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An Analysis of the Relationship between School District Poverty and FAFSA Completion in June 2016 and June 2017

Writers & Contributors:
Lindsay C. Page, Assistant Professor, Research Methodology, University of Pittsburgh
Danielle Lowry, Graduate Student, Administrative and Policy Studies, University of Pittsburgh
Aizat Nurshatayeva, Graduate Student, Administrative and Policy Studies, University of Pittsburgh

Washington, DC
www.collegeaccess.org

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TABLE OF CONTENTS

I. **Executive Summary**……………………………………………………………......4

II. **Policy Recommendations**……………..…………………………………….........6

a. Policy Goal 1……………………………………………………………………………………………………….6

b. Policy Goal 2……………………………………………………………………………………………………….6

c. Policy Goal 3……………………………………………………………………………………………………….6

III. **Introduction**……..……...…………………………………………………….……….7

IV. **Data and Analysis**……..…………………………………………………..…..…...7

V. **Methods**……….……...……………………………………………………………..19

VI. **Results**……….……...……………………………………………………………….19

VII. **Implications and Conclusions**………………………………………….……..25

VIII. **Appendices**……...…………………………………………………….…………28

a. Sample restriction process……………………………………………………………………………..28

b. Geographical depictions of the change in FAFSA filing rates by state and district poverty as noted in Figure 7…………………………………………………………………………………..29

c. Relationship between district-level FAFSA completion rates and the share of children living in poverty, state-by-state………………………………………………………………………..32

d. Regression results of district-level FAFSA completion rates on district-level child poverty, by state……………………………………………………………………………………………….57

e. Fitted FAFSA completion at percentiles of national poverty by state………………………………62

f. School districts with higher FAFSA filing than what is predicted from regression models……71

I. EXECUTIVE SUMMARY

The Free Application for Federal Student Aid (FAFSA) is an important application that prospective college students must complete to qualify for state and federal financial aid. In this report, we describe how school district FAFSA completion rates are related to district-level poverty rates across and within states. Given that students from low-income backgrounds may be particularly dependent on financial aid to make postsecondary education affordable, it might be reasonable to hypothesize that districts that serve higher-poverty student populations also have higher FAFSA filing rates than their wealthier counterparts. Unfortunately, we find the opposite – that, in most states, districts with higher rates of poverty have lower FAFSA completion rates. We observe this trend both across states and within states.

In most states, higher child poverty levels are associated with lower FAFSA completion.

For most states, on average, we find that FAFSA completion rates tend to be lower in school districts with higher poverty levels. The relationship between FAFSA completion and poverty is, for many states, quite substantial. On average, for every 10 percentage point difference in the percent of children aged 5 to 17 living in poverty, the district FAFSA completion rate is about 3 percentage points lower.

In six states, higher poverty is associated with slightly higher FAFSA rates.

Counter to the overall trends that we observe, New Mexico, Washington, Colorado, California, Minnesota, and Illinois have slightly higher rates of FAFSA completion among low-income districts than wealthier districts. In these four states, poorer districts outperform wealthier districts by a modest margin.

FAFSA completion varies substantially across states.

The gaps in the FAFSA filing rate between the poorest and wealthiest school districts should be interpreted differently for states that have high overall FAFSA filing in contrast to the states that have low overall FAFSA filing.

Although school district child poverty is a significant predictor of FAFSA completion, due to differences among states in overall FAFSA completion, we observe variation in FAFSA completion rates even among districts with similar levels of child poverty across states. Most notably, in Tennessee, despite the FAFSA filing gap between poor and wealthy school districts, poorer districts achieve high rates of FAFSA completion in comparison to other states.

On average, FAFSA filing increased from 2016 to 2017 in every state.

Across states, FAFSA completion increased by approximately 4 percentage points from June 2016 to June 2017. The greatest increases—of more than 8 percentage points—occurred in Arkansas, Idaho, Utah, Washington, and Wyoming.

Overall, gaps in FAFSA filing between the wealthiest and poorest districts did not increase from 2016 to 2017.

From 2016 to 2017, we do not observe an increase in the gap in filing rates between districts with lower levels of poverty and districts with higher levels of poverty. Instead, improvements in filing rates are fairly consistent across the poverty distribution. Although there are a few states in which the gap in FAFSA filing between the wealthiest and poorest districts increased from 2016 to 2017, we do not see an increase in these gaps, on average.

II. POLICY RECOMMENDATIONS

Increasing FAFSA completion among school districts serving larger shares of low-income students creates opportunities for more equitable access to financial aid and higher education and to better subsequent labor market opportunities. Therefore, policies aimed at increasing FAFSA completion are powerful potential mechanisms for reducing economic and social inequality. The findings of this study provide guidance on where concentrated effort may yield the highest return in terms of improved FAFSA completion rates.

Policy goal 1

Increase statewide FAFSA filing rates in states with overall low FAFSA rates

States where overall FAFSA filing is low will benefit by focusing on increasing FAFSA completion across the socioeconomic spectrum. For example, some states have an average FAFSA completion rate of less than 30 percent.

Policy goal 2

Decrease the FAFSA filing gap between school districts in states where gaps are large

For states where large gaps in FAFSA completion rates exist between the poorest and wealthiest school districts, policymakers may wish to specifically focus FAFSA completion efforts within districts serving low-income student populations.

Policy goal 3

Increase the national average FAFSA filing rate

At the national level, policy should focus on efforts both to simplify the FAFSA filing process and to increase awareness and support for timely FAFSA completion.

III. INTRODUCTION

The Free Application for Federal Student Aid (FAFSA) is an important application that prospective college students must complete to qualify for state and federal financial aid. The goal of this work is to examine the variation in FAFSA completion rates across U.S. school districts and how these FAFSA completion rates relate to district-level socioeconomic status. To assess district-level socioeconomic status (SES), we utilize data compiled by the U.S. Census on the percent of children aged 5 to 17 living in poverty within each school district in the United States. We then merge this data to the U.S. Department of Education's records on recent high school graduates' June 2016 and June 2017 FAFSA filing rates. After producing plots to visually determine the relationship between FAFSA completion and poverty, we fit regression models for each individual state to mathematically characterize the overall relationship between FAFSA completion and poverty at the school district level.

We find, on average, that there is a negative relationship between FAFSA completion and school district poverty. High-poverty school districts do not complete the FAFSA at the same rate as their lower-poverty counterparts.

Large gaps in FAFSA completion rates between wealthy and impoverished school districts exist between and within states. There are, however, certain states that have narrow gaps in FAFSA completion between the wealthiest and poorest districts and states that have higher rates of completion among low-income districts than wealthier districts.

In the following sections, we describe in more detail the data and methods that we use to examine this relationship. We then discuss our results. Finally, we conclude this policy brief with research and policy implications.

IV. DATA AND ANALYSIS

To complete this analysis, we merge data from three sources. First, we utilize the 2015 U.S. Census' school district-level Small Area Income and Poverty Estimates (SAIPE) on the share of relevant children ages 5 to 17 living in poverty.[1] SAIPE is calculated annually using data from the American Community Survey (ACS) to determine income

[1]As of September 2017, the most recently available SAIPE data is from the year 2015. We find it unlikely that school district poverty rates have changed drastically from 2015 to 2016 and 2017.

levels and poverty rates among school-aged children.[2,3] Second, to assess district-level FAFSA completion, we use the Department of Education's calculations of June FAFSA completion by school district for the years 2016 and 2017.[4,5] Finally, to weight districts according to enrollment size, we pull academic year 2014-2015 data on the number of students enrolled in primary and secondary schools by district from the National Center for Education Statistics' (NCES) Common Core of Data. Our final sample includes 9,689 school districts from 49 states.[6,7]

[2] The U.S. Census designates a family as living in poverty based on family size, family composition, and income thresholds, which are recalculated annually. SAIPE reports the estimated number of relevant children 5 to 17 in poverty who are related to the householder and the estimated number of children 5 to 17 in the school district. We divide the number of children in poverty by the total child population and use this percentage as our district poverty estimate. To learn more about SAIPE, visit: https://www.census.gov/did/www/saipe/index.html

[3] We do not use the percentage of students eligible for free or reduced-price lunch (FRL) as a proxy for poverty because FRL is often considered a poor indicator of poverty status, particularly among older students who may not receive FRL benefits even when eligible. FRL eligibility is usually based on family income and students above the federal poverty threshold are often eligible to receive FRL status. For more information, see: https://nces.ed.gov/blogs/nces/post/free-or-reduced-price-lunch-a-proxy-for-poverty

[4] District FAFSA filing rates are reported for public school students only. For the most recent FAFSA completion data, see: https://studentaid.ed.gov/sa/about/data-center/studnt/application-volume/fafsa-completion-high-school

[5] FAFSA completion rates are reported in ranges rather than as single estimates. Using the lower and upper bound of this range, we computed random filing rates for each district as reported by the Department of Education. We repeated our analyses using lower and upper bounds and found that results are not sensitive to the rate chosen within the reported range.

[6] In the current analysis, we capitalize on the variation in FAFSA completion and poverty rates across school districts within states; therefore, we need enough school districts per state to complete the analysis. As a result, we drop the District of Columbia and Hawaii from our analysis.

[7] To see how we arrived at our final analytic sample, please see Appendix A.

Table 1

Descriptive statistics for child poverty and FAFSA completion rates among U.S. school districts, n=9,689

	Mean	Standard deviation	Minimum	Maximum
Rate of children 5 to 17 living in poverty, 2015	18.81	9.80	1.58	62.15
FAFSA completion rate, 2016	52.09	11.02	20	80
FAFSA completion rate, 2017	57.10	10.90	20	80

Note: FAFSA completion rates are computed by the U.S. Department of Education for June 2016 and June 2017. Poverty rates are from the Census' 2015 Small Area Income and Poverty Estimates (SAIPE). Statistics are weighted by district enrollment size. Table statistics do not include Hawaii and DC school districts.

In Table 1, we report basic descriptive statistics for the district-level FAFSA completion and poverty measures. The average school district in the U.S. serves a population where approximately 18 percent of the schoolchildren are living in poverty.

There is considerable variability in U.S. district poverty rates, which range from a low of 2 percent to a high of 62 percent. This variability exists even within states. In Figure 1, we present the variability in district poverty rates by state. States in this figure are sorted by median district poverty with states with the highest median poverty rates positioned in the lower half of the figure. We display each state's 10th and 90th percentile of district poverty to demonstrate the wide disparity in poverty present within states. Figure 2 presents a geographical depiction of these poverty estimates. States with higher levels of child poverty are mostly concentrated in southern states such as Louisiana, Georgia, and Mississippi. Lower rates of poverty are present in states located in New England, the Midwest, and Wyoming.

We next examine the FAFSA completion rates in June of 2016 and 2017.[8] The average district-level FAFSA completion rate by June 2016 was 52 percent. The average

[8] The figures we report here may be different from the U.S. Department of Education's national average FAFSA completion rate due to how we restrict the sample for analytic purposes. For more detail about our data processing steps, please see Appendix A.

completion rate in June the following year increased by approximately 5 percentage points. The completion rates range from a low of 20 percent to a high of 80 percent in both years. These bounds, however, are an artifact of the fact that the U.S. Department of Education does not report FAFSA completion rates outside these bounds.[9]

In Figures 3 and 4, analogous in structure to Figure 1, we present the within-state variability in the proportion of students within districts completing the FAFSA by June 2016 and June 2017, respectively. In both years, Connecticut, Massachusetts, and Tennessee had the highest median FAFSA completion average. Nevada, Georgia, and Utah had the lowest average FAFSA completion among school districts in both years. Figure 5 maps the mean average 2017 FAFSA completion rate by state. The highest concentrations of FAFSA filing by state are comparable to the lowest average poverty rates as depicted in Figure 2. We see larger FAFSA completion rates in New England states, Tennessee, and Nebraska.

