework, either in economic or personal finance, is generally ineffective at reducing poverty rates and that financial curriculum or economic curriculum is not enough to overcome factors that may affect impoverishment of potentially affected populations. It also does not significantly impact education attainment of populations who were potentially exposed. What it does suggest is that those who were potentially exposed tend to claim more amounts of the Earned Income Tax Credit, and that they are more likely to claim this tax credit when using state fixed effects. The additional specifications included suggests that standard error clustering at the state level is appropriate for this level of data granularity, and that heterogeneous effects of affected populations should be examined to parse out demographic specific effects, since there are significant impacts on education and tax filing behaviours. I also determine that looking at possible differences rural and urban populations, here expressed as IPUMS county codes versus metropolitan area designation, should be examined to further differentiate the effects of economic and financial coursework.

It is worth noting the limitations of the data sets used for this analysis. Assumptions were made about student's potential exposure to such coursework, as well as the curriculum used in each individual state. It is likely that there is little uniformity in coursework structures between states, and that each state focused on different aspects of financial and economic topics in the delivered coursework. The main results presented also cannot discern if coursework was offered in some states prior to 1998, only stating that it was available in 1998 and after. Data is also unavailable on whether someone was actually exposed to said coursework offerings or requirements, and instead a metric of them being in the state at a particular point in time when coursework was or was not available is used as indicator of their potential exposure, which suffers from measurement error. The current data also does not account for any migration that might have occurred for

individuals, and assumes that the state that they went to high school in is the state that they resided in from the ages of 18 to 40. It is likely that some of these observations decided to, in the event of pursuing work or higher education, moved out of state.

Despite the limitations currently present in the data sets used for this analysis, the established framework provides a concrete and well developed avenue for future research into the true effects of financial and economic coursework on post education outcomes. If microdata on individuals across time becomes available and includes their level of education and course data from their high school degree, the discussed empirical model should serve as a sound starting point for future iterations of this work and developments in this field. Extensions to this study would benefit from using an Urban/Rural flag to indicate status of a particular county or observation, as well as having more granular data on when coursework was introduced in a state prior to 1998. Future studies would also benefit from having concrete data on a student's exposure to financial and economic coursework, whether it be offered or required, and the ability to link individual tax data to observations across time so that longitudinal analysis of the same cohort of individuals can be done.

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Appendices

Figure 3: Appendix A.1: States with Required Coursework: 1998-2018

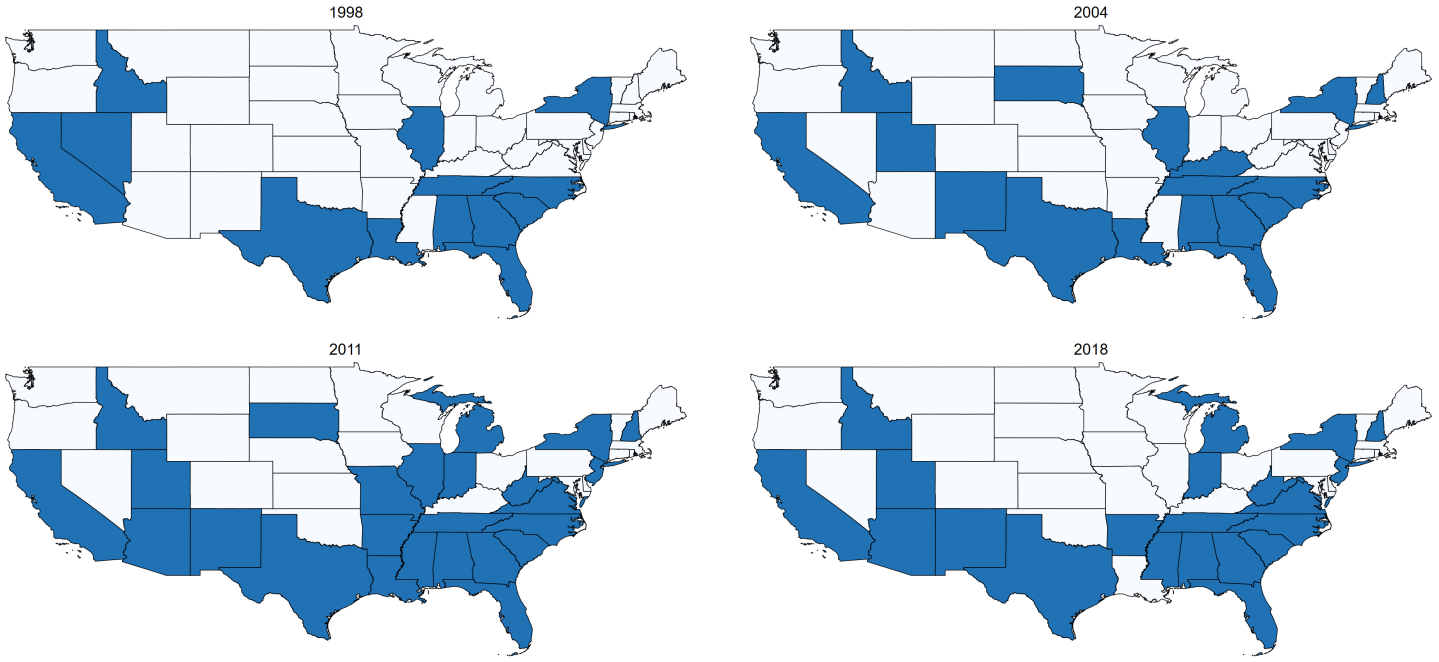
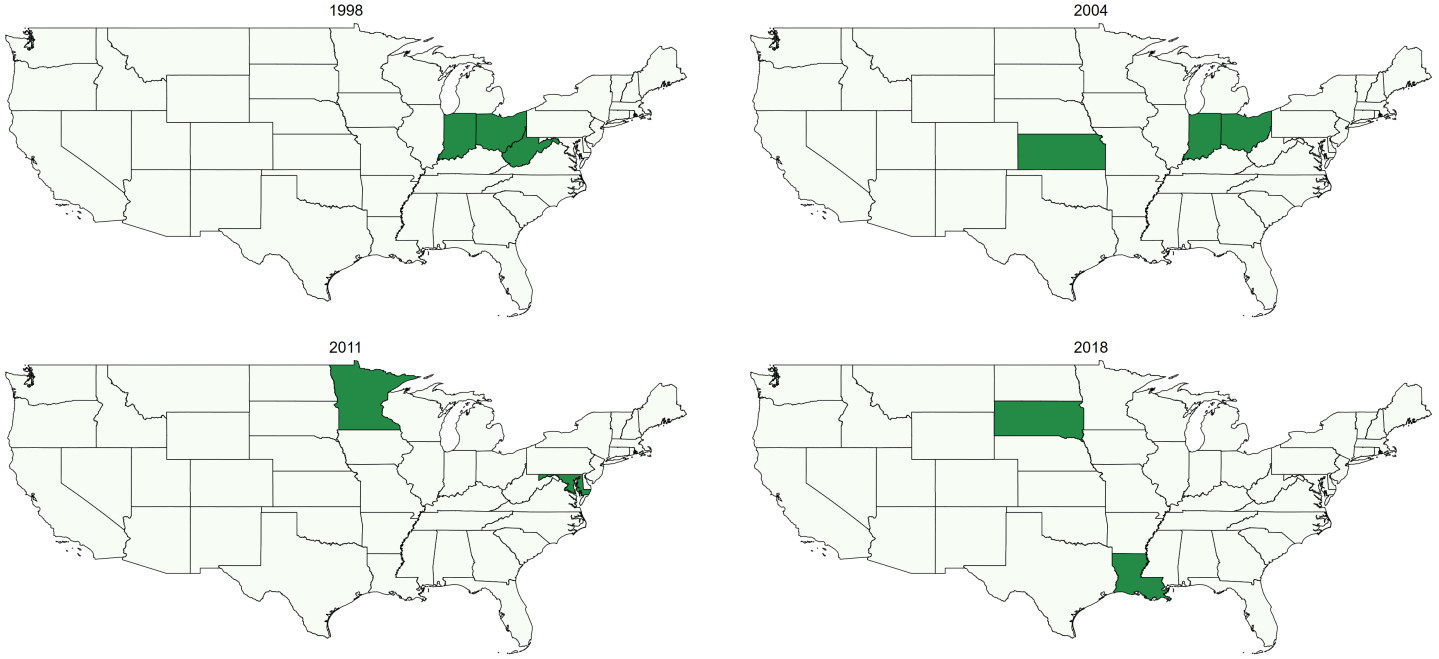


Figure 4: Appendix A.2: States with Offered Coursework: 1998-2018



The above figures depict the adoption of offered and required course treatment in the Contiguous U.S. states from 1998 to 2018. Since standards only update every 2 years or so, values for 2018 are equivalent to 2019. Alaska, Hawaii, and U.S. Territories are excluded. Data is either unavailable for these geographic locations, or they did not adopt any coursework standards over the sample period. The top four maps in blue depict required coursework adoption in certain states, with states in dark blue having either required financial or economic coursework in high schools at the time. The bottom four maps in green depict offered coursework adoption in certain states, with states in dark green having either offered financial or economic coursework in high schools at the time, but not required coursework.