Three occurrences in the 2017-2018 FAFSA filing cycle may have impacted the rate of filing by June 2017. First, the 2017-2018 FAFSA application became available to prospective students on October 1, 2016, three months earlier than in prior years. Second, FAFSA filing shifted to allow students and families to rely on prior-prior year tax information to facilitate this earlier filing. Both of these policy shifts likely led to the increase that we observe in June FAFSA filing rates. Third, counter to these two policy changes, the IRS Data Retrieval Tool, which allows students and parents to easily transfer IRS tax return data into their FAFSA application, became unavailable beginning in early March 2017. The deactivation of this tool may have increased the challenges that students and families faced in successful filing. On balance, however, the change between the two years is positive.

We examine changes in FAFSA filing from June 2016 to June 2017 by state in Figure 6. Overall, each state experienced an average increase in FAFSA filing during this time of about 4 percentage points. Utah had the highest average increase in FAFSA completion at almost 10 percentage points. Among states with the highest levels of poverty, Alabama, Louisiana, and Kentucky increased FAFSA completion more than the increase experienced by three-quarters of the other states.

Of course, improvements in FAFSA filing may have been realized by some districts more than others. We examine FAFSA completion increases by state and by poverty level in Figure 7. The first panel of Figure 7 displays average FAFSA completion rate changes among districts in the bottom decile of the poverty distribution (i.e., the wealthiest districts). The last panel shows the average FAFSA completion rate increase among districts in the top decile of the poverty distribution (i.e., the poorest districts).

[9] This reporting practice is likely implemented to protect the FAFSA filing status information of individual students served by these school districts.

Districts with the lowest poverty rates did experience larger increases in FAFSA completion (of about 5 percentage points) than districts with highest concentrations of poverty (which had an increase of approximately 4 percentage points), but this is a difference of only 1 percentage point. States that have done particularly well in increasing FAFSA completion from 2016 to 2017 among the most impoverished districts include Utah, Washington, Vermont, and North Dakota. For geographical depictions of Figure 7, please see Appendix B.

To analyze the relationship between FAFSA completion and district poverty, we first visually inspect scatter plots of these two measures within each individual state. We present these state-by-state figures in Appendix C. In the figures, each hollow circle corresponds to a single school district, and the relative size of the circle corresponds to the number of students enrolled in the district. The circles also represent the 2017 FAFSA completion rate for each district. The dashed blue line in the figures represents the relationship between FAFSA completion and poverty in June 2016, while the solid green line represents this relationship for June 2017. Note that in examining results across states, the axes of the figures change to best present the data for each state. The change in the slope of the trend lines for the 2016 and 2017 FAFSA completion rates should be interpreted carefully for those states with few districts.

We find that, within most states, the relationship between district-level FAFSA completion and poverty is negative and relatively linear. For example, in states such as Indiana and Missouri, we find that FAFSA completion rates are much lower in districts where there are greater shares of children living in poverty. In other states, such as Montana and North Dakota, we observe no clear relationship between FAFSA completion and poverty.

In a few states, we find evidence of a positive relationship such that FAFSA completion is higher in high-poverty districts. These states include: California, Colorado, Idaho, New Mexico, Utah, Washington, and Wyoming. None of these relationships appears particularly strong, except in the case of California and Utah. Note, however, that Utah's completion rates are among the lowest in the nation.

In certain states, we observe curvature in the relationship between FAFSA completion and poverty. These states include: Connecticut, Georgia, Maine, Nebraska, New York, Ohio, South Carolina, Texas, and Virginia. In Maine, for example, this curvature suggests that FAFSA completion rates are similar for relatively high and low poverty districts and moderately lower for districts in the state of relatively middling levels of child poverty. In Texas, this relationship shows slightly higher percentages of FAFSA completion among higher income districts as compared to middle poverty districts, but a gradually increasing positive relationship between high-poverty districts and FAFSA completion. In the next section, we discuss how we more carefully analyze these

relationships.

Figure 1

District poverty rate by state

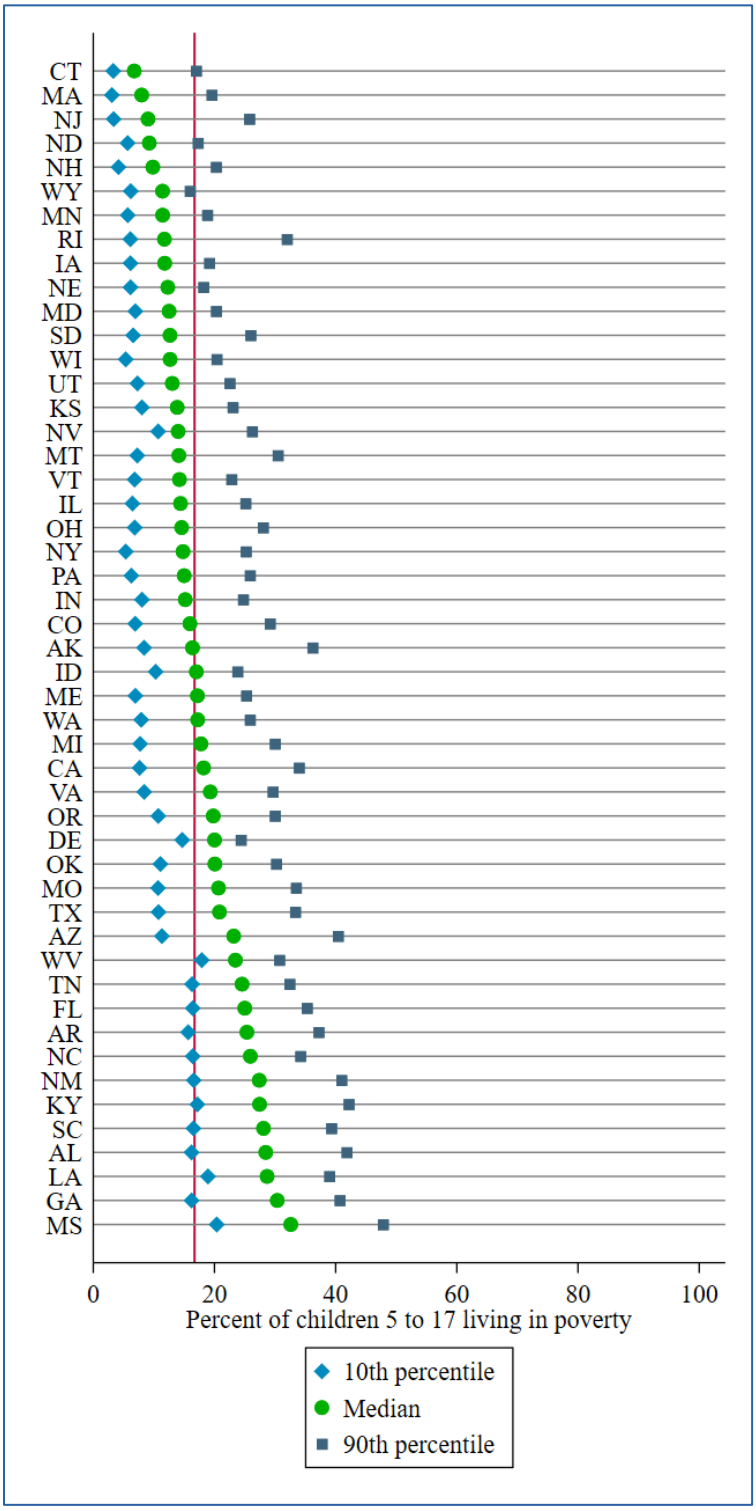


Figure 2

Average district poverty rate by state

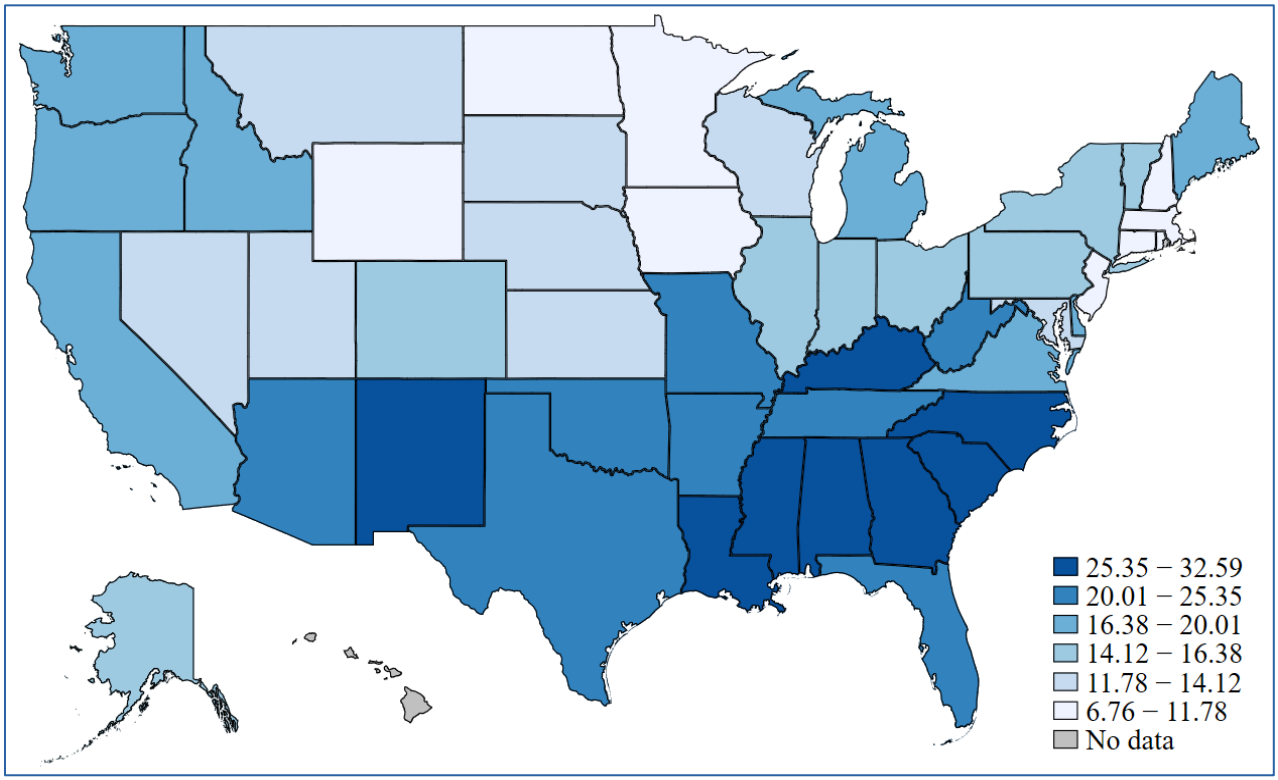


Figure 3

FAFSA completion rate by state, June 2016

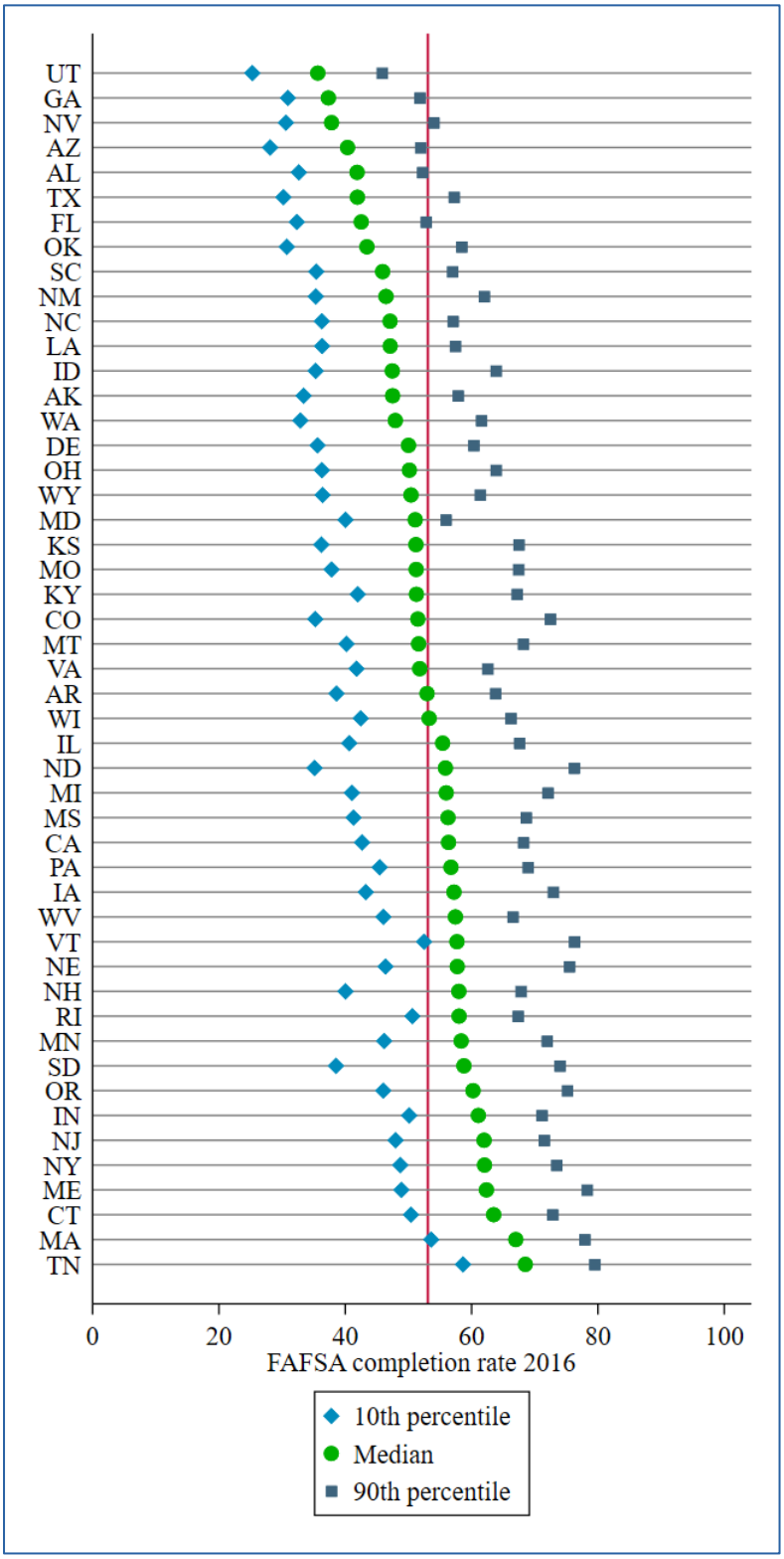


Figure 4

FAFSA completion rate by state, June 2017

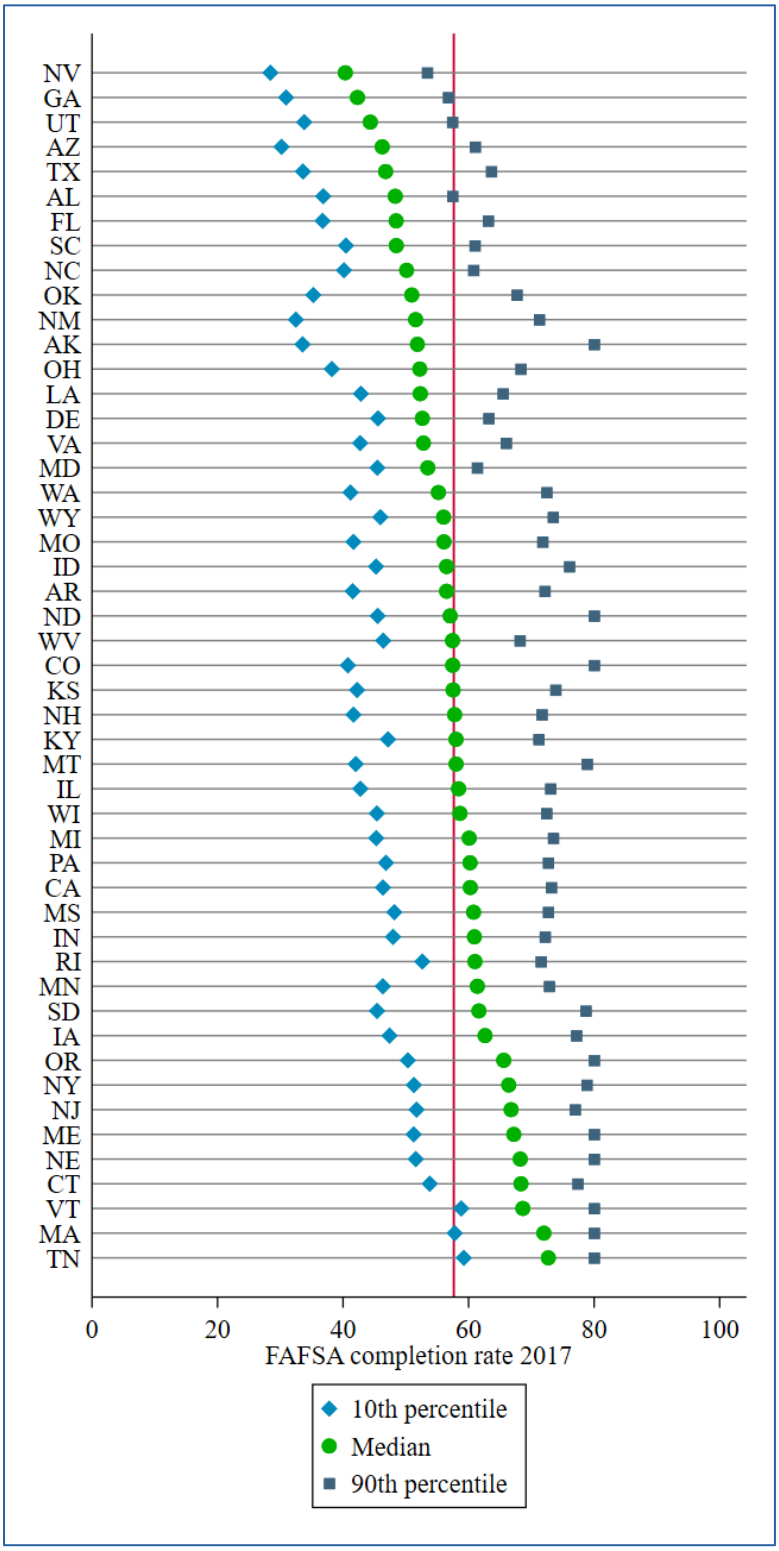


Figure 5

June 2017 mean average FAFSA completion by state

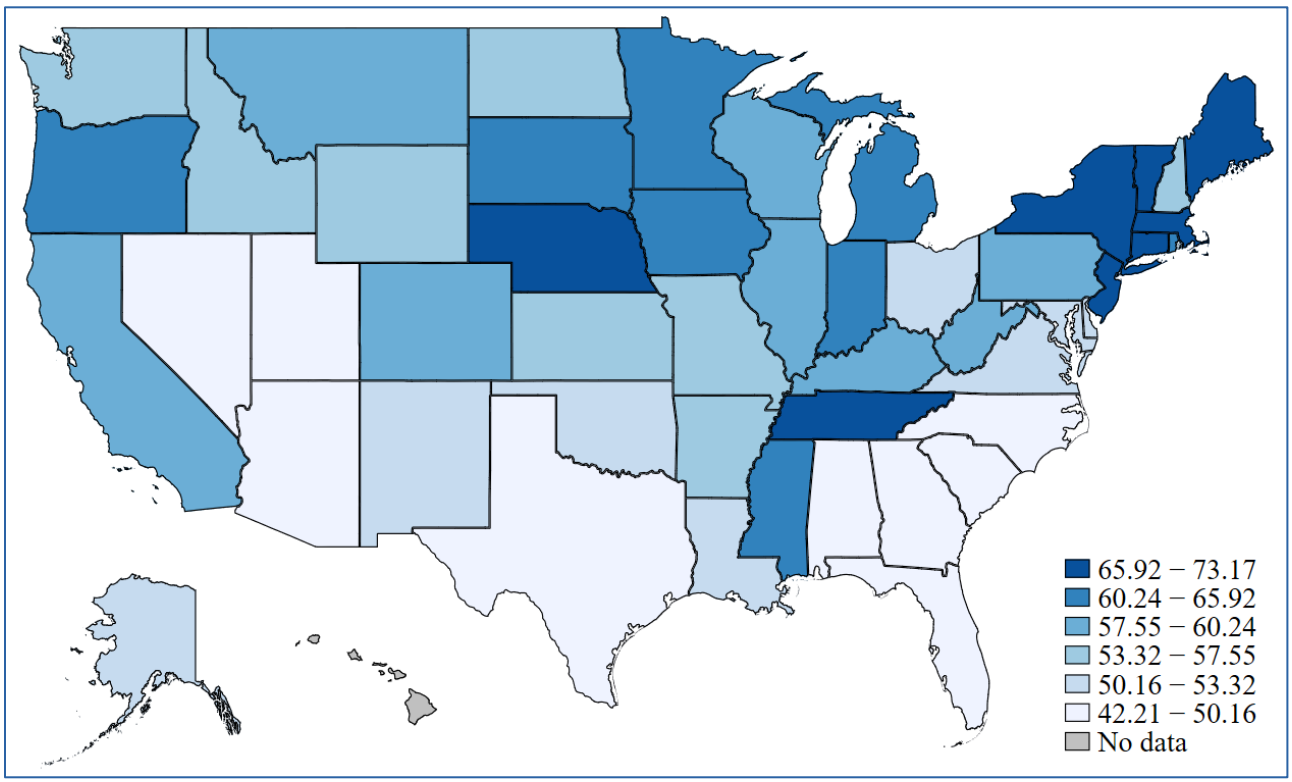


Figure 6

Change in FAFSA completion from June 2016 to June 2017 by state

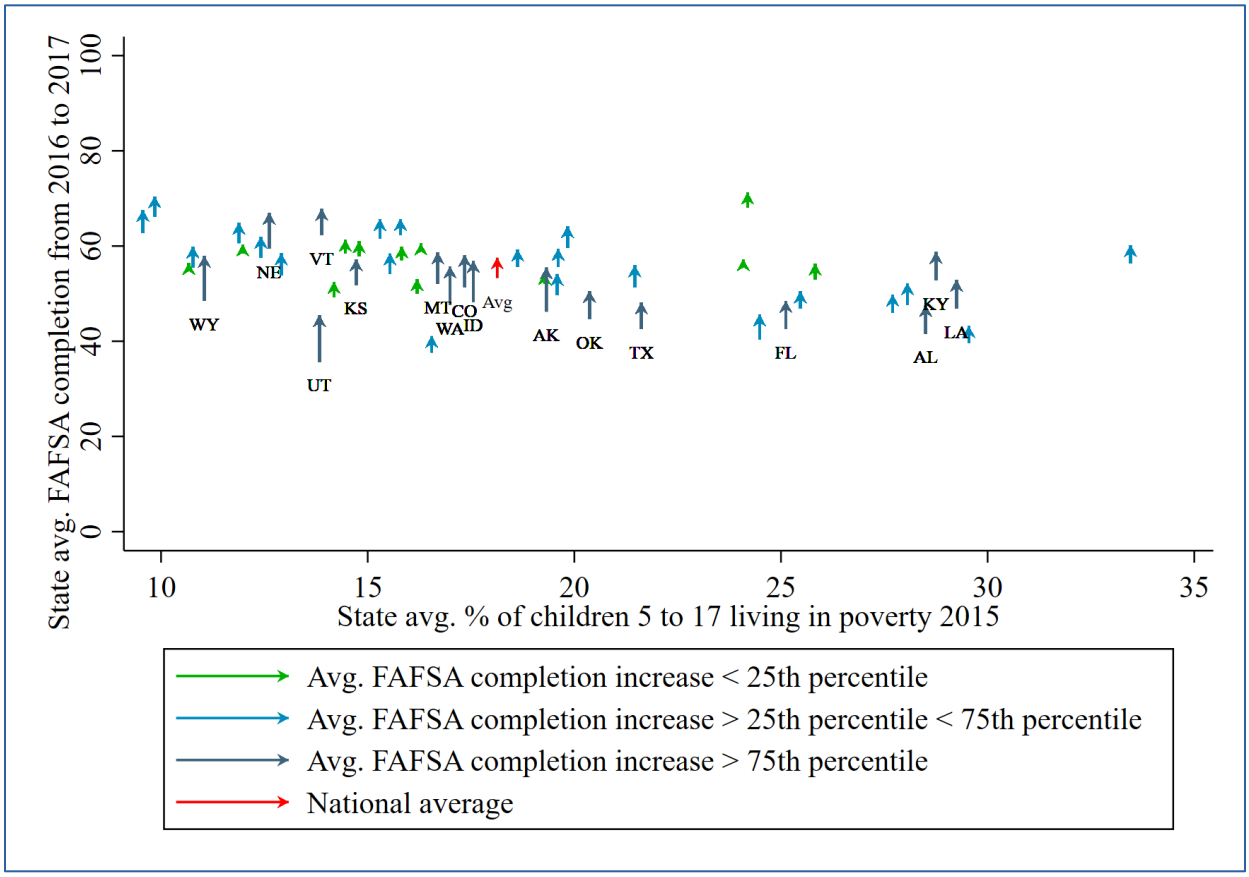
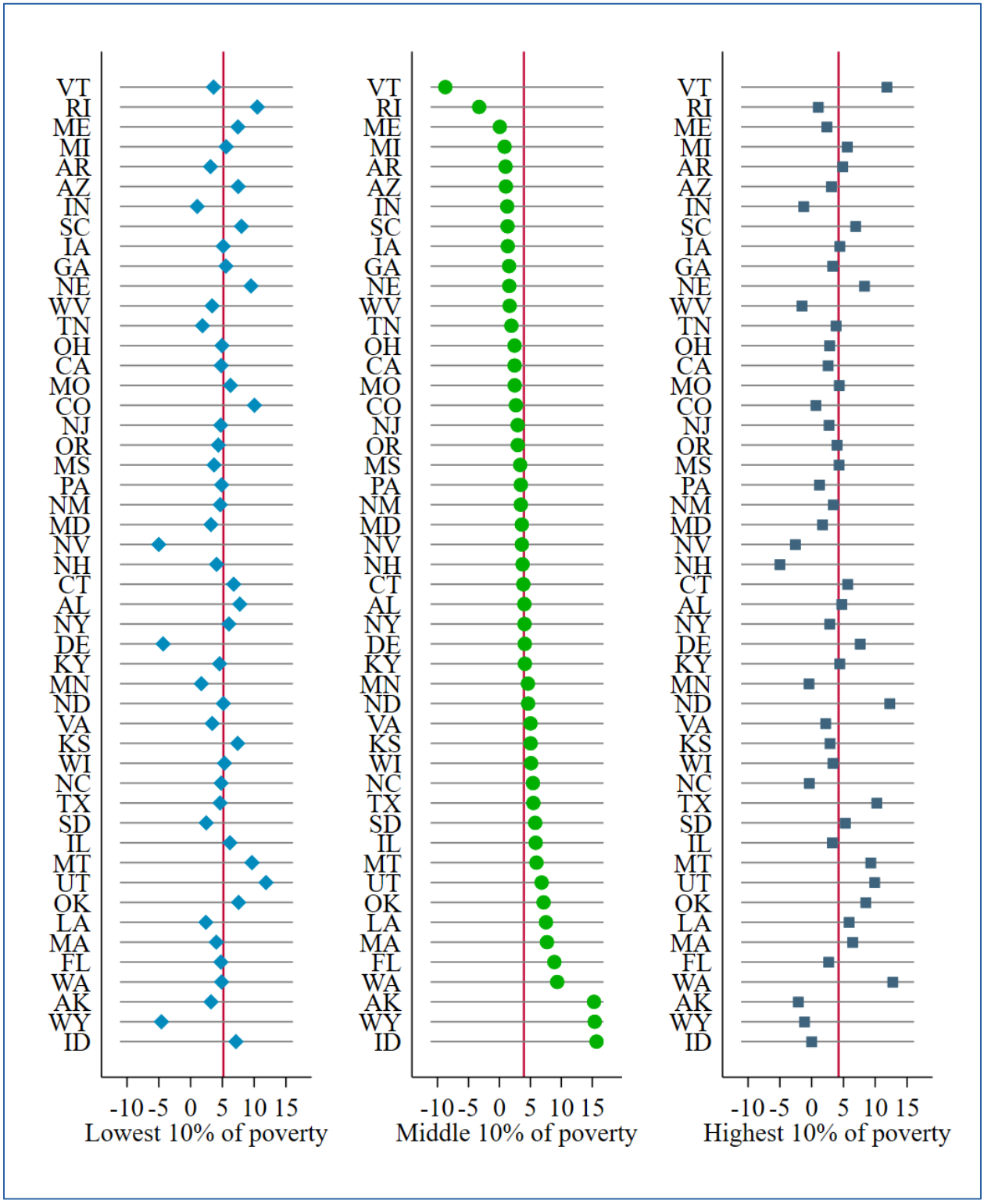


Figure 7

Change in FAFSA completion from 2016 to 2017 by state and district poverty



V. METHODS

We use regression analysis to quantify the relationship between FAFSA completion rates and the share of children aged 5 to 17 living in poverty within each of the 49 states in our sample. We fit either a linear or quadratic model as determined by our visual inspection of the relationship between these two measures (e.g., we use a quadratic model in those states where we observe curvature). Using these fitted models, we then predict the average district-level FAFSA completion rate for each state by the 10th, 25th, 50th, 75th, and 90th percentiles of the national distribution of district-level child poverty (as assessed through SAIPE data). These percentiles correspond to the following poverty rates, respectively: 6.9 percent, 10.9 percent, 16.7 percent, 23.8 percent, and 31.2 percent. Through this analysis, we aim to determine which states are doing relatively well with FAFSA completion at particular levels of district poverty and which states must more adequately target low-income school districts in FAFSA completion efforts.

VI. RESULTS

The relationship between FAFSA completion and district poverty rates is quite substantial for several states. We separate our regression results into two tables, which are displayed in Appendix D. In Table D1, we report results from the fitted linear models and, in Table D2, we report the results from the fitted quadratic models (e.g., corresponding to the figures in Appendix C where we observe curvature in the relationship between the two measures). The last row of Table D1 shows that, on average, in the United States, for every 10 percentage point difference in the share of children 5 to 17 living in poverty, we estimate that the school district FAFSA completion rate is approximately 2.6 percentage points lower.

Beyond this average, we observe considerable variability between states. In four states—Delaware, Iowa, Maryland, and New Hampshire—we see, on average, a negative approximately one-for-one difference in the FAFSA completion rate for every percentage point difference in the poverty rate.[10] In Indiana, New Jersey, and Tennessee, this relationship is smaller but still substantial and greater than the national average: each 10 percentage point difference in the district poverty rate in these three states is negatively associated with a 5 percentage point difference in FAFSA