Figure 5: Appendix A.3: IPUMS Counties used in County Fixed Effects Analysis

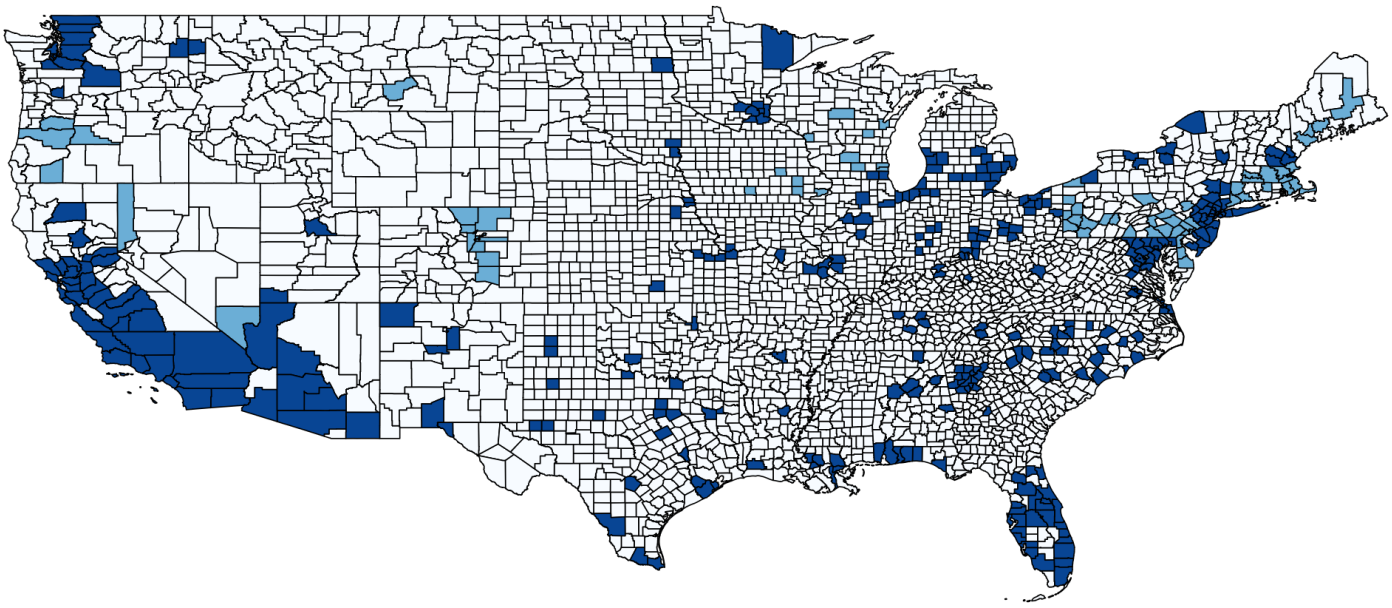
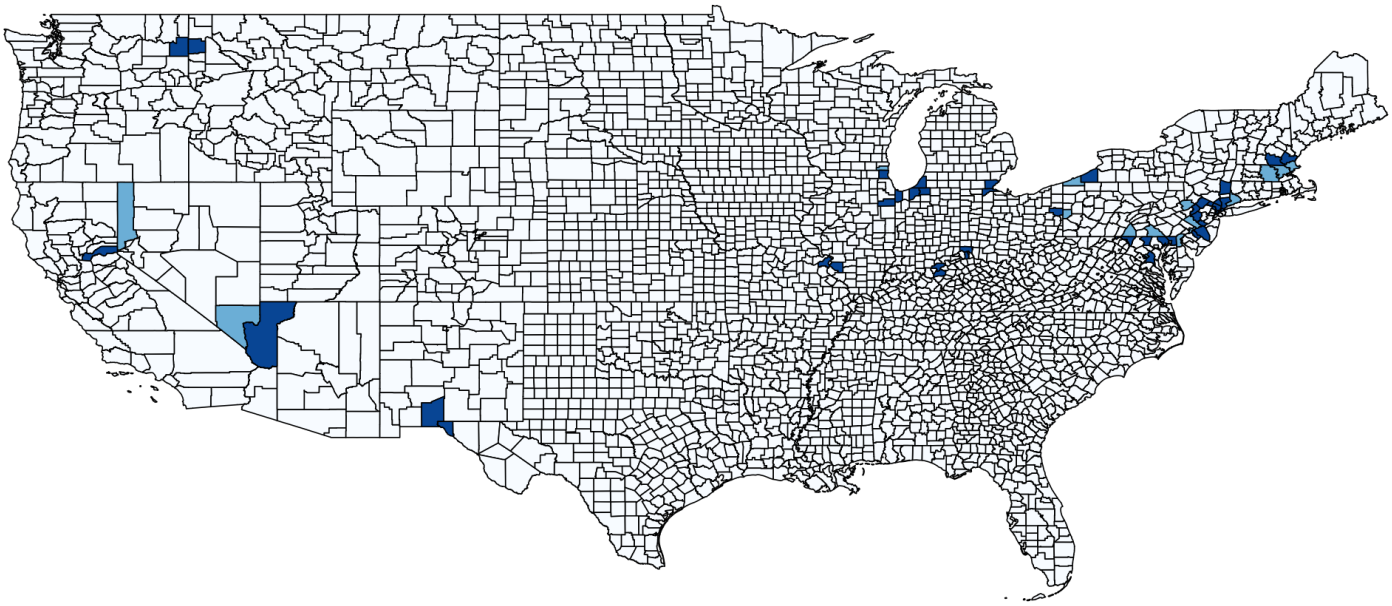


Figure 6: Appendix A.4: IPUMS Counties used in County Pair Fixed Effects Analysis



The above figures depict the counties used in the restricted regressions using county and county pair fixed effects. The top map depicts the counties used in the regressions using county fixed effects. There are a total of 408 counties used. The bottom map depicts the counties used in the regressions using contiguous county pair fixed effects, and is restricted to 64 counties. In both maps, counties in dark blue are counties that offered or required coursework at any point over the sample period, while those in light blue never implemented offered or required coursework in economics or personal finance over the sample period. Counties that are part of a border pair may adopt the same standards as the other and be included, as long as there is a difference present between them. Due to inconsistencies in the data, some pairs between California and Nevada are not included in the analysis. Alaska, Hawaii, and U.S. territories are omitted from the maps. 1 county from Alaska and 2 from Hawaii are included in the county analysis, and no counties from either of these states are included in the county pair analysis.

Figure 7: Appendix A.5: Metropolitan Areas used in County Fixed Effects Analysis

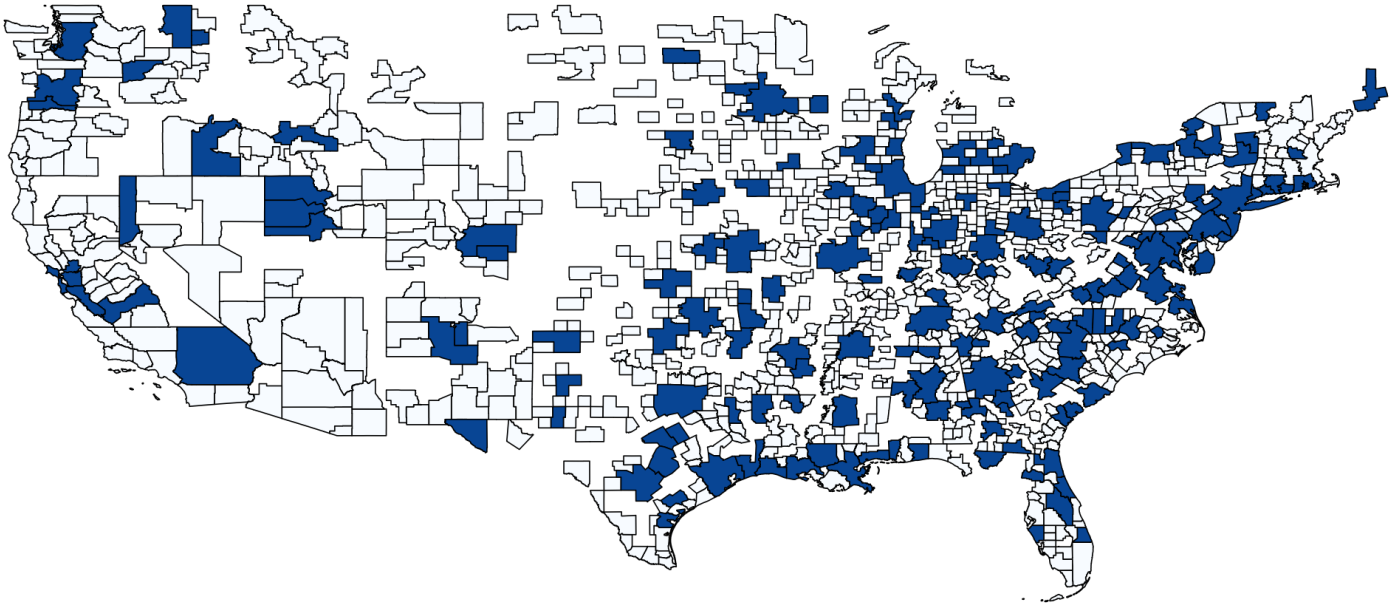
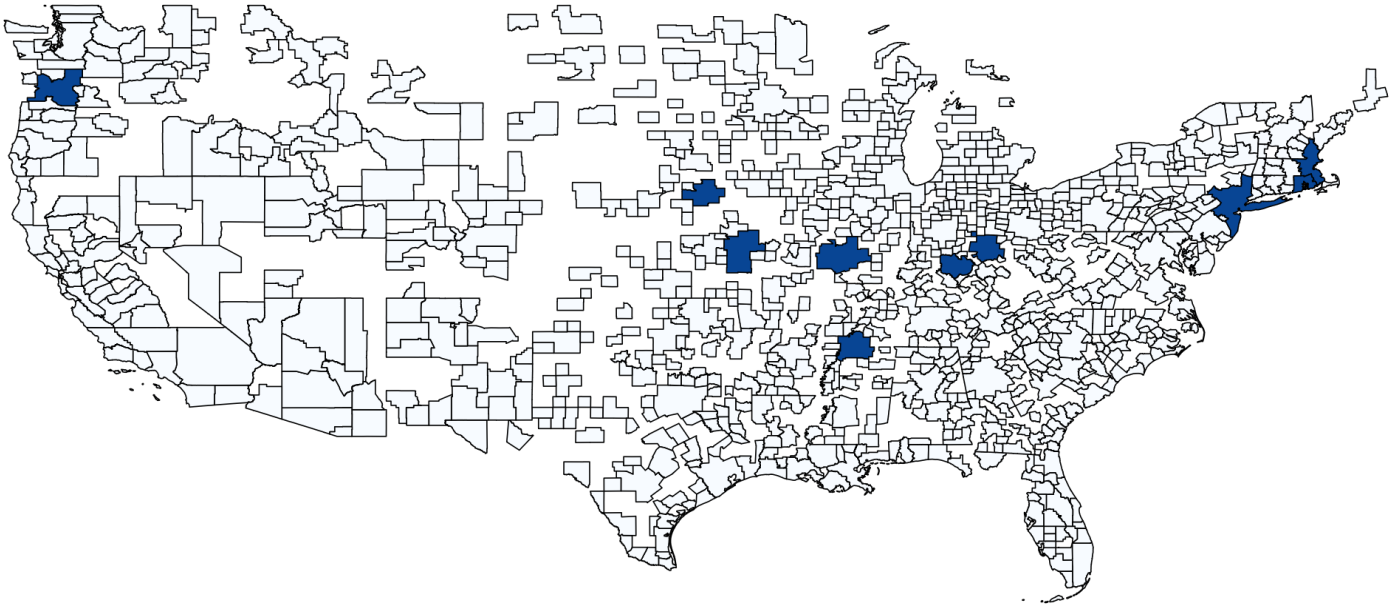


Figure 8: Appendix A.6: Metropolitan Areas used in County Pair Fixed Effects Analysis



The above figures depict the metropolitan areas used in the restricted regressions using county and county pair fixed effects. The top map depicts the counties used in the regressions using county fixed effects in dark blue, while the bottom map depicts the counties used in the regressions using contiguous county pair fixed effects, also in dark blue. Due to how borders are defined in the files used to generate my maps, I cannot visually differentiate between state borders that may be present in metropolitan areas. The metropolitan areas used in the county pair analysis are only included because there are differences present in them at any point over the sample period. Alaska, Hawaii, and U.S. Territories are omitted from the maps. 1 metropolitan area from Hawaii is used in the county fixed effects analysis, while no metropolitan areas from either Alaska or Hawaii is used in the county pair fixed effects analysis. The reader should note that due to changes in the borders defined for metropolitan areas over time, that these maps may not be wholly representative of the sample and geographic areas covered by the included metropolitan areas.

Table 11: Appendix B.1: Financial and Economic Course in States, 1998-2019 (Table 1 of 3)

State	Financial Coursework, Year Introduced	Economic Coursework, Year Introduced
Alabama	Required, 2000*	Required, 1998
Alaska	None	None
Arizona	Required, 2014	Required, 2009
Arkansas	Required, 2009*	Offered, 2009
California	None	Required, 1998
Colorado	None	None
Connecticut	None	None
Delaware	None	None
District of Columbia	None	None
Florida	Required, 2014	Required, 1998
Georgia	Required, 2004	Required, 1998
Hawaii	None	None
Idaho	Required, 2000	Required, 1998
Illinois	Required, 1998*	None
Indiana	None	Offered, 1998*
Iowa	None	None
Kansas	Offered, 2004*	None

Note: * denotes whether there was a gap in this coursework standard in a state across the sample period. They are detailed below.
Alabama: Finance Required 2000-2001, 2004-2006, 2014-2019
Arkansas: Finance Required 2009-2010, 2016-2019
Illinois: Finance Required 1998-2013
Indiana: Economics Required 2007-2019
Kansas: Finance Required 2004-2007

Table 12: Appendix B.2: Financial and Economic Course in States, 1998-2019 (Table 2 of 3)

State	Financial Coursework, Year Introduced	Economic Coursework, Year Introduced
Kentucky	Required, 2002*	Required, 2002*
Louisiana	Required, 2007*	Required, 2000*
Maine	None	None
Maryland	Required, 2009*	Offered, 2011*
Massachusetts	None	None
Michigan	Required, 2016	Required 2007
Minnesota	None	Offered, 2011*
Mississippi	Offered, 2000*	Required, 2007*
Missouri	Offered, 1998*	Required, 2007*
Montana	None	None
Nebraska	Required, 1998*	None
Nevada	None	None
New Hampshire	Required, 2014	Required, 1998
New Jersey	Required, 2009	Required, 2009
New Mexico	Offered, 1998*	Required, 2000
New York	Required, 2000*	Required, 1998
North Carolina	Required, 2011	Required, 1998

Note: * denotes whether there was a gap in this coursework standard in a state across the sample period. They are detailed below.
Kentucky: Finance Required 2002-2006, Economics Required 2002-2006
Louisiana: Finance Required 2007-2015, Offered 2007-2019
Louisiana (cont.): Economics Required 2000-2015, Offered 2000-2019
Maryland: Finance Required 2009-2010, Economics Offered 2011-2013
Minnesota: Economics Offered 2011-2013
Mississippi: Finance Required 2000-2001, 2007-2019
Mississippi (cont.): Economics Required 2007-2019
Missouri: Finance Required 1998-2006, 2009-2010, Offered 2007-2008, 2011-2019
Nebraska: Finance Required 1998-1999
New Mexico: Finance Offered 1998-2010, 2014-2019
New York: Finance Required 2000-2006, 2009-2013, 2016-2019

Table 13: Appendix B.3: Financial and Economic Course in States, 1998-2019 (Table 3 of 3)

State	Financial Coursework, Year Introduced	Economic Coursework, Year Introduced
North Dakota	Required, 2014	Required, 2014
Ohio	None	Offered, 1998*
Oklahoma	Required, 2009*	None
Oregon	None	None
Pennsylvania	None	None
Rhode Island	None	None
South Carolina	Offered, 2000*	Required, 1998
South Dakota	Required, 2007*	Required, 2004*
Tennessee	Required, 2009	Required, 1998
Texas	Required, 2014	Required, 1998
Utah	Required, 2004	Required, 2011*
Vermont	None	None
Virginia	Required, 2009	Offered, 2009
Washington	None	Offered, 2000*
West Virginia	Required, 2011*	Required, 2011
Wisconsin	None	None
Wyoming	None	Required, 2014*

Note: * denotes whether there was a gap in this coursework standard in a state across the sample period. They are detailed below.
Ohio: Economics Offered 1998-2006
Oklahoma: Finance Required 2009-2010, Offered 2014-2015
South Carolina: Finance Offered 2000-2001
South Dakota: Finance Required 2007-2013, Offered 2007-2019
South Dakota (cont.): Economics Required 2004-2013, Offered 2004-2019
Utah: Finance Required 2011-2013, 2018-2019
Washington: Economics Offered 2000-2001
West Virginia: Finance Required 2011-2015, Offered 2011-2019
Wyoming: Economics Required 2014-2015

Table 14: Appendix C.1: County Level Summary Statistics

	Mean	SD	Min	Max
Outcome Measures				
Has High School Education	0.9939	0.0776	0	1
Greater Than High School Education	0.2980	0.4574	0	1
Below Poverty Line	0.1523	0.3593	0	1
Amount of EITC claimed	241.8981	902.7000	0	6,431
Any Amount of EITC claimed	0.1097	0.3125	0	1
Demographic Controls				
Years of Age	25.5150	5.6368	18	40
Female	0.5140	0.4998	0	1
White	0.7465	0.4350	0	1
Black	0.1396	0.3466	0	1
Indigenous American	0.0098	0.0985	0	1
Asian	0.0685	0.2526	0	1
Pacific Islander/Hawaiian	0.0064	0.0797	0	1
Other	0.0292	0.1684	0	1
Economic and Education Controls				
In Labour Force	0.7257	0.4462	0	1
Currently Employed	0.6429	0.4791	0	1
Filed Taxes this year	0.7671	0.4227	0	1
Years of Education	13.0418	2.5464	0	22
Treatment Controls				
Course Offered Treatment	0.0286	0.1666	0	1
Course Required Treatment	0.5693	0.4952	0	1

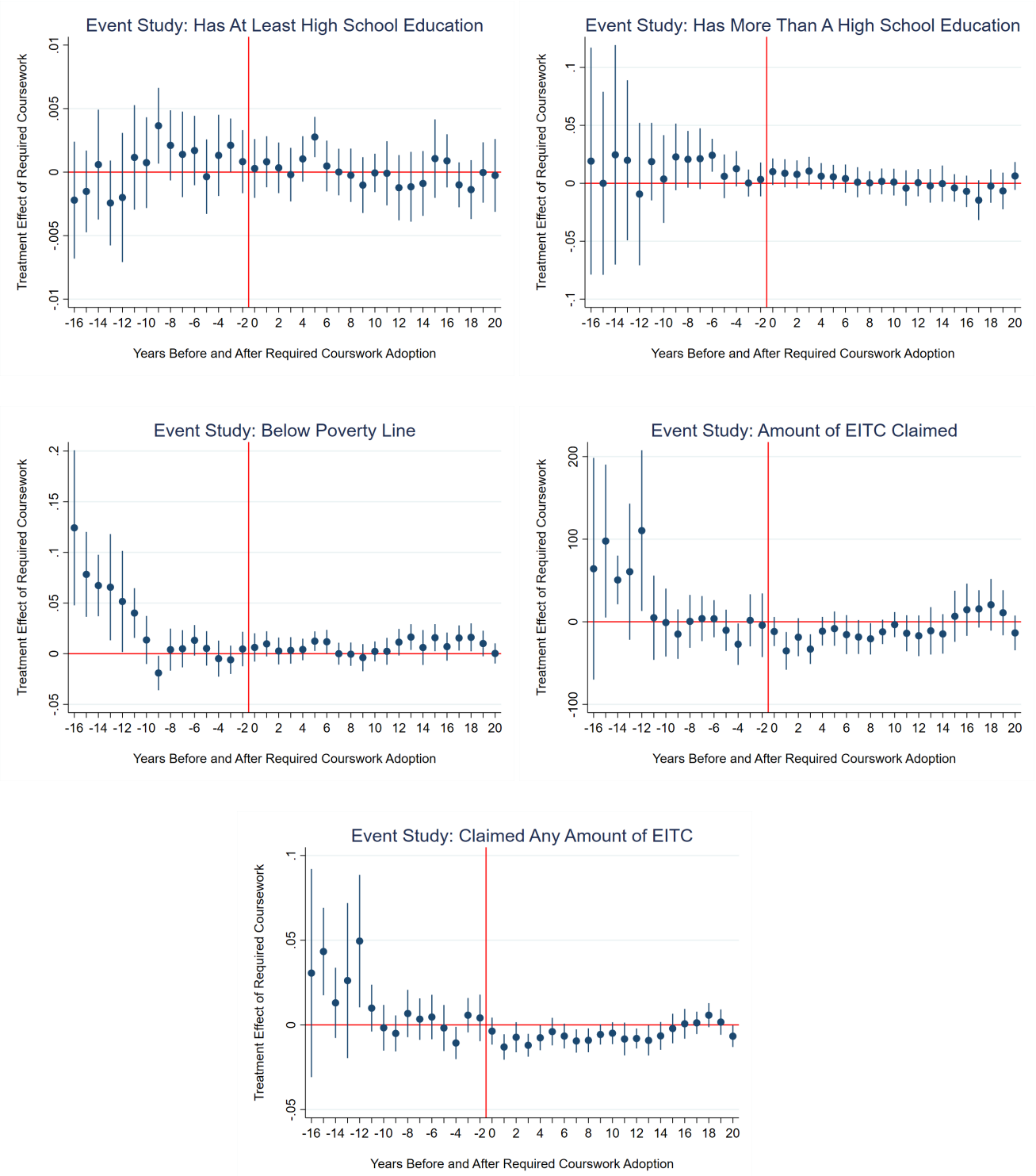
This table contains summary statistics for the county level analysis, which is restricted to observations that have county level data available.

Table 15: Appendix C.2: County Pair Level Summary Statistics

	Mean	SD	Min	Max
Outcome Measures				
Has High School Education	0.9932	0.0823	0	1
Greater Than High School Education	0.3954	0.4889	0	1
Below Poverty Line	0.1511	0.3582	0	1
Amount of EITC claimed	207.0521	830.5670	0	6,431
Any Amount of EITC claimed	0.0994	0.2991	0	1
Demographic Controls				
Years of Age	26.0980	5.5290	18	40
Female	0.5212	0.4996	0	1
White	0.7091	0.4542	0	1
Black	0.1940	0.3955	0	1
Indigenous American	0.0056	0.0745	0	1
Asian	0.0674	0.2508	0	1
Pacific Islander/Hawaiian	0.0031	0.0558	0	1
Other	0.0207	0.1425	0	1
Ecomonic and Education Controls				
In Labour Force	0.7390	0.4392	0	1
Currently Employed	0.6557	0.4751	0	1
Filed Taxes this year	0.7685	0.4218	0	1
Years of Education	13.5538	2.7690	0	22
Treatment Controls				
Course Offered Treatment	0.0685	0.2526	0	1
Course Required Treatment	0.3444	0.4752	0	1

This table contains summary statistics for the county pair level analysis, which is restricted to observations that have county level data available, and are located on a state border.

Figure 9: Appendix D: Event Study Visualizations using State Sample



The above visuals depict the output of event studies run to check the assumption of parallel trends between the treated and untreated observations in the sample. For all outcome measures examined, there are few instances of generated lag variables being statistically different from zero or displaying a clear trend prior to treatment introduction. The farthest lagged year estimates display the greatest amount of volatility, most likely due to the low number of observations available for those years. Due to computational difficulty, the event studies were not run with the IPUMS specified individual weights. These event studies were rerun with the proper weighting using a random 30% sample of the state data, and produced visually similar results, with slightly larger reported standard errors.