[10] This extreme relationship between poverty and FAFSA completion should be interpreted with caution for Delaware. Although we calculate a point estimate of -1.76 in 2016, the point estimate in 2017 is sharply cut in half. Because Delaware has 13 districts, we could be incorrectly forcing a linear functional form on the data.

completion, on average.[11] The change in the relationship between poverty and FAFSA completion from 2016 to 2017 is reported in the final columns of Tables C1 and C2. For Oregon, New Hampshire, and Minnesota, the negative relationship between these two measures became even more negative. It remains to be seen whether this increasing negative trend continues into the 2018-2019 FAFSA filing cycle.

We observe a positive relationship between FAFSA completion and poverty among a few states. The largest positive relationship is found in Wyoming and Utah. In these states, on average, for every 10 percentage point difference in district poverty, the FAFSA completion rate is between 7 and 8 percentage points higher. As was noted previously, however, Utah ranks among the worst three states for FAFSA completion. FAFSA completion in Wyoming is only slightly below the national average. The relationship between FAFSA completion and poverty is also positive—though not quite as substantial—in California, Illinois, Minnesota, and New Mexico.[12,13] In Table C2, we report analogous results from the fitted models using a quadratic function.

In Appendix F, Table F1, we highlight 49 school districts in larger urban areas that are accomplishing high rates of FAFSA completion. These school districts have high enrollment numbers, high poverty rates, and observed 2017 FAFSA completion rates that are substantially larger than what our regression models predict. Table F1 presents the observed 2017 FAFSA completion rate for each district, as well as the estimated FAFSA completion rate based on our models. The "residual" is simply the difference between the observed and the fitted rate. The table also displays the student enrollment rate and poverty rate for each of these districts. We chose to display these districts because they had the largest residuals among those districts serving large numbers of students with poverty rates higher than half of the districts in the country.

We next use these same fitted models to predict the average FAFSA completion by state at multiple percentiles of the distribution of district poverty. We display results from this exercise in Table 2. In this table, we rank states on the 50th percentile of the national poverty rate from the highest FAFSA completion rate in 2017 to the lowest completion rate.[14] We find that, at the 50th percentile of poverty, Tennessee, Oregon,

[11] Tennessee has consistently high FAFSA completion rates across all levels of poverty despite this negative relationship. It may be the case that two districts—Shelby County and Davidson County—may be inflating the magnitude of this relationship due to both districts having two large urban cities with high-poverty rates and low FAFSA completion. These cities are Memphis and Nashville, respectively.

[12] In Minnesota, the substantial positive relationship between FAFSA completion and poverty rates decreases from 2016 to 2017. This change can be observed in the final column of Table D1.