Table 16: Appendix E.1: State Level Education Output, No Economic Controls

	(1) Has High School Education	(2) Has High School Education	(3) Has More Than High School Education	(4) Has More Than High School Education
Course Offered Treatment	0.00167		0.0171***	
	(0.00150)		(0.00496)	
Course Required Treatment		-0.000293		0.00247
		(0.000786)		(0.00613)
Female	0.000922***	0.00194***	0.0728***	0.0680***
	(0.000338)	(0.000324)	(0.00261)	(0.00223)
Black	0.000477	0.00212***	-0.133***	-0.0970***
	(0.00107)	(0.000609)	(0.0106)	(0.0104)
Indigenous American	-0.00396	-0.00519**	-0.151***	-0.133***
	(0.00306)	(0.00257)	(0.0102)	(0.00975)
Asian	0.000166	0.00179	0.166***	0.175***
	(0.00136)	(0.00141)	(0.0179)	(0.0152)
Pacific Islander/Hawaiian	-0.000221	-0.00597	-0.0938***	-0.0635***
	(0.00208)	(0.00648)	(0.0230)	(0.0210)
Other	0.000441	0.000767	-0.0509***	-0.0297*
	(0.00139)	(0.00145)	(0.0142)	(0.0154)
Constant	0.995***	0.993***	0.304***	0.272***
	(0.000353)	(0.000530)	(0.00240)	(0.00401)
Observations	321806	660598	321806	660598
Adj. R^2	0.00139	0.00177	0.203	0.198

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 17: Appendix E.2: State Level Earned Income Tax Credit and Poverty Status Output, No Economic Controls

	(1) Below Poverty Line	(2) Below Poverty Line	(3) Amount of EITC Claimed	(4) Amount of EITC Claimed	(5) Any Amount of EITC Claimed	(6) Any Amount of EITC Claimed
Course Offered Treatment	0.00439		-2.122		-0.00988***	
	(0.00854)		(2.559)		(0.00351)	
Course Required Treatment		-0.00441		3.587		0.00165
		(0.00454)		(7.098)		(0.00216)
Female	0.0507***	0.0553***	188.8***	197.9***	0.0548***	0.0588***
	(0.00272)	(0.00261)	(7.555)	(10.59)	(0.00249)	(0.00318)
Black	0.131***	0.109***	183.4***	133.6***	0.0800***	0.0611***
	(0.0103)	(0.00917)	(13.89)	(16.60)	(0.00473)	(0.00490)
Indigenous American	0.149***	0.111***	199.6***	123.8***	0.0762***	0.0499***
	(0.0131)	(0.0159)	(23.22)	(21.32)	(0.00755)	(0.00611)
Asian	0.0291***	0.0118	-101.4***	-127.1***	-0.0394***	-0.0456***
	(0.00849)	(0.0135)	(11.56)	(15.81)	(0.00471)	(0.00528)
Pacific Islander/Hawaiian	0.0651***	0.0209	133.1***	30.23	0.0405***	0.0150*
	(0.0238)	(0.0236)	(32.60)	(33.16)	(0.0133)	(0.00883)
Other	0.0483***	0.0265*	83.64***	52.63***	0.0369***	0.0219***
	(0.00833)	(0.0133)	(19.63)	(19.55)	(0.00625)	(0.00749)
Constant	0.0968***	0.116***	113.1***	115.3***	0.0732***	0.0702***
	(0.00266)	(0.00447)	(4.420)	(8.638)	(0.00153)	(0.00264)
Observations	321806	660598	321806	660598	321806	660598
Adj. R^2	0.0320	0.0285	0.0427	0.0444	0.0581	0.0629

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 18: Appendix E.3: Economic Controls as Outcome Measures Output

	(1) Filed Taxes this year	(2) Filed Taxes this year	(3) In Labour Force	(4) In Labour Force
Course Offered Treatment	0.0342***		0.0133	
	(0.0106)		(0.0105)	
Course Required Treatment		0.00667		0.00862
		(0.0103)		(0.0104)
Female	-0.00705**	-0.00540***	-0.0811***	-0.0866***
	(0.00264)	(0.00189)	(0.00651)	(0.00731)
Black	-0.120***	-0.111***	-0.0550***	-0.0431***
	(0.00843)	(0.00708)	(0.00763)	(0.00742)
Indigenous American	-0.114***	-0.0857***	-0.0838***	-0.0609***
	(0.0125)	(0.0185)	(0.0139)	(0.0152)
Asian	-0.0802***	-0.0842***	-0.0953***	-0.101***
	(0.00858)	(0.00530)	(0.0150)	(0.00967)
Pacific Islander/Hawaiian	-0.0470*	-0.0177	-0.0371***	-0.0148
	(0.0278)	(0.0185)	(0.0137)	(0.0177)
Other	-0.0409***	-0.0397***	-0.0233**	-0.0163***
	(0.00908)	(0.00566)	(0.00935)	(0.00576)
Constant	0.833***	0.788***	0.814***	0.780***
	(0.00274)	(0.00664)	(0.00368)	(0.00703)
Observations	321806	660598	321806	660598
Adj. R^2	0.134	0.162	0.0679	0.0818

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 19: Appendix F.1: County Pair Heterogeneous Effects (Table 1 of 3)

	(1)	(2)	(3)	(4)
Course Offered Treatment	0.00269		0.00109	
	(0.00342)		(0.00273)	
Course Required Treatment		-0.00259*		-0.00145
		(0.00143)		(0.00174)
Course Offered Treatment x Female	-0.00270*			
	(0.00119)			
Course Required Treatment x Female		0.00355*		
		(0.00171)		
Course Offered Treatment x Black			0.00189	
			(0.00123)	
Course Required Treatment x Black				0.00498**
				(0.00238)
Filed Taxes this year	0.0121*	0.00771***	0.0154*	0.00663***
	(0.00611)	(0.00157)	(0.00793)	(0.00137)
In Labour Force	-0.00295	0.000220	-0.00657	0.000747
	(0.00512)	(0.00127)	(0.00759)	(0.000881)
Constant	0.986***	0.988***	0.987***	0.989***
	(0.00221)	(0.000890)	(0.00208)	(0.000695)
Observations	18951	99448	17778	89504
Adj. R^2	0.0116	0.00583	0.0127	0.00573

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 20: Appendix F.2: County Pair Heterogeneous Effects (Table 2 of 3)

	(1)	(2)	(3)	(4)
Course Offered Treatment	0.000422		-0.000524	
	(0.00306)		(0.00333)	
Course Required Treatment		-0.00131		-0.00211
		(0.00190)		(0.00192)
Course Offered Treatment x Indigenous	-0.0326			
	(0.0386)			
Course Required Treatment x Indigenous		-0.00139		
		(0.00412)		
Course Offered Treatment x Asian			-0.0269	
			(0.0319)	
Course Required Treatment x Asian				0.00519***
				(0.00170)
Filed Taxes this year	0.0159	0.00985***	0.0138	0.00757***
	(0.0105)	(0.00132)	(0.0104)	(0.00150)
In Labour Force	-0.00542	-0.000173	-0.00425	-0.000953
	(0.00675)	(0.00126)	(0.00655)	(0.000932)
Constant	0.986***	0.986***	0.987***	0.989***
	(0.00347)	(0.00126)	(0.00366)	(0.000894)
Observations	13899	69381	14270	76372
Adj. R^2	0.0154	0.00774	0.0153	0.00690

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 21: Appendix F.3: County Pair Heterogeneous Effects (Table 3 of 3)

	(1)	(2)	(3)	(4)
Course Offered Treatment	0.00209		-0.000132	
	(0.00355)		(0.00302)	
Course Required Treatment		-0.00116		-0.00149
		(0.00212)		(0.00193)
Course Offered Treatment x Pacific	0.000457			
	(0.00215)			
Course Required Treatment x Pacific		-0.116		
		(0.0985)		
Course Offered Treatment x Other			0.00132	
			(0.00158)	
Course Required Treatment x Other				0.00830***
				(0.00247)
Filed Taxes this year	0.0137	0.00945***	0.0152	0.00779***
	(0.00853)	(0.00227)	(0.0104)	(0.00158)
In Labour Force	-0.00266	-0.00124	-0.00539	-0.000338
	(0.00403)	(0.00147)	(0.00668)	(0.00113)
Constant	0.984***	0.987***	0.987***	0.988***
	(0.00473)	(0.00111)	(0.00347)	(0.000947)
Observations	13806	69191	14174	70784
Adj. R^2	0.0198	0.0106	0.0153	0.00733

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 22: Appendix G.1: State Level Education Output

	(1) Has High School Education	(2) Has High School Education	(3) Has More Than High School Education	(4) Has More Than High School Education
Course Offered Treatment	0.00149		0.0137**	
	(0.00151)		(0.00640)	
Course Required Treatment		-0.000347		0.00139
		(0.000831)		(0.00628)
Filed Taxes this year	0.00435***	0.00511***	0.0596***	0.0471***
	(0.000613)	(0.000358)	(0.00401)	(0.00273)
In Labour Force	0.00258***	0.00229***	0.0971***	0.0883***
	(0.000492)	(0.000401)	(0.00371)	(0.00354)
Female	0.00116***	0.00217***	0.0811***	0.0759***
	(0.000345)	(0.000355)	(0.00284)	(0.00184)
Black	0.00114	0.00279***	-0.120***	-0.0880***
	(0.00107)	(0.000591)	(0.00978)	(0.00949)
Indigenous American	-0.00325	-0.00461*	-0.136***	-0.124***
	(0.00305)	(0.00262)	(0.00994)	(0.00859)
Asian	0.000761	0.00245*	0.180***	0.188***
	(0.00136)	(0.00140)	(0.0184)	(0.0144)
Pacific Islander/Hawaiian	0.0000789	-0.00584	-0.0874***	-0.0614***
	(0.00204)	(0.00642)	(0.0218)	(0.0191)
Other	0.000679	0.00101	-0.0462***	-0.0264*
	(0.00137)	(0.00146)	(0.0140)	(0.0153)
Constant	0.990***	0.988***	0.175***	0.165***
	(0.000721)	(0.000671)	(0.00518)	(0.00505)
Observations	321806	660598	321806	660598
Adj. R^2	0.00266	0.00300	0.216	0.210

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 23: Appendix G.2: State Level Earned Income Tax Credit and Poverty Status Output

	(1) Below Poverty Line	(2) Below Poverty Line	(3) Amount of EITC Claimed	(4) Amount of EITC Claimed	(5) Any Amount of EITC Claimed	(6) Any Amount of EITC Claimed
Course Offered Treatment	0.0136*		-9.749***		-0.0136***	
	(0.00795)		(2.830)		(0.00306)	
Course Required Treatment		-0.00238		2.431		0.00108
		(0.00621)		(6.250)		(0.00198)
Filed Taxes this year	-0.245***	-0.236***	244.8***	261.7***	0.118***	0.120***
	(0.00574)	(0.00366)	(12.87)	(12.42)	(0.00537)	(0.00414)
In Labour Force	-0.0630***	-0.0533***	-56.28***	-68.32***	-0.0262***	-0.0259***
	(0.00370)	(0.00193)	(5.437)	(8.722)	(0.00293)	(0.00229)
Female	0.0438***	0.0494***	185.9***	193.4***	0.0535***	0.0572***
	(0.00228)	(0.00247)	(8.025)	(10.54)	(0.00267)	(0.00320)
Black	0.0981***	0.0809***	209.7***	159.8***	0.0927***	0.0733***
	(0.00901)	(0.00803)	(14.18)	(17.57)	(0.00482)	(0.00534)
Indigenous American	0.116***	0.0880***	222.9***	142.0***	0.0875***	0.0586***
	(0.00995)	(0.0116)	(23.42)	(23.57)	(0.00815)	(0.00736)
Asian	0.00349	-0.0135	-87.08***	-112.0***	-0.0324***	-0.0381***
	(0.00645)	(0.0119)	(11.54)	(16.75)	(0.00485)	(0.00568)
Pacific Islander/Hawaiian	0.0512***	0.0159	142.6***	33.85	0.0451***	0.0167
	(0.0172)	(0.0192)	(35.82)	(36.55)	(0.0160)	(0.0106)
Other	0.0368***	0.0162	92.34***	61.90***	0.0411***	0.0262***
	(0.00743)	(0.0128)	(19.80)	(20.11)	(0.00633)	(0.00775)
Constant	0.352***	0.344***	-44.90***	-37.78**	-0.00411	-0.00423
	(0.00622)	(0.00397)	(14.63)	(17.04)	(0.00583)	(0.00530)
Observations	321806	660598	321806	660598	321806	660598
Adj. R^2	0.120	0.110	0.0513	0.0548	0.0739	0.0813

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 24: Appendix H.1: County Level "Has at Least High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.000649**		0.000111		0.000438	
	(0.000254)		(0.00164)		(0.000920)	
Course Required Treatment		-0.000975		-0.00118		-0.000989
		(0.00118)		(0.00109)		(0.000909)
Filed Taxes this year	0.00425***	0.00520***	0.00375***	0.00513***	0.00404***	0.00515***
	(0.000901)	(0.000408)	(0.000874)	(0.000749)	(0.000627)	(0.000378)
In Labour Force	0.00216***	0.00218***	0.00325***	0.00283***	0.00263***	0.00245***
	(0.000752)	(0.000531)	(0.000880)	(0.000804)	(0.000609)	(0.000460)
Female	0.00173***	0.00264***	0.000680	0.00177***	0.00128***	0.00227***
	(0.000580)	(0.000504)	(0.000576)	(0.000548)	(0.000450)	(0.000356)
Black	0.00196	0.00424***	0.00102	0.00300***	0.00158	0.00370***
	(0.00207)	(0.000976)	(0.000941)	(0.000651)	(0.00132)	(0.000611)
Indigenous American	-0.000621	-0.00625	-0.0146	-0.00731	-0.00697	-0.00669*
	(0.00246)	(0.00594)	(0.0111)	(0.00547)	(0.00503)	(0.00364)
Asian	0.00210	0.00400***	-0.0000720	0.00277***	0.00129	0.00355***
	(0.00194)	(0.00116)	(0.00235)	(0.000961)	(0.00152)	(0.000993)
Pacific Islander/Hawaiian	0.000720	0.000357	0.0000222	-0.0130	0.000540	-0.00393
	(0.00287)	(0.00361)	(0.00358)	(0.0125)	(0.00223)	(0.00588)
Other	-0.00163	0.00172	0.00303***	-0.000196	0.000323	0.000908
	(0.00294)	(0.00238)	(0.000904)	(0.00169)	(0.00156)	(0.00159)
Constant	0.989***	0.987***	0.990***	0.988***	0.990***	0.987***
	(0.00107)	(0.000931)	(0.000999)	(0.000889)	(0.000735)	(0.000742)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	127738	292020	98862	219047	226600	511067
Adj. R^2	0.00596	0.00716	0.00380	0.00452	0.00486	0.00603

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 25: Appendix H.2: County Level "Has Higher than a High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0280***		-0.0198		0.00152	
	(0.00355)		(0.0139)		(0.00746)	
Course Required Treatment		-0.0131		0.00918		-0.00347
		(0.0102)		(0.00838)		(0.00773)
Filed Taxes this year	0.0609***	0.0444***	0.0629***	0.0506***	0.0619***	0.0468***
	(0.00734)	(0.00398)	(0.00631)	(0.00471)	(0.00537)	(0.00344)
In Labour Force	0.0929***	0.0863***	0.0949***	0.0888***	0.0936***	0.0872***
	(0.00652)	(0.00570)	(0.00515)	(0.00372)	(0.00406)	(0.00406)
Female	0.0784***	0.0764***	0.0775***	0.0726***	0.0780***	0.0747***
	(0.00368)	(0.00220)	(0.00491)	(0.00236)	(0.00321)	(0.00180)
Black	-0.141***	-0.101***	-0.122***	-0.0932***	-0.133***	-0.0974***
	(0.0204)	(0.0132)	(0.0155)	(0.0170)	(0.0129)	(0.0114)
Indigenous American	-0.125***	-0.109***	-0.135***	-0.129***	-0.130***	-0.117***
	(0.0145)	(0.0122)	(0.0245)	(0.0120)	(0.0121)	(0.00964)
Asian	0.138***	0.147***	0.151***	0.189***	0.143***	0.161***
	(0.0231)	(0.0170)	(0.0186)	(0.0192)	(0.0179)	(0.0149)
Pacific Islander/Hawaiian	-0.111***	-0.0637**	-0.0952***	-0.0889***	-0.105***	-0.0706***
	(0.0301)	(0.0250)	(0.0301)	(0.0249)	(0.0222)	(0.0196)
Other	-0.0512***	-0.0296	-0.0590**	-0.0338**	-0.0543***	-0.0309*
	(0.0137)	(0.0189)	(0.0264)	(0.0159)	(0.0161)	(0.0158)
Constant	0.217***	0.199***	0.189***	0.173***	0.205***	0.188***
	(0.00805)	(0.00964)	(0.00751)	(0.00637)	(0.00557)	(0.00648)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	127738	292020	98862	219047	226600	511067
Adj. R^2	0.255	0.236	0.228	0.228	0.244	0.232

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 26: Appendix H.3: County Level "Below Poverty Line" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.00170		0.0165**		0.00900	
	(0.00289)		(0.00672)		(0.00535)	
Course Required Treatment		-0.00550		-0.00340		-0.00459
		(0.00844)		(0.00848)		(0.00699)
Filed Taxes this year	-0.247***	-0.235***	-0.241***	-0.235***	-0.245***	-0.235***
	(0.00909)	(0.00439)	(0.00826)	(0.00527)	(0.00624)	(0.00387)
In Labour Force	-0.0667***	-0.0563***	-0.0488***	-0.0477***	-0.0589***	-0.0526***
	(0.00736)	(0.00319)	(0.00599)	(0.00343)	(0.00405)	(0.00200)
Female	0.0366***	0.0428***	0.0438***	0.0469***	0.0397***	0.0446***
	(0.00337)	(0.00251)	(0.00258)	(0.00241)	(0.00246)	(0.00213)
Black	0.0883***	0.0685***	0.105***	0.0880***	0.0951***	0.0771***
	(0.0121)	(0.00940)	(0.0112)	(0.0111)	(0.0102)	(0.00799)
Indigenous American	0.0878***	0.0550***	0.105***	0.0780***	0.0956***	0.0642***
	(0.0124)	(0.0111)	(0.0183)	(0.0150)	(0.0106)	(0.00970)
Asian	0.0141	-0.00611	0.0105	0.00217	0.0133*	-0.00304
	(0.0102)	(0.0147)	(0.00881)	(0.0110)	(0.00718)	(0.0122)
Pacific Islander/Hawaiian	0.0488**	0.0141	0.0558*	0.0346	0.0513***	0.0211
	(0.0203)	(0.0180)	(0.0280)	(0.0224)	(0.0161)	(0.0168)
Other	0.0339***	0.0109	0.0291***	0.0207**	0.0318***	0.0152
	(0.0106)	(0.0161)	(0.0106)	(0.00928)	(0.00749)	(0.0122)
Constant	0.355***	0.348***	0.327***	0.331***	0.343***	0.341***
	(0.0108)	(0.00501)	(0.00810)	(0.00754)	(0.00706)	(0.00407)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	127738	292020	98862	219047	226600	511067
Adj. R^2	0.141	0.126	0.119	0.114	0.131	0.121

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 27: Appendix H.4: County Level "Amount of EITC Claimed" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-21.04		-5.035		-10.94***	
	(14.73)		(9.066)		(2.982)	
Course Required Treatment		2.061		7.660		4.568
		(10.67)		(12.55)		(8.674)
Filed Taxes this year	236.2***	244.4***	217.9***	256.3***	228.1***	249.4***
	(11.97)	(9.576)	(18.12)	(16.06)	(10.85)	(11.55)
In Labour Force	-54.86***	-61.32***	-51.99***	-71.63***	-53.63***	-65.53***
	(7.959)	(8.766)	(8.736)	(15.42)	(5.672)	(8.656)
Female	177.0***	174.9***	168.2***	190.6***	173.2***	181.7***
	(6.937)	(11.66)	(13.18)	(11.14)	(7.015)	(10.21)
Black	219.0***	151.7***	215.5***	174.3***	217.7***	161.6***
	(20.00)	(22.28)	(23.31)	(24.51)	(15.91)	(18.63)
Indigenous American	210.1***	85.39***	225.4***	135.5**	217.2***	105.1***
	(33.42)	(21.84)	(60.23)	(50.94)	(31.86)	(27.40)
Asian	-37.57**	-70.84***	-68.03***	-108.8***	-49.69***	-83.62***
	(18.43)	(18.87)	(11.79)	(27.45)	(12.23)	(17.27)
Pacific Islander/Hawaiian	106.6*	11.91	212.0***	105.7**	140.8***	41.05
	(60.03)	(39.49)	(70.15)	(52.15)	(38.57)	(33.81)
Other	113.7***	64.91**	53.21**	57.41***	87.77***	61.85***
	(28.00)	(26.88)	(25.82)	(18.84)	(22.55)	(20.02)
Constant	-58.42***	-36.56*	-32.91	-45.12**	-47.27***	-40.37**
	(14.08)	(21.20)	(23.74)	(17.26)	(12.81)	(16.44)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	127738	292020	98862	219047	226600	511067
Adj. R^2	0.0566	0.0579	0.0520	0.0554	0.0544	0.0567

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 28: Appendix H.5: County Level "Claimed Any Amount of EITC" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.0125***		-0.0118**		-0.0117***	
	(0.00444)		(0.00436)		(0.00106)	
Course Required Treatment		0.00317		0.00189		0.00261
		(0.00262)		(0.00394)		(0.00237)
Filed Taxes this year	0.115***	0.114***	0.108***	0.117***	0.112***	0.116***
	(0.00569)	(0.00345)	(0.00760)	(0.00527)	(0.00491)	(0.00382)
In Labour Force	-0.0233***	-0.0237***	-0.0268***	-0.0266***	-0.0248***	-0.0248***
	(0.00486)	(0.00215)	(0.00296)	(0.00361)	(0.00305)	(0.00207)
Female	0.0502***	0.0511***	0.0488***	0.0555***	0.0496***	0.0530***
	(0.00265)	(0.00360)	(0.00360)	(0.00294)	(0.00262)	(0.00298)
Black	0.0987***	0.0683***	0.0910***	0.0808***	0.0956***	0.0738***
	(0.00685)	(0.00764)	(0.00854)	(0.00671)	(0.00541)	(0.00595)
Indigenous American	0.0629***	0.0324***	0.0837***	0.0577***	0.0723***	0.0422***
	(0.0107)	(0.00720)	(0.0174)	(0.0121)	(0.0102)	(0.00788)
Asian	-0.0151**	-0.0242***	-0.0265***	-0.0374***	-0.0196***	-0.0285***
	(0.00705)	(0.00678)	(0.00523)	(0.00806)	(0.00519)	(0.00607)
Pacific Islander/Hawaiian	0.0416**	0.0173	0.0453**	0.0214	0.0426***	0.0187*
	(0.0187)	(0.0108)	(0.0214)	(0.0133)	(0.0153)	(0.00948)
Other	0.0386***	0.0209**	0.0408***	0.0328***	0.0393***	0.0256***
	(0.00816)	(0.00894)	(0.0105)	(0.00685)	(0.00728)	(0.00760)
Constant	-0.0109*	-0.00428	0.00105	-0.00703	-0.00574	-0.00550
	(0.00619)	(0.00578)	(0.00857)	(0.00556)	(0.00547)	(0.00484)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	127738	292020	98862	219047	226600	511067
Adj. R^2	0.0804	0.0853	0.0733	0.0804	0.0772	0.0831