[13] There are three large urban areas with high poverty rates and also relatively high FAFSA rates in Illinois and Minnesota that should be noted. These are Chicago in Illinois and Minneapolis and St. Paul in Minnesota. A visual inspection of the figures corresponding to these states in Appendix C shows how well these districts are accomplishing high FAFSA completion.

[14] We do not provide fitted values for those states that do not have districts at a given percentile of the national district poverty rate.

and Maine have the highest 2017 FAFSA completion rates at 73 percent, 69 percent, and 69 percent, respectively. Conversely, we find that Alabama, Utah, and Nevada have the lowest completion rates between 47 percent and 48 percent at this same percentile. We next examine the estimated filing rates at the nation's 90th percentile of poverty to determine which states have the highest FAFSA completion rates in the most impoverished districts in the nation. In 2016, Maine, Minnesota, and Tennessee had the highest estimated FAFSA completion rates between 63 percent and 65 percent at this percentile. In 2017, the highest estimated FAFSA completion rates at the 90th percentile of poverty were 67 percent for Oregon and Tennessee and 68 percent for Wyoming.

Variation in FAFSA completion between districts within states is also large. The last two columns in Table 2 display the difference in completion rates between the districts at the 90th and 10th percentile of poverty within each state for both 2016 and 2017. In 2016, the largest disparities between the highest and lowest poverty districts in terms of FAFSA completion were 20 percentage points in Georgia and 26 percentage points in Maryland. These same states, with the addition of Tennessee, also had the highest disparities in FAFSA completion in 2017. In several states, the poorest districts have higher FAFSA completion rates than the wealthiest districts, although the differentials are modest. Nonetheless, California, New Mexico, and Minnesota have consistently higher completion rates among districts in the 90th percentile of poverty in both 2016 and 2017. On average, the gap in filing rates between districts in the 90th and 10th percentiles of poverty within states is between 6.4 and 6.5 percentage points. Gaps in filing may have increased in Alabama, Rhode Island, Oregon, and North Dakota between 2016 and 2017. However, in Texas, Vermont, and Missouri, we see a decrease in filing gaps of 5, 7, and 4 percentage points, respectively.[15] Overall, the FAFSA filing gaps between the wealthiest and poorest districts did not change between 2016 and 2017.

Appendix E presents the estimates from Table 2 visually. These figures break states into Census-designated regions and divisions in order to compare FAFSA completion among similarly situated states. The top panel of each regional breakdown shows the FAFSA completion rates for both 2016 and 2017 at each of the percentiles of poverty listed in Table 2. The bottom panel displays the estimated change in FAFSA completion from 2016 to 2017 at each of these same percentiles to allow for a better observation of where along the poverty distribution within each state increases in FAFSA filing have occurred.

Figure 8 is a more parsimonious version of the figures in Appendix E and it allows us to more easily compare FAFSA completion rates across all states simultaneously. The

[15] The gaps in FAFSA filing between the wealthiest and poorest districts over these years must be interpreted with caution for both Vermont and Rhode Island due to these states having fewer districts.

national median average FAFSA filing rate of 57.6 percent is indicated by the solid red line. Figure 8 highlights two important aspects of the estimates in Table 2. First, there are states with high overall FAFSA completion rates and states with low overall FAFSA completion rates. In the states with high overall FAFSA completion rates, such as Tennessee, Oregon, Maryland, and Maine, students in all districts, irrespective of poverty rates, file the FAFSA at a rate higher than the national average. In states with low overall FAFSA completion rates, such as Alabama, Alaska, New Mexico, and Texas, all districts, including wealthier districts, file the FAFSA at a rate lower than the national average. This implies that gaps between the wealthier and poorer school districts should be interpreted in conjunction with the overall statewide FAFSA completion rate.

Second, in Figure 8 we see that in most states, poorer school districts have lower FAFSA filing rates. In some states, such as Colorado and Idaho, gaps in FAFSA completion across poverty levels are narrow. However, given the differing statewide FAFSA averages, the stories of Colorado and Idaho are drastically different. Namely, districts in Colorado, even at the 90th percentile of poverty, have completion rates greater than the national average; meanwhile, Idaho, even at the 10th percentile of poverty, has lower completion rates than the national average.

Figure 8

Fitted 2017 FAFSA completion rates at the 10th, 50th, and 90th percentiles of poverty by state

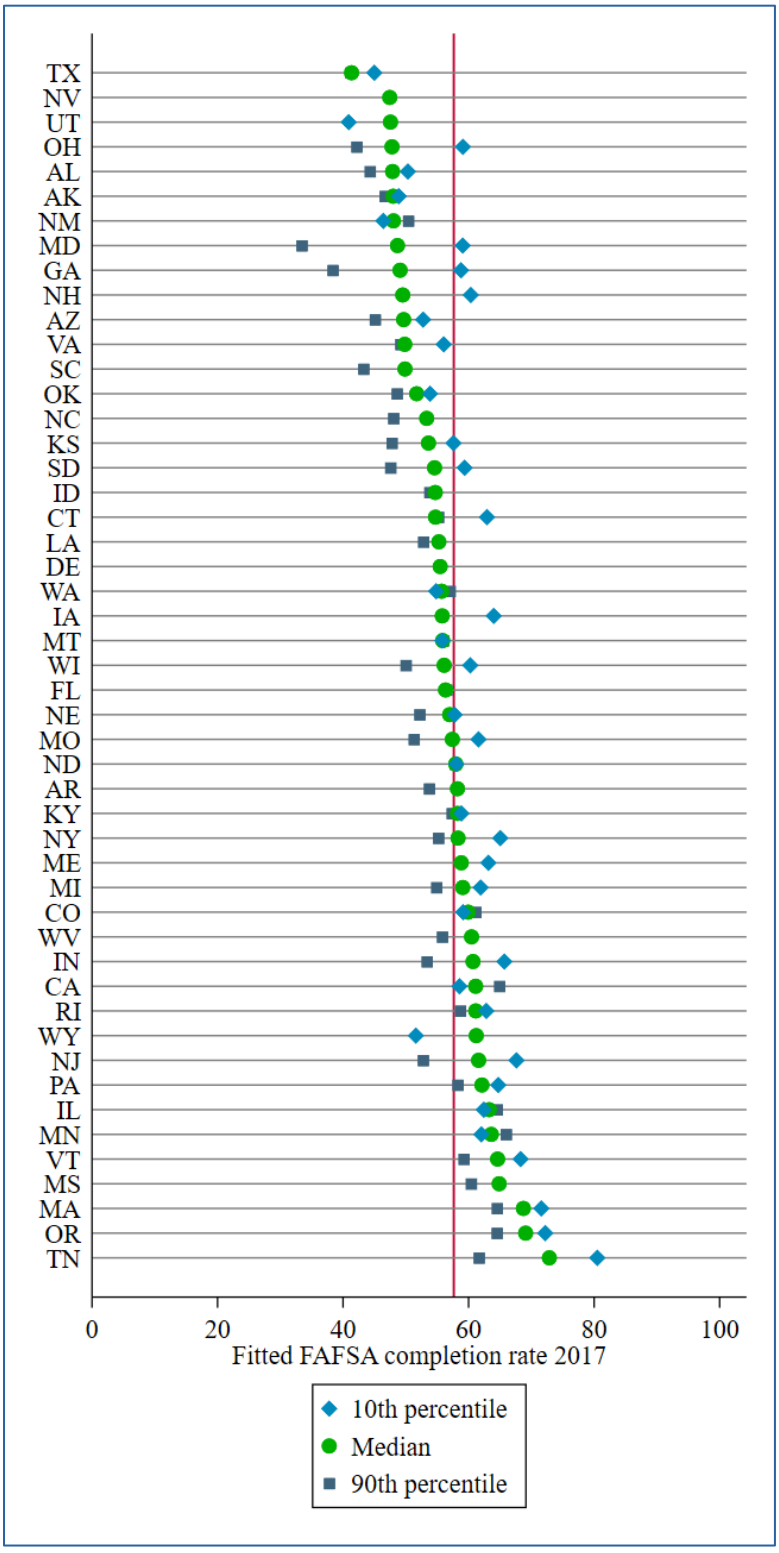


Table 2

States ranked by highest predicted FAFSA completion at the 50th percentile of national district-level poverty

State	10th percentile		25th percentile		50th percentile		75th percentile		90th percentile		Gap	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
TN	76.01	80.50	73.52	77.42	69.84	72.86	65.42	67.39	60.79	61.65	15.22	18.86
OR	64.34	72.21	63.97	70.95	63.42	69.09	62.77	66.85	62.08	64.51	2.25	7.69
MA	68.14	71.59	66.60	70.43	64.32	68.73	61.59	66.69	58.72	64.54	9.42	7.04
ME	63.15	66.92	59.95	66.56	58.83	66.04	63.16	65.40				
NY	65.05	69.09	61.88	67.64	58.32	65.50	55.79	62.92	55.19	60.22	9.86	8.88
MS			63.02	66.68	60.92	64.87	58.39	62.69	55.75	60.40		
CT	62.92	68.82	58.78	67.14	54.73	64.66	53.09	61.67	55.18	58.54	7.75	10.28
VT	65.03	68.28	62.46	66.80	58.67	64.62	54.11	61.99	49.34	59.24	15.69	9.04
MN	58.69	62.03	60.21	62.67	62.46	63.62	65.16	64.77	67.99	65.97	-9.30	-3.94
IL	57.04	62.42	57.41	62.77	57.94	63.28	58.59	63.90	59.26	64.54	-2.22	-2.12
PA	60.98	64.73	59.97	63.68	58.47	62.12	56.67	60.25	54.78	58.28	6.20	6.45
NE	57.78	64.66	57.70	63.50	56.99	61.80	55.19	59.75	52.20	57.60	5.58	7.06
NJ	63.42	67.62	61.25	65.19	58.04	61.60	54.19	57.28	50.15	52.75	13.27	14.88
WY	42.11	51.59	44.89	55.48	48.99	61.22	53.91	68.12				
RI	59.13	62.82	59.40	62.14	59.79	61.14	60.26	59.94	60.75	58.68	-1.63	4.14
CA	54.81	58.55	55.78	59.59	57.22	61.13	58.95	62.98	60.76	64.92	-5.95	-6.37
IN	64.92	65.70	62.82	63.68	59.72	60.70	56.00	57.12	52.09	53.36	12.82	12.34
WV					58.17	60.47	56.50	58.19	54.75	55.80		
CO	53.51	59.12	53.34	59.45	53.09	59.94	52.78	60.52	52.46	61.13	1.05	-2.00
MI	57.24	61.92	56.44	60.77	55.26	59.07	53.85	57.03	52.37	54.89	4.87	7.03
KY	53.86	58.84	53.53	58.60	53.06	58.24	52.49	57.80	51.89	57.34	1.96	1.50
AR			55.74	60.05	54.16	58.22	52.26	56.03	50.26	53.72		
ND	51.52	58.07	52.43	58.03	53.79	57.97	55.42	57.89	57.13	57.81	-5.61	0.25
MO	58.31	61.58	56.01	59.90	52.62	57.42	48.54	54.43	44.26	51.30	14.05	10.28
FL			48.09	56.26	47.62	56.33	47.05	56.41	46.45	56.49		
WI	55.06	60.26	53.46	58.58	51.11	56.11	48.28	53.13	45.32	50.00	9.74	10.26
MT	51.50	55.81	51.08	55.83	50.47	55.87	49.72	55.91	48.95	55.96	2.55	-0.15
IA	60.22	64.00	56.66	60.69	51.41	55.80	45.09	49.91				
WA	49.33	54.82	49.33	55.18	49.34	55.71	49.35	56.35	49.35	57.02	-0.03	-2.20
DE					55.44	55.47	44.27	50.83				
LA					48.93	55.27	47.85	54.06	46.72	52.80		
VA	56.04	58.06	52.97	56.83	49.83	55.00	48.25	52.81	49.16	50.51	6.87	7.56
SC			53.88	58.49	49.87	54.98	46.06	50.76	43.26	46.33		
OH	59.10	60.26	53.80	58.08	47.79	54.85	43.42	50.97	42.17	46.91	16.93	13.36
ID			48.57	55.06	47.72	54.69	46.70	54.25	45.63	53.79		
SD	55.96	59.36	53.81	57.43	50.64	54.57	46.82	51.14	42.83	47.55	13.13	11.81
KS	51.67	57.60	50.09	55.99	47.76	53.62	44.96	50.76	42.03	47.77	9.64	9.83