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 29: Appendix I.1: County Pair Level "Has at Least High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.00266**		0.00157		0.000874	
	(0.000976)		(0.00339)		(0.00280)	
Course Required Treatment		-0.00292*		0.00296		-0.000876
		(0.00144)		(0.00183)		(0.00141)
Filed Taxes this year	-0.000875	0.00672***	0.0176	0.00988**	0.0131	0.00810***
	(0.00360)	(0.00159)	(0.00920)	(0.00322)	(0.00759)	(0.00148)
In Labour Force	0.00194	0.00187	-0.00542	-0.00234	-0.00358	0.000428
	(0.00320)	(0.00110)	(0.00817)	(0.00285)	(0.00597)	(0.00117)
Female	-0.0000770	0.000621*	-0.000147	0.00385	-0.000211	0.00169
	(0.000530)	(0.000354)	(0.00145)	(0.00361)	(0.00110)	(0.00110)
Black	0.000666	0.00552*	0.00504	0.00457	0.00395	0.00500**
	(0.00163)	(0.00264)	(0.00452)	(0.00263)	(0.00387)	(0.00209)
Indigenous American	0.00323***	-0.00115	-0.0104	-0.0985	-0.00722	-0.0393
	(0.000678)	(0.00268)	(0.0244)	(0.0752)	(0.0168)	(0.0366)
Asian	0.00258***	0.00496***	-0.0102	0.00600**	-0.00795	0.00519***
	(0.000426)	(0.00145)	(0.0217)	(0.00206)	(0.0170)	(0.00102)
Pacific Islander/Hawaiian	0.00287	0.00428	-0.231	-0.112	-0.198	-0.0354
	(0.00170)	(0.00258)	(0.208)	(0.0972)	(0.182)	(0.0380)
Other	0.00246*	0.000511	0.00590**	0.00740*	0.00519***	0.00238
	(0.00120)	(0.00543)	(0.00194)	(0.00321)	(0.00141)	(0.00360)
Constant	0.998***	0.987***	0.982***	0.984***	0.985***	0.986***
	(0.00108)	(0.00159)	(0.00397)	(0.00192)	(0.00343)	(0.00116)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	4529	71802	14422	27646	18951	99448
Adj. R^2	-0.00240	0.00687	0.0385	0.0241	0.0316	0.00838

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 30: Appendix I.2: County Pair Level "Has Higher Than a High School Education" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0592*		0.0338		0.0429*	
	(0.0244)		(0.0238)		(0.0189)	
Course Required Treatment		0.0272*		0.0420		0.0320*
		(0.0155)		(0.0312)		(0.0164)
Filed Taxes this year	0.0250	0.0778***	0.0624***	0.0536***	0.0526***	0.0697***
	(0.0296)	(0.0106)	(0.0139)	(0.00934)	(0.0124)	(0.00945)
In Labour Force	0.0531**	0.112***	0.0615***	0.115***	0.0608***	0.113***
	(0.0179)	(0.00597)	(0.00771)	(0.0158)	(0.00644)	(0.00760)
Female	0.0570***	0.0789***	0.0785***	0.0742***	0.0734***	0.0776***
	(0.00596)	(0.00936)	(0.0129)	(0.00823)	(0.00849)	(0.00764)
Black	-0.162***	-0.166***	-0.163***	-0.0912***	-0.165***	-0.149***
	(0.0240)	(0.0367)	(0.0289)	(0.0200)	(0.0265)	(0.0289)
Indigenous American	-0.104**	-0.141**	0.243***	-0.255***	0.148**	-0.186***
	(0.0330)	(0.0519)	(0.0427)	(0.0317)	(0.0641)	(0.0304)
Asian	0.202***	0.151***	0.163*	0.168**	0.170**	0.156***
	(0.0337)	(0.0271)	(0.0686)	(0.0663)	(0.0538)	(0.0306)
Pacific Islander/Hawaiian	0.0457	-0.0325	-0.246***	-0.0828	-0.209***	-0.0504
	(0.131)	(0.0341)	(0.0562)	(0.128)	(0.0601)	(0.0496)
Other	0.0214	-0.0466**	-0.0281	-0.210***	-0.0129	-0.105***
	(0.0264)	(0.0168)	(0.0328)	(0.0260)	(0.0248)	(0.0317)
Constant	0.194***	0.261***	0.198***	0.182***	0.196***	0.234***
	(0.0169)	(0.0226)	(0.0132)	(0.0127)	(0.00948)	(0.0164)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	4529	71802	14422	27646	18951	99448
Adj. R^2	0.227	0.306	0.219	0.260	0.217	0.292

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 31: Appendix I.3: County Pair Level "Below Poverty Line" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.0131		-0.0315**		-0.0278*	
	(0.0163)		(0.0117)		(0.0129)	
Course Required Treatment		0.00443		-0.0254		-0.00671
		(0.00491)		(0.0145)		(0.0126)
Filed Taxes this year	-0.203***	0.120***	-0.252***	-0.207***	-0.241***	-0.256***
	(0.0281)	(0.0149)	(0.0169)	(0.0219)	(0.0178)	(0.0298)
In Labour Force	-0.0442	-0.0346***	-0.0558*	-0.0782***	-0.0529***	-0.0671***
	(0.0294)	(0.00601)	(0.0228)	(0.00998)	(0.0135)	(0.0117)
Female	0.0504***	0.0466***	0.0585***	0.0362***	0.0562***	0.0430***
	(0.00481)	(0.00831)	(0.0114)	(0.00661)	(0.00963)	(0.00601)
Black	0.0790**	0.0917***	0.146***	0.104**	0.136***	0.0876***
	(0.0257)	(0.0122)	(0.0134)	(0.0433)	(0.00839)	(0.0253)
Indigenous American	0.137	0.0674**	0.127*	0.117	0.128**	0.0932***
	(0.0751)	(0.0252)	(0.0562)	(0.0714)	(0.0431)	(0.0322)
Asian	-0.0278	-0.0210**	0.0529	-0.0226	0.0383	0.0146
	(0.0305)	(0.00766)	(0.0351)	(0.0246)	(0.0224)	(0.0177)
Pacific Islander/Hawaiian	0.316*	0.0445	0.345**	0.239**	0.346**	0.0834
	(0.148)	(0.0365)	(0.126)	(0.103)	(0.106)	(0.0523)
Other	0.0238	0.0303	0.0323	0.0997**	0.0283	0.0613**
	(0.0616)	(0.0198)	(0.0261)	(0.0392)	(0.0270)	(0.0278)
Constant	0.334***	-0.0166	0.351***	0.332***	0.346***	0.354***
	(0.0147)	(0.0108)	(0.0254)	(0.0149)	(0.0228)	(0.0352)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	4529	71802	14422	27646	18951	99448
Adj. R^2	0.103	0.0854	0.147	0.121	0.134	0.149

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 32: Appendix I.4: County Pair Level "Amount of EITC Claimed" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-16.85		16.42		9.847	
	(27.81)		(9.664)		(12.92)	
Course Required Treatment		2.021		-39.09		-12.18
		(15.88)		(37.37)		(12.04)
Filed Taxes this year	277.7***	230.6***	264.7***	212.0***	269.0***	224.2***
	(45.15)	(34.44)	(41.46)	(42.86)	(32.64)	(30.75)
In Labour Force	41.46*	-69.21***	6.719	-91.76***	15.89	-76.30***
	(17.16)	(15.80)	(15.15)	(13.12)	(11.26)	(10.12)
Female	194.3***	157.8***	257.2***	157.6***	243.1***	157.5***
	(18.26)	(25.08)	(23.23)	(26.46)	(23.65)	(17.74)
Black	283.1**	192.2***	214.4***	166.5*	227.2***	186.5***
	(99.09)	(31.15)	(16.04)	(78.25)	(21.00)	(27.99)
Indigenous American	128.2*	209.5**	-16.32	170.8	26.88	198.4**
	(56.71)	(83.86)	(76.42)	(150.8)	(68.93)	(70.31)
Asian	-90.34	-41.72***	-70.47	-100.1*	-69.96	-58.03***
	(92.27)	(12.48)	(86.37)	(45.16)	(67.51)	(16.35)
Pacific Islander/Hawaiian	685.7	57.25	325.1	212.5	381.8*	111.7
	(585.5)	(46.59)	(199.4)	(287.7)	(188.2)	(102.1)
Other	66.46	132.5*	12.26	134.4*	22.00	136.4**
	(161.7)	(67.32)	(43.85)	(62.50)	(44.82)	(58.91)
Constant	-95.35***	-63.98**	-145.7**	4.451	-137.0***	-40.80
	(14.79)	(26.26)	(37.03)	(49.11)	(28.41)	(26.68)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	4529	71802	14422	27646	18951	99448
Adj. R^2	0.0708	0.0592	0.0632	0.0521	0.0651	0.0557

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 33: Appendix I.5: County Pair Level "Claimed Any Amount of EITC" Results

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.000312		-0.00762		-0.00677	
	(0.00966)		(0.00875)		(0.00650)	
Course Required Treatment		0.00443		-0.00194		0.00209
		(0.00491)		(0.0106)		(0.00375)
Filed Taxes this year	0.138***	0.120***	0.138***	0.101***	0.139***	0.114***
	(0.0185)	(0.0149)	(0.0171)	(0.0175)	(0.0133)	(0.0148)
In Labour Force	-0.00971	-0.0346***	-0.0191**	-0.0408***	-0.0170***	-0.0368***
	(0.0118)	(0.00601)	(0.00572)	(0.00792)	(0.00434)	(0.00453)
Female	0.0597***	0.0466***	0.0728***	0.0391***	0.0697***	0.0439***
	(0.00569)	(0.00831)	(0.00909)	(0.00659)	(0.00793)	(0.00572)
Black	0.133***	0.0917***	0.120***	0.0791**	0.122***	0.0888***
	(0.0246)	(0.0122)	(0.0160)	(0.0320)	(0.0114)	(0.0120)
Indigenous American	0.143**	0.0674**	-0.00647	0.115	0.0330	0.0882***
	(0.0378)	(0.0252)	(0.0162)	(0.0739)	(0.0305)	(0.0299)
Asian	-0.000282	-0.0210**	-0.0205	-0.0390**	-0.0171	-0.0264***
	(0.0299)	(0.00766)	(0.0260)	(0.0148)	(0.0203)	(0.00824)
Pacific Islander/Hawaiian	0.307**	0.0445	0.0691	0.00638	0.107	0.0325
	(0.0916)	(0.0365)	(0.0895)	(0.0558)	(0.0730)	(0.0318)
Other	0.0336	0.0303	0.0838***	0.0961***	0.0670***	0.0540***
	(0.0576)	(0.0198)	(0.0164)	(0.0165)	(0.0178)	(0.0170)
Constant	-0.0263**	-0.0166	-0.0371	0.0121	-0.0352**	-0.00686
	(0.00729)	(0.0108)	(0.0188)	(0.0182)	(0.0130)	(0.0115)
County Data	Yes	Yes	No	No	No	No
City Data	No	No	Yes	Yes	No	No
Combined Data	No	No	No	No	Yes	Yes
Observations	4529	71802	14422	27646	18951	99448
Adj. R^2	0.107	0.0854	0.101	0.0814	0.101	0.0823

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 34: Appendix J.1: County Pair Level "Has at Least High School Education" Results, Varying Standard Error Clustering