State	10th percentile		25th percentile		50th percentile		75th percentile		90th percentile		Gap	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
GA	58.79	60.71	54.64	57.82	49.09	53.57	43.33	48.45	38.36	43.09	20.43	17.62
NC			51.27	55.47	49.44	53.32	47.23	50.74	44.91	48.03		
OK	47.45	53.86	46.05	53.00	43.99	51.73	41.51	50.20	38.92	48.59	8.53	5.27
AZ	45.51	52.76	44.62	51.50	43.31	49.65	41.73	47.43	40.08	45.10	5.43	7.66
NH	58.02	60.35	54.43	55.97	49.13	49.51						
MD	54.59	59.07	50.37	54.87	44.14	48.68	36.65	41.23	28.80	33.42	25.78	25.64
TX	44.98	48.08	43.17	48.25	41.35	48.50	40.52	48.80	41.22	49.11	3.76	-1.03
NM	41.54	46.42	42.11	47.07	42.96	48.03	43.97	49.19	45.04	50.40	-3.50	-3.98
AK	45.12	48.88	44.92	48.52	44.61	47.98	44.25	47.34	43.87	46.66	1.26	2.22
AL	41.19	50.33	40.93	49.34	40.56	47.88	40.10	46.13	39.63	44.30	1.57	6.03
UT	30.73	40.90	33.19	43.59	36.81	47.56	41.17	52.34				
NV			48.41	49.11	47.76	47.44	46.98	45.42				

Notes: States are ranked from largest FAFSA completion rate to smallest on the 50th percentile of the national poverty rate among school districts. The FAFSA completion rates reported here are the averages calculated from the fitted linear or quadratic models (as specified in the figures presented in Appendix C) of district FAFSA completion on the percent of children aged 5 to 17 living in poverty within school districts. Predicted estimates of FAFSA completion are not reported for those states without districts meeting the national percentiles of poverty reported here. DC and Hawaii are not included.

VII. IMPLICATIONS AND CONCLUSIONS

In this analysis, we find that wide disparities in FAFSA completion extend across and within states. Moreover, in most states, relatively wealthier school districts have higher FAFSA completion rates than their counterparts in lower-income communities.

Given that some states have overall high or overall low FAFSA completion rates, we observe substantial cross-state variation in FAFSA completion rates even among districts with similar levels of child poverty. Most notable are states, such as Tennessee and Maine, where districts across the spectrum of poverty rates achieve high rates of FAFSA completion.

We also observe an increase in FAFSA completion from June 2016 to June 2017 in all states. This increase occurs across the distribution of district-level poverty. These positive changes in filing are likely attributable to the FAFSA application becoming available to prospective students earlier, as well as allowing students and families to rely on prior-prior year tax information. These increases occurred despite the likely negative impact of the shutdown of the IRS Data Retrieval Tool beginning in March.

We recommend monitoring changes in filing in conjunction with FAFSA policy changes moving forward.

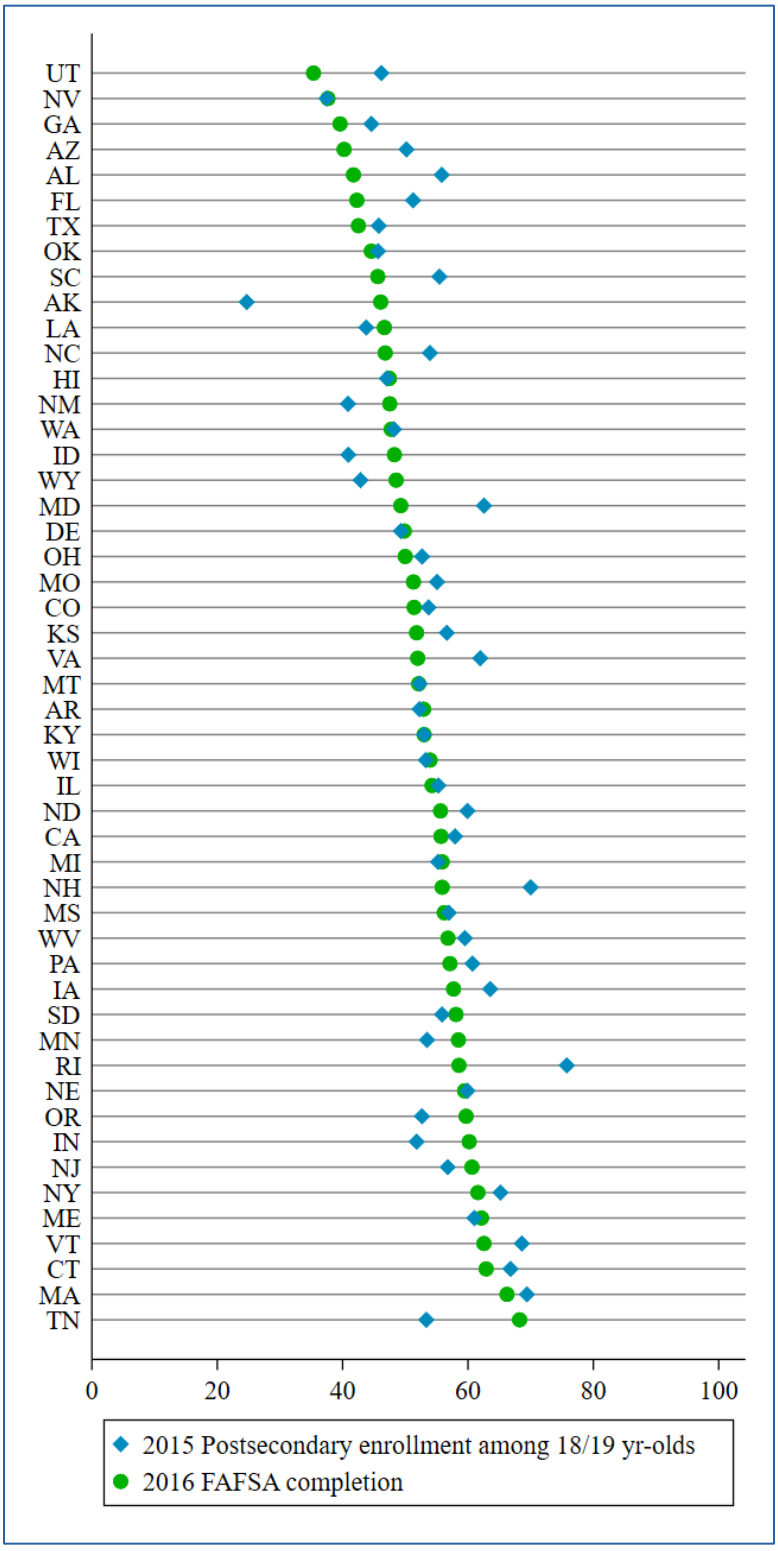
Filing the FAFSA is a major step in accessing higher education. The correlation between FAFSA filing and college enrollment is considerable. Figure 9 demonstrates the connection between FAFSA completion and postsecondary enrollment.[16] The FAFSA is especially important for students from low-income backgrounds, as it serves as the gateway to Pell grants and other need-based sources of college financial aid. In this light, the findings of this study highlight the need to increase rates of FAFSA completion particularly in districts that serve large shares of low-income students in order to improve equitable access to higher education.

The findings of this study also allow policymakers to better tailor or adjust their policies focusing on college access. States where the overall FAFSA filing rate is low will benefit by focusing primarily on increasing FAFSA completion across the socioeconomic spectrum. For states where large gaps in FAFSA completion rates exist between the poorest and wealthiest school districts, it may be more appropriate to target low-SES school districts in their efforts to increase FAFSA completion. It is also recommended to continue investing effort into increasing national FAFSA filing rates by reducing the barriers in filing the FAFSA encountered by all students irrespective of the state in which they reside.

[16] This figure uses data on college enrollment among 18- and 19-year-olds by state from the 2015 American Community Survey, as well as 2016 state-level FAFSA completion from the U.S. Department of Education.

Figure 9

The relationship between FAFSA completion and college enrollment by state, sorted on FAFSA completion rates



VIII. APPENDICES

A: Sample restriction process

We used three publicly-available datasets for this report. The first is the 2015 Small Area Income and Poverty Estimates (SAIPE), which combines income and poverty data from the decennial census and the American Community Survey. The second is the June 2016 and June 2017 Free Application for Federal Student Aid (FAFSA) completion rates by district, which was estimated by the U.S. Department of Education. Finally, we obtained school district enrollment rates from the Common Core of Data for the 2015-2016 academic year.

We merged the three datasets using local education agency identification numbers. The SAIPE and FAFSA data matched for 9,830 school districts; 3,416 districts were available in the SAIPE file only, and 1,085 districts were available in the FAFSA file only. We next dropped Hawaii because it contains only a single school district. We drop an additional 140 districts due to missing FAFSA completion rates for either June 2016 or June 2017 or both. This left us with a final sample of 9,829 school districts.

Using the school district category information in the Common Core of Data for the 2015-2016 academic year, we analyzed the unmatched districts from the SAIPE and FAFSA files. We checked every unmatched school district in the "Regular local school district" category. The majority of the districts from the SAIPE file that did not match to FAFSA data fall into the regular school district category. School districts in Puerto Rico constitute the largest share of these districts, i.e. these districts were not matched because we excluded the U.S. territories from the analysis. All the remaining districts are either K-8 or single high school districts.

The "regular" districts from the FAFSA file that were not matched to the SAIPE file are charters, special education or juvenile facilities, vocational-technical schools, single-/two-high school districts, or districts serving small communities. They seem to have been coded as "regular" due to local legislation and funding peculiarities. Such schools in other states are listed as "state-operated" or "regional" facilities.

All other unmatched districts are charter, regional, state-operated, or single high school districts. In sum, all or nearly all regular school districts in the U.S. are covered by our merged dataset, and we judged the unmatched school districts to be districts that are appropriate to exclude.