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.000874		0.000874		0.000874	
	(0.00280)		(0.00241)		(0.00341)	
Course Required Treatment		-0.000876		-0.000876		-0.000876
		(0.00141)		(0.00122)		(0.00128)
Filed Taxes this year	0.0131	0.00810***	0.0131	0.00810***	0.0131	0.00810***
	(0.00759)	(0.00148)	(0.00743)	(0.00185)	(0.00698)	(0.00149)
In Labour Force	-0.00358	0.000428	-0.00358	0.000428	-0.00358	0.000428
	(0.00597)	(0.00117)	(0.00570)	(0.00125)	(0.00652)	(0.00111)
Female	-0.000211	0.00169	-0.000211	0.00169	-0.000211	0.00169
	(0.00110)	(0.00110)	(0.00103)	(0.00115)	(0.000443)	(0.00130)
Black	0.00395	0.00500**	0.00395	0.00500**	0.00395	0.00500***
	(0.00387)	(0.00209)	(0.00395)	(0.00206)	(0.00390)	(0.00173)
Indigenous American	-0.00722	-0.0393	-0.00722	-0.0393	-0.00722	-0.0393
	(0.0168)	(0.0366)	(0.0159)	(0.0355)	(0.0165)	(0.0357)
Asian	-0.00795	0.00519***	-0.00795	0.00519***	-0.00795	0.00519***
	(0.0170)	(0.00102)	(0.0157)	(0.00107)	(0.0137)	(0.000985)
Pacific Islander/Hawaiian	-0.198	-0.0354	-0.198	-0.0354	-0.198	-0.0354
	(0.182)	(0.0380)	(0.173)	(0.0372)	(0.176)	(0.0358)
Other	0.00519***	0.00238	0.00519**	0.00238	0.00519***	0.00238
	(0.00141)	(0.00360)	(0.00174)	(0.00330)	(0.00138)	(0.00249)
Constant	0.985***	0.986***	0.985***	0.986***	0.985***	0.986***
	(0.00343)	(0.00116)	(0.00360)	(0.00160)	(0.00241)	(0.00123)
State Level SE Clustering	Yes	Yes	No	No	No	No
County Level SE Clustering	No	No	Yes	Yes	No	No
Pair Level SE Clustering	No	No	No	No	Yes	Yes
Observations	18951	99448	18951	99448	18951	99448
Adj. R^2	0.0316	0.00838	0.0316	0.00838	0.0315	0.00837

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 35: Appendix J.2: County Pair Level "Has Higher than a High School Education" Results, Varying Standard Error Clustering

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0429*		0.0429**		0.0429*	
	(0.0189)		(0.0189)		(0.0192)	
Course Required Treatment		0.0320*		0.0320*		0.0320
		(0.0164)		(0.0182)		(0.0247)
Filed Taxes this year	0.0526***	0.0697***	0.0526***	0.0697***	0.0526**	0.0697***
	(0.0124)	(0.00945)	(0.0122)	(0.0103)	(0.0154)	(0.00805)
In Labour Force	0.0608***	0.113***	0.0608***	0.113***	0.0608***	0.113***
	(0.00644)	(0.00760)	(0.00716)	(0.00840)	(0.00497)	(0.00614)
Female	0.0734***	0.0776***	0.0734***	0.0776***	0.0734***	0.0776***
	(0.00849)	(0.00764)	(0.00964)	(0.00736)	(0.00852)	(0.00562)
Black	-0.165***	-0.149***	-0.165***	-0.149***	-0.165***	-0.149***
	(0.0265)	(0.0289)	(0.0186)	(0.0308)	(0.0200)	(0.0172)
Indigenous American	0.148**	-0.186***	0.148**	-0.186***	0.148	-0.186***
	(0.0641)	(0.0304)	(0.0646)	(0.0327)	(0.0836)	(0.0272)
Asian	0.170**	0.156***	0.170***	0.156***	0.170***	0.156***
	(0.0538)	(0.0306)	(0.0548)	(0.0280)	(0.0430)	(0.0191)
Pacific Islander/Hawaiian	-0.209***	-0.0504	-0.209***	-0.0504	-0.209**	-0.0504
	(0.0601)	(0.0496)	(0.0606)	(0.0624)	(0.0657)	(0.0599)
Other	-0.0129	-0.105***	-0.0129	-0.105***	-0.0129	-0.105***
	(0.0248)	(0.0317)	(0.0218)	(0.0315)	(0.0226)	(0.0301)
Constant	0.196***	0.234***	0.196***	0.234***	0.196***	0.234***
	(0.00948)	(0.0164)	(0.0112)	(0.0139)	(0.0141)	(0.0154)
State Level SE Clustering	Yes	Yes	No	No	No	No
County Level SE Clustering	No	No	Yes	Yes	No	No
Pair Level SE Clustering	No	No	No	No	Yes	Yes
Observations	18951	99448	18951	99448	18951	99448
Adj. R^2	0.217	0.292	0.217	0.292	0.217	0.292

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 36: Appendix J.3: County Pair Level "Below Poverty Line" Results, Varying Standard Error Clustering

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.0278*		-0.0278**		-0.0278**	
	(0.0129)		(0.00942)		(0.00818)	
Course Required Treatment		-0.00671		-0.00671		-0.00671
		(0.0126)		(0.0131)		(0.0134)
Filed Taxes this year	-0.241***	-0.256***	-0.241***	-0.256***	-0.241***	-0.256***
	(0.0178)	(0.0298)	(0.0167)	(0.0284)	(0.0167)	(0.0220)
In Labour Force	-0.0529***	-0.0671***	-0.0529***	-0.0671***	-0.0529**	-0.0671***
	(0.0135)	(0.0117)	(0.0159)	(0.0107)	(0.0182)	(0.00708)
Female	0.0562***	0.0430***	0.0562***	0.0430***	0.0562***	0.0430***
	(0.00963)	(0.00601)	(0.00845)	(0.00527)	(0.00933)	(0.00389)
Black	0.136***	0.0876***	0.136***	0.0876***	0.136***	0.0876***
	(0.00839)	(0.0253)	(0.0113)	(0.0212)	(0.0133)	(0.0160)
Indigenous American	0.128**	0.0932***	0.128***	0.0932***	0.128**	0.0932***
	(0.0431)	(0.0322)	(0.0384)	(0.0350)	(0.0357)	(0.0296)
Asian	0.0383	0.0146	0.0383	0.0146	0.0383	0.0146
	(0.0224)	(0.0177)	(0.0385)	(0.0193)	(0.0397)	(0.0159)
Pacific Islander/Hawaiian	0.346**	0.0834	0.346***	0.0834*	0.346**	0.0834
	(0.106)	(0.0523)	(0.108)	(0.0490)	(0.123)	(0.0557)
Other	0.0283	0.0613**	0.0283	0.0613***	0.0283	0.0613***
	(0.0270)	(0.0278)	(0.0247)	(0.0214)	(0.0278)	(0.0214)
Constant	0.346***	0.354***	0.346***	0.354***	0.346***	0.354***
	(0.0228)	(0.0352)	(0.0186)	(0.0316)	(0.0125)	(0.0167)
State Level SE Clustering	Yes	Yes	No	No	No	No
County Level SE Clustering	No	No	Yes	Yes	No	No
Pair Level SE Clustering	No	No	No	No	Yes	Yes
Observations	18951	99448	18951	99448	18951	99448
Adj. R^2	0.134	0.149	0.134	0.149	0.134	0.149

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 37: Appendix J.4: County Pair Level "Amount of EITC Claimed" Results, Varying Standard Error Clustering

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	9.847		9.847		9.847	
	(12.92)		(11.41)		(13.20)	
Course Required Treatment		-12.18		-12.18		-12.18
		(12.04)		(22.55)		(23.64)
Filed Taxes this year	269.0***	224.2***	269.0***	224.2***	269.0***	224.2***
	(32.64)	(30.75)	(33.10)	(29.85)	(36.24)	(22.66)
In Labour Force	15.89	-76.30***	15.89	-76.30***	15.89	-76.30***
	(11.26)	(10.12)	(13.03)	(12.96)	(14.49)	(10.94)
Female	243.1***	157.5***	243.1***	157.5***	243.1***	157.5***
	(23.65)	(17.74)	(21.54)	(17.59)	(19.15)	(13.78)
Black	227.2***	186.5***	227.2***	186.5***	227.2***	186.5***
	(21.00)	(27.99)	(26.78)	(30.63)	(29.30)	(24.97)
Indigenous American	26.88	198.4**	26.88	198.4**	26.88	198.4**
	(68.93)	(70.31)	(63.59)	(80.90)	(68.00)	(77.32)
Asian	-69.96	-58.03***	-69.96	-58.03***	-69.96	-58.03***
	(67.51)	(16.35)	(64.93)	(18.62)	(71.39)	(16.96)
Pacific Islander/Hawaiian	381.8*	111.7	381.8*	111.7	381.8**	111.7
	(188.2)	(102.1)	(183.9)	(115.8)	(145.0)	(104.7)
Other	22.00	136.4**	22.00	136.4***	22.00	136.4***
	(44.82)	(58.91)	(55.61)	(44.09)	(54.09)	(37.93)
Constant	-137.0***	-40.80	-137.0***	-40.80	-137.0***	-40.80
	(28.41)	(26.68)	(30.39)	(25.35)	(35.18)	(25.92)
State Level SE Clustering	Yes	Yes	No	No	No	No
County Level SE Clustering	No	No	Yes	Yes	No	No
Pair Level SE Clustering	No	No	No	No	Yes	Yes
Observations	18951	99448	18951	99448	18951	99448
Adj. R^2	0.0651	0.0557	0.0651	0.0557	0.0651	0.0557

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 38: Appendix J.5: County Pair Level "Claimed Any Amount of EITC" Results, Varying Standard Error Clustering

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.00677		-0.00677		-0.00677	
	(0.00650)		(0.00540)		(0.00470)	
Course Required Treatment		0.00209		0.00209		0.00209
		(0.00375)		(0.00817)		(0.00826)
Filed Taxes this year	0.139***	0.114***	0.139***	0.114***	0.139***	0.114***
	(0.0133)	(0.0148)	(0.0160)	(0.0119)	(0.0153)	(0.00918)
In Labour Force	-0.0170***	-0.0368***	-0.0170	-0.0368***	-0.0170*	-0.0368***
	(0.00434)	(0.00453)	(0.00995)	(0.00507)	(0.00855)	(0.00406)
Female	0.0697***	0.0439***	0.0697***	0.0439***	0.0697***	0.0439***
	(0.00793)	(0.00572)	(0.00671)	(0.00588)	(0.00509)	(0.00439)
Black	0.122***	0.0888***	0.122***	0.0888***	0.122***	0.0888***
	(0.0114)	(0.0120)	(0.0161)	(0.0115)	(0.0159)	(0.00980)
Indigenous American	0.0330	0.0882***	0.0330	0.0882***	0.0330	0.0882***
	(0.0305)	(0.0299)	(0.0295)	(0.0311)	(0.0374)	(0.0294)
Asian	-0.0171	-0.0264***	-0.0171	-0.0264***	-0.0171	-0.0264***
	(0.0203)	(0.00824)	(0.0217)	(0.00720)	(0.0213)	(0.00502)
Pacific Islander/Hawaiian	0.107	0.0325	0.107	0.0325	0.107	0.0325
	(0.0730)	(0.0318)	(0.0785)	(0.0364)	(0.0763)	(0.0289)
Other	0.0670***	0.0540***	0.0670***	0.0540***	0.0670**	0.0540***
	(0.0178)	(0.0170)	(0.0212)	(0.0150)	(0.0224)	(0.0140)
Constant	-0.0352**	-0.00686	-0.0352**	-0.00686	-0.0352**	-0.00686
	(0.0130)	(0.0115)	(0.0135)	(0.0103)	(0.0140)	(0.0105)
State Level SE Clustering	Yes	Yes	No	No	No	No
County Level SE Clustering	No	No	Yes	Yes	No	No
Pair Level SE Clustering	No	No	No	No	Yes	Yes
Observations	18951	99448	18951	99448	18951	99448
Adj. R^2	0.101	0.0823	0.101	0.0823	0.101	0.0823

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 39: Appendix K.1: "Has at Least High School Education" Results, Non 1998 States Only

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.00147		0.000452		-0.00304	
	(0.00152)		(0.000966)		(0.00271)	
Course Required Treatment		0.000708		-0.0000563		-0.00139
		(0.000877)		(0.000781)		(0.00257)
Filed Taxes this year	0.00451***	0.00503***	0.00417***	0.00509***	0.00650	0.00355
	(0.000658)	(0.000639)	(0.000648)	(0.000637)	(0.00375)	(0.00390)
In Labour Force	0.00250***	0.00126**	0.00261***	0.00131**	0.00177	0.00546
	(0.000482)	(0.000535)	(0.000646)	(0.000594)	(0.00181)	(0.00328)
Female	0.00118***	0.00108***	0.00128**	0.00121***	-0.000996	-0.000451
	(0.000371)	(0.000345)	(0.000485)	(0.000437)	(0.00226)	(0.00131)
Black	0.00118	0.000884	0.00147	0.00180	-0.000577	0.000404
	(0.00117)	(0.00112)	(0.00145)	(0.00149)	(0.000784)	(0.00125)
Indigenous American	-0.00364	-0.00298	-0.00759	-0.00594	-0.0151	-0.00586
	(0.00331)	(0.00258)	(0.00545)	(0.00445)	(0.0257)	(0.0131)
Asian	0.00112	0.00128	0.00159	0.00196	-0.0156	-0.00573
	(0.00133)	(0.00123)	(0.00151)	(0.00129)	(0.0251)	(0.0136)
Pacific Islander/Hawaiian	-0.000397	-0.0128	-0.0000339	-0.00901	0.00215	0.00342***
	(0.00229)	(0.0104)	(0.00251)	(0.00894)	(0.00109)	(0.000785)
Other	0.000384	-0.000225	-0.000112	-0.000569	0.00427**	0.00409**
	(0.00149)	(0.00165)	(0.00168)	(0.00194)	(0.00131)	(0.00119)
Constant	0.989***	0.990***	0.989***	0.990***	0.992***	0.989***
	(0.000788)	(0.000578)	(0.000791)	(0.000688)	(0.00309)	(0.00293)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	294036	325948	208202	230161	13129	24541
Adj. R^2	0.00280	0.00264	0.00513	0.00479	0.00731	0.00615

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 40: Appendix K.2: "Has Higher than a High School Education" Results, Non 1998 States Only

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0127*		0.000383		0.0222	
	(0.00696)		(0.00805)		(0.0346)	
Course Required Treatment		0.00978		0.00904		-0.0137
		(0.00811)		(0.00932)		(0.0240)
Filed Taxes this year	0.0587***	0.0501***	0.0612***	0.0511***	0.0579**	0.0668***
	(0.00387)	(0.00349)	(0.00546)	(0.00473)	(0.0139)	(0.0125)
In Labour Force	0.0987***	0.0926***	0.0957***	0.0919***	0.0595***	0.0751***
	(0.00365)	(0.00315)	(0.00401)	(0.00316)	(0.00764)	(0.0141)
Female	0.0811***	0.0774***	0.0785***	0.0759***	0.0775***	0.0870***
	(0.00290)	(0.00258)	(0.00336)	(0.00301)	(0.00571)	(0.0100)
Black	-0.124***	-0.112***	-0.137***	-0.122***	-0.190***	-0.174***
	(0.0104)	(0.00941)	(0.0138)	(0.0124)	(0.0238)	(0.0333)
Indigenous American	-0.134***	-0.125***	-0.127***	-0.121***	0.166**	-0.0302
	(0.0104)	(0.00999)	(0.0127)	(0.0103)	(0.0496)	(0.146)
Asian	0.183***	0.175***	0.146***	0.147***	0.141	0.175***
	(0.0192)	(0.0176)	(0.0189)	(0.0172)	(0.0724)	(0.0257)
Pacific Islander/Hawaiian	-0.0960***	-0.101***	-0.114***	-0.111***	-0.177***	-0.234***
	(0.0216)	(0.0213)	(0.0223)	(0.0209)	(0.0156)	(0.0313)
Other	-0.0484***	-0.0502***	-0.0567***	-0.0590***	0.00101	0.00968
	(0.0152)	(0.0136)	(0.0174)	(0.0155)	(0.0199)	(0.0212)
Constant	0.182***	0.174***	0.211***	0.199***	0.214***	0.218***
	(0.00483)	(0.00405)	(0.00541)	(0.00539)	(0.00984)	(0.0298)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	294036	325948	208202	230161	13129	24541
Adj. R^2	0.219	0.229	0.247	0.255	0.230	0.222

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 41: Appendix K.3: "Below Poverty Line" Results, Non 1998 States Only

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	0.0140*		0.00937*		-0.0365**	
	(0.00785)		(0.00533)		(0.0122)	
Course Required Treatment		-0.00714		-0.00914		0.0302**
		(0.00756)		(0.00798)		(0.00809)
Filed Taxes this year	-0.242***	-0.229***	-0.243***	-0.230***	-0.242***	-0.247***
	(0.00569)	(0.00769)	(0.00642)	(0.00890)	(0.0161)	(0.00797)
In Labour Force	-0.0636***	-0.0556***	-0.0592***	-0.0530***	-0.0675***	-0.0710***
	(0.00392)	(0.00414)	(0.00425)	(0.00442)	(0.00898)	(0.00664)
Female	0.0427***	0.0449***	0.0393***	0.0415***	0.0469***	0.0463***
	(0.00228)	(0.00281)	(0.00261)	(0.00310)	(0.00324)	(0.00180)
Black	0.0929***	0.0894***	0.0903***	0.0842***	0.142***	0.128***
	(0.00928)	(0.0102)	(0.0106)	(0.0107)	(0.00494)	(0.0163)
Indigenous American	0.121***	0.117***	0.0982***	0.0959***	0.121	0.171***
	(0.00991)	(0.0129)	(0.0112)	(0.0118)	(0.0579)	(0.0338)
Asian	0.00494	0.0113*	0.0150**	0.0197***	0.0503*	-0.00564
	(0.00652)	(0.00618)	(0.00712)	(0.00626)	(0.0197)	(0.0374)
Pacific Islander/Hawaiian	0.0608***	0.0650***	0.0609***	0.0652***	0.266***	0.166*
	(0.0167)	(0.0151)	(0.0153)	(0.0150)	(0.0359)	(0.0819)
Other	0.0382***	0.0418***	0.0346***	0.0388***	0.0514***	0.0303*
	(0.00752)	(0.00937)	(0.00761)	(0.00995)	(0.00677)	(0.0137)
Constant	0.350***	0.333***	0.341***	0.325***	0.373***	0.351***
	(0.00646)	(0.00777)	(0.00739)	(0.00862)	(0.0153)	(0.0115)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	294036	325948	208202	230161	13129	24541
Adj. R^2	0.118	0.113	0.129	0.125	0.142	0.137

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 42: Appendix K.4: "Amount of EITC Claimed" Results, Non 1998 States Only

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-8.834***		-9.827***		26.38**	
	(3.122)		(2.749)		(8.904)	
Course Required Treatment		-5.334		-3.144		-41.82
		(8.152)		(11.53)		(29.94)
Filed Taxes this year	240.4***	233.5***	222.4***	214.5***	224.6***	217.3***
	(13.53)	(13.64)	(10.75)	(11.74)	(23.57)	(18.55)
In Labour Force	-58.71***	-58.32***	-53.09***	-53.56***	25.44**	-9.167
	(5.609)	(6.098)	(6.101)	(5.957)	(9.121)	(27.12)
Female	180.2***	175.1***	169.2***	163.8***	242.7***	201.3***
	(7.118)	(6.692)	(6.791)	(7.063)	(28.32)	(41.71)
Black	205.1***	176.0***	214.1***	182.4***	237.8***	221.5***
	(14.28)	(12.42)	(16.37)	(14.73)	(23.43)	(34.75)
Indigenous American	218.0***	170.1***	201.7***	132.0***	64.93	201.9
	(24.72)	(20.72)	(31.62)	(31.02)	(111.2)	(132.3)
Asian	-89.51***	-83.19***	-51.66***	-52.58***	-15.24	-71.20
	(12.13)	(10.37)	(12.91)	(10.56)	(48.94)	(38.72)
Pacific Islander/Hawaiian	157.8***	141.7***	157.0***	145.9***	183.1	414.5*
	(34.59)	(42.03)	(37.43)	(43.46)	(136.5)	(198.7)
Other	90.57***	97.37***	84.95***	97.02***	60.75	31.53
	(20.79)	(18.94)	(23.60)	(22.35)	(33.95)	(33.91)
Constant	-40.75***	-38.22***	-44.92***	-41.37***	-136.6**	-66.47
	(14.18)	(13.94)	(12.52)	(14.16)	(29.99)	(51.90)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	294036	325948	208202	230161	13129	24541
Adj. R^2	0.0502	0.0508	0.0532	0.0523	0.0610	0.0508

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 43: Appendix K.5: "Claimed Any Amount of EITC" Results, Non 1998 States Only

	(1)	(2)	(3)	(4)	(5)	(6)
Course Offered Treatment	-0.0135***		-0.0116***		0.00345	
	(0.00314)		(0.00114)		(0.00849)	
Course Required Treatment		0		-0.000174		-0.00507
		(.)		(0.00321)		(0.00770)
Filed Taxes this year	0.117***	0.117***	0.110***	0.104***	0.120***	0.119***
	(0.00555)	(0.00555)	(0.00488)	(0.00513)	(0.0120)	(0.00777)
In Labour Force	-0.0274***	-0.0274***	-0.0251***	-0.0245***	-0.0109	-0.0226**
	(0.00304)	(0.00304)	(0.00322)	(0.00299)	(0.00809)	(0.00770)
Female	0.0516***	0.0516***	0.0484***	0.0480***	0.0701***	0.0587***
	(0.00258)	(0.00258)	(0.00272)	(0.00268)	(0.0105)	(0.0129)
Black	0.0905***	0.0905***	0.0938***	0.0798***	0.113***	0.108***
	(0.00470)	(0.00470)	(0.00548)	(0.00464)	(0.0100)	(0.0126)
Indigenous American	0.0876***	0.0876***	0.0705***	0.0510***	0.0393	0.0690*
	(0.00863)	(0.00863)	(0.0109)	(0.00943)	(0.0396)	(0.0319)
Asian	-0.0337***	-0.0337***	-0.0206***	-0.0204***	-0.00652	-0.0228
	(0.00503)	(0.00503)	(0.00546)	(0.00477)	(0.0187)	(0.0165)
Pacific Islander/Hawaiian	0.0481***	0.0482***	0.0466***	0.0465***	0.0308	0.0702
	(0.0170)	(0.0170)	(0.0160)	(0.0138)	(0.0600)	(0.0360)
Other	0.0410***	0.0410***	0.0391***	0.0393***	0.0786***	0.0407
	(0.00681)	(0.00682)	(0.00778)	(0.00688)	(0.00914)	(0.0227)
Constant	-0.00196	-0.00329	-0.00437	-0.00375	-0.0323*	-0.0111
	(0.00559)	(0.00575)	(0.00534)	(0.00549)	(0.0121)	(0.0145)
State Data	Yes	Yes	No	No	No	No
County Data	No	No	Yes	Yes	No	No
County Pair Data	No	No	No	No	Yes	Yes
Observations	294036	294036	208202	230161	13129	24541
Adj. R^2	0.0727	0.0727	0.0756	0.0776	0.0831	0.0709

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$