B: Geographical depictions of the change in FAFSA filing rates by state and district poverty as noted in Figure 7

Figure B1

Change in FAFSA completion rate from 2016 to 2017 among districts at or below 10th percentile of children in poverty, by state

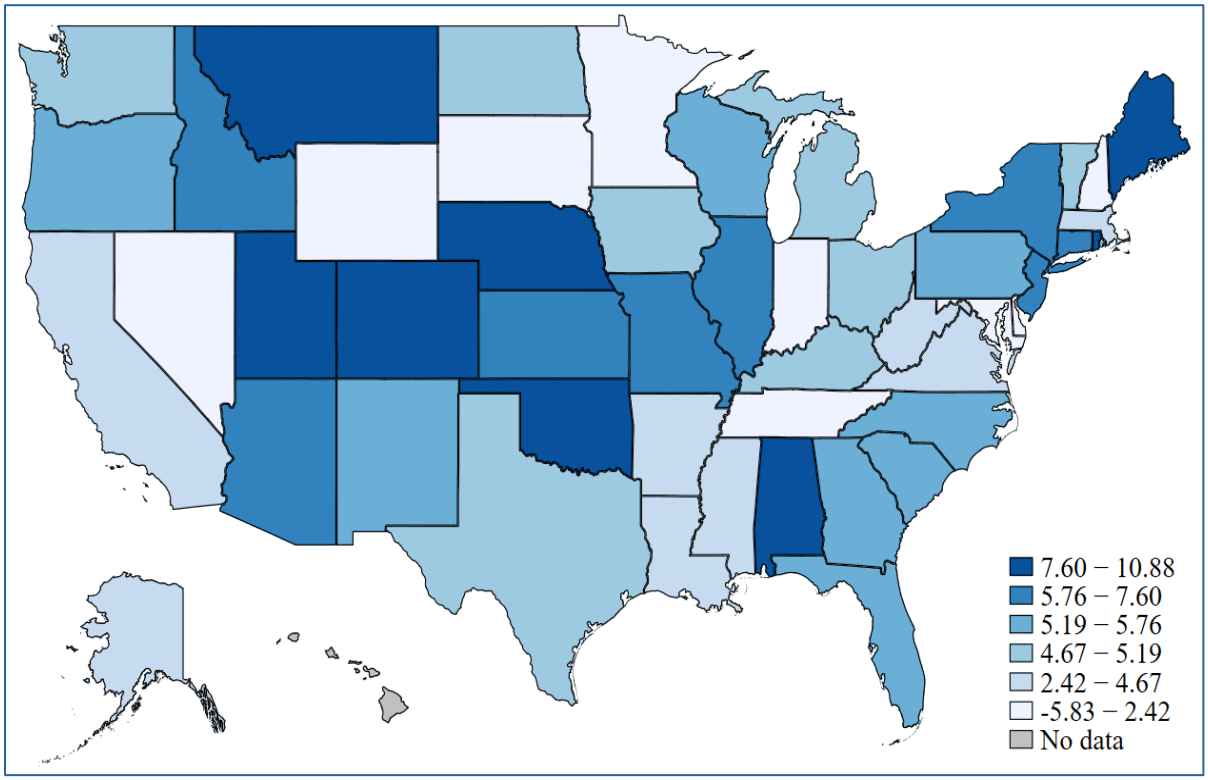


Figure B2

Change in FAFSA completion rate from 2016 to 2017 among districts in middle 10% of the distribution of children in poverty, by state

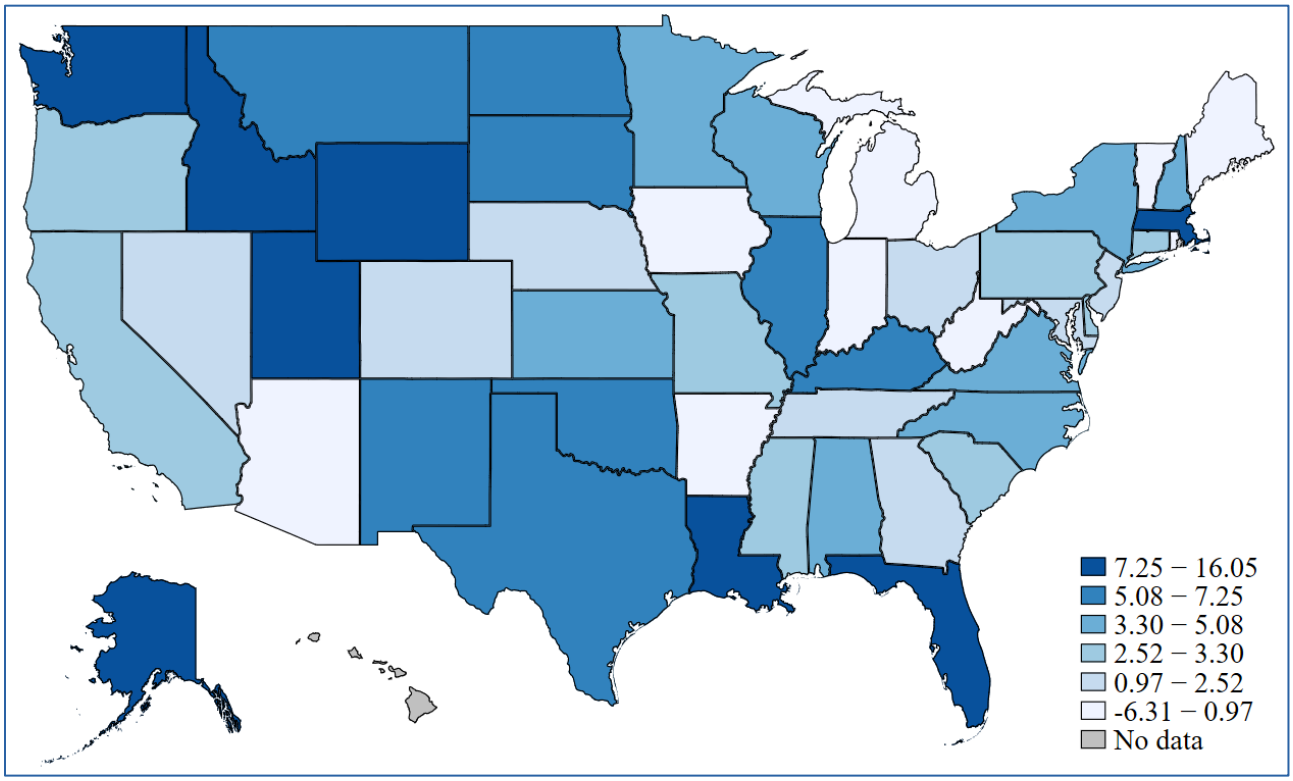
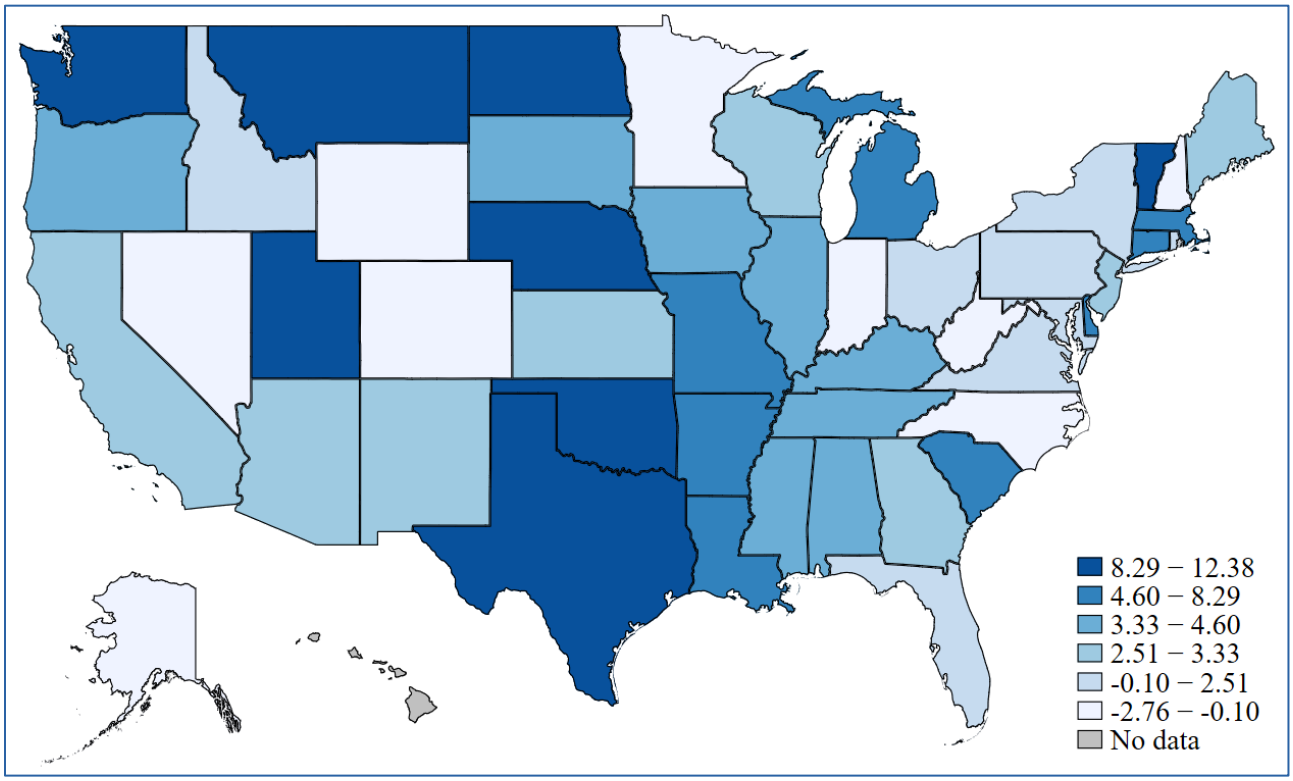
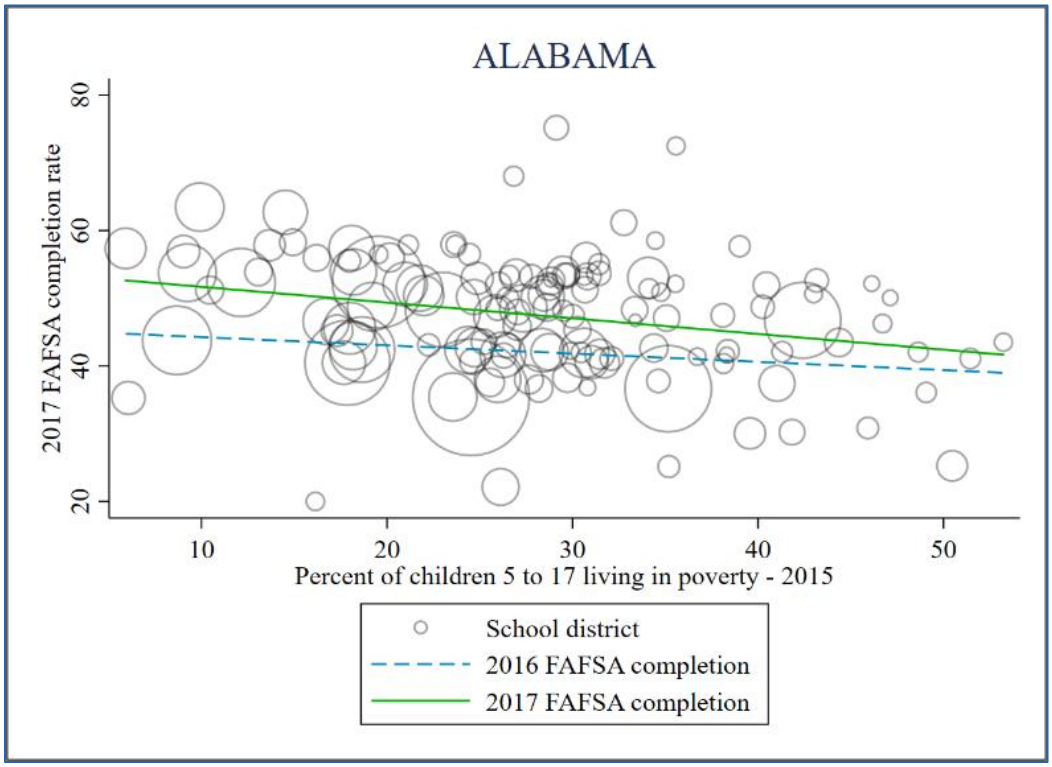


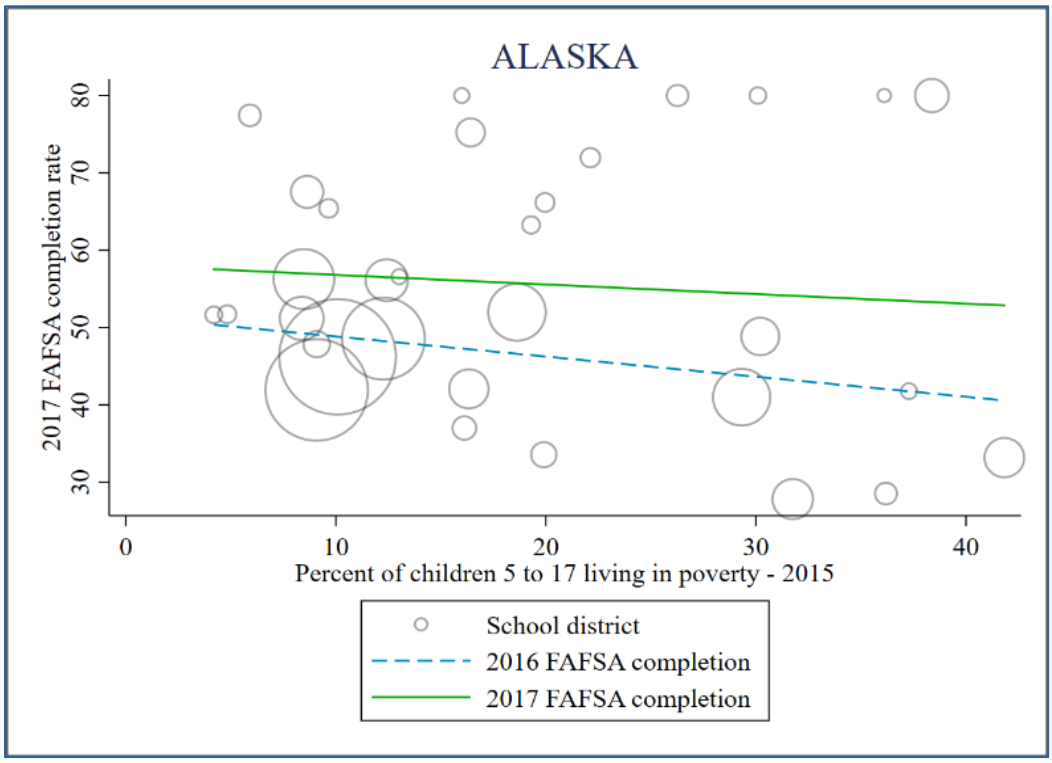
Figure B3

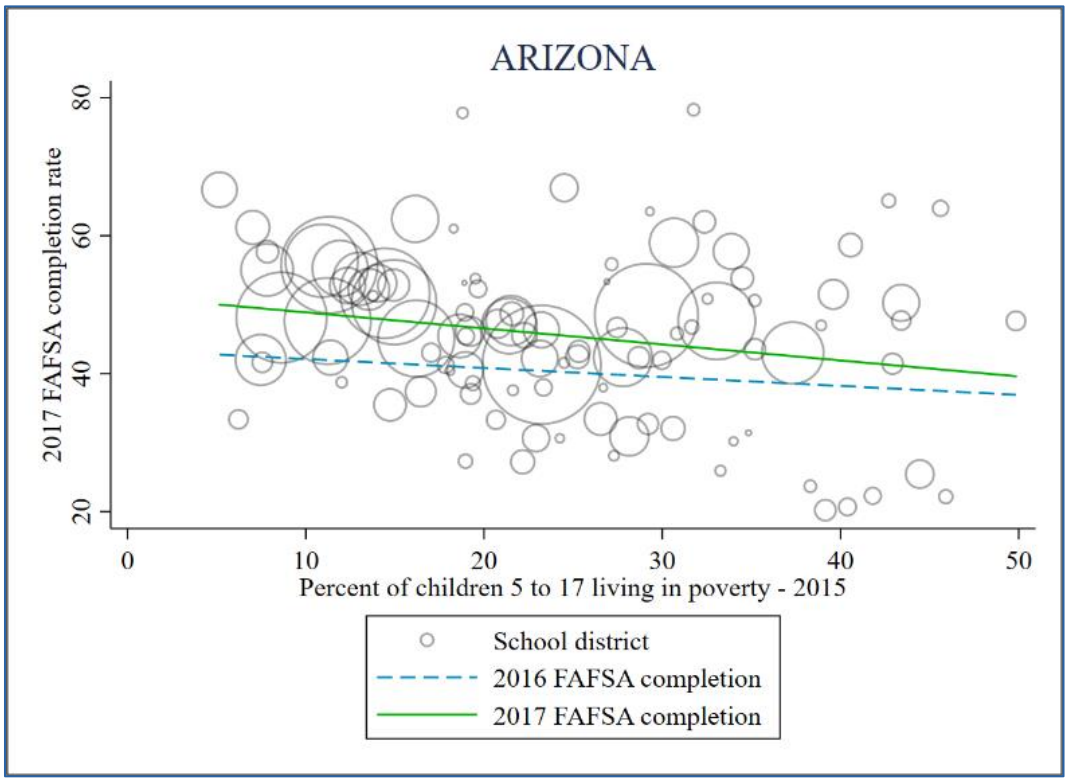
Change in FAFSA completion rate from 2016 to 2017 among districts at or above 90th percentile of children in poverty, by state

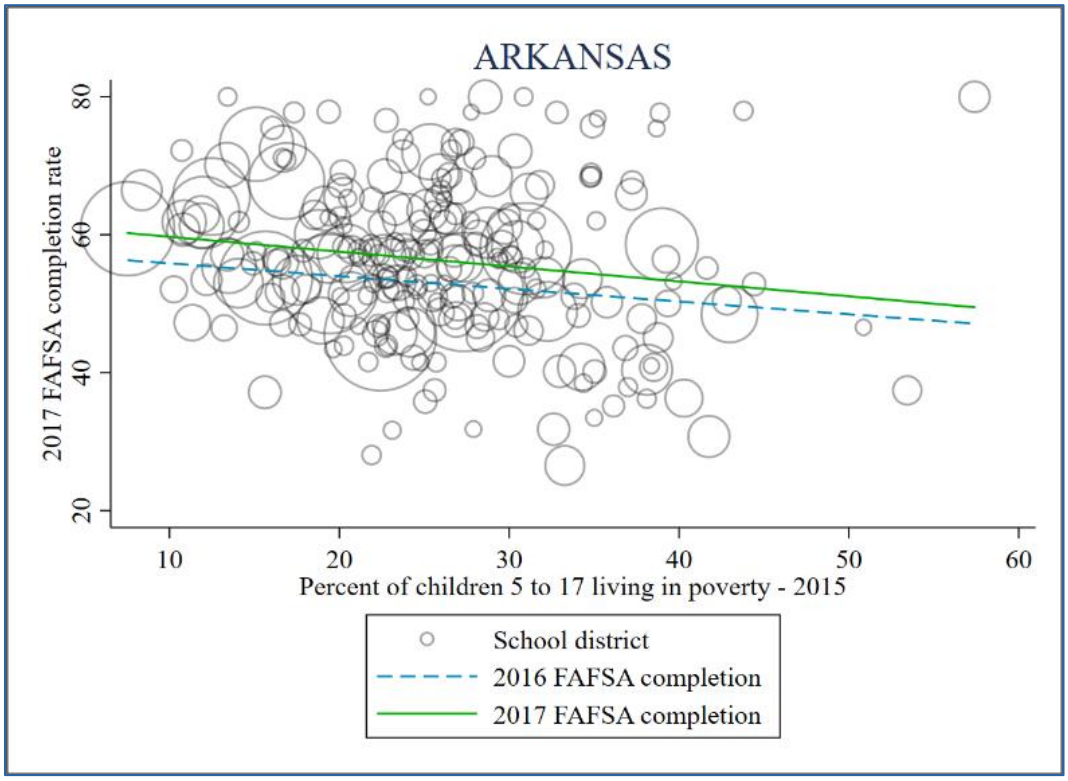


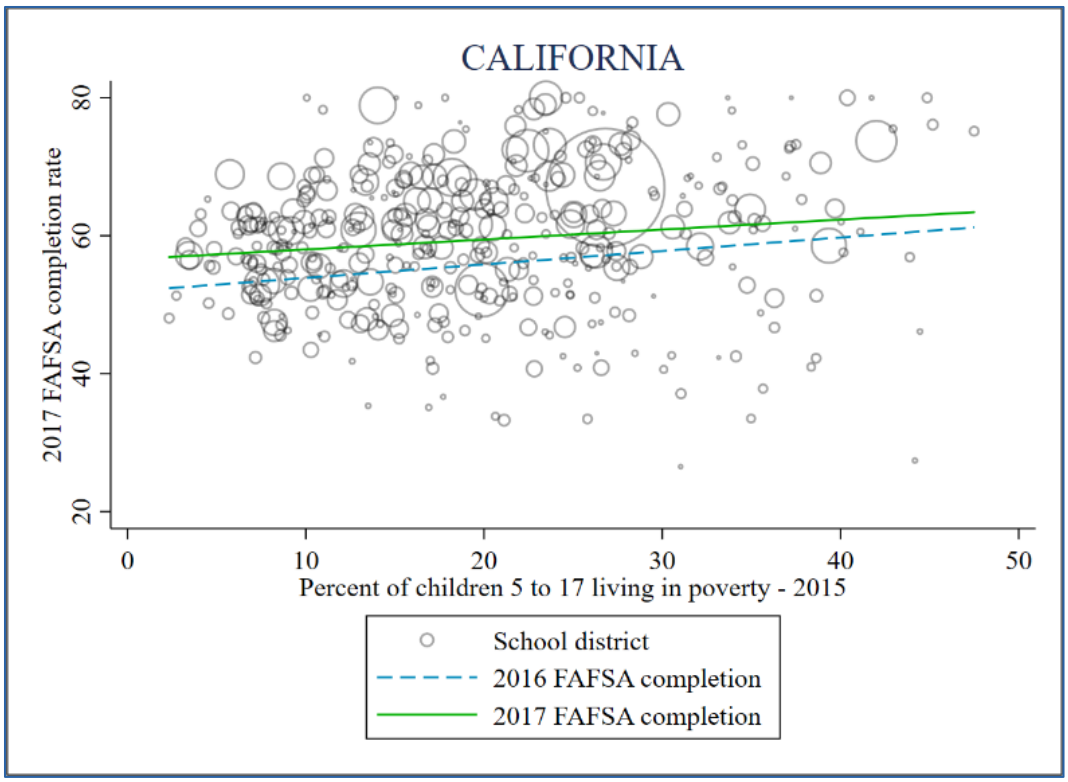
C: Relationship between district-level FAFSA completion rates and the share of children living in poverty, state-by-state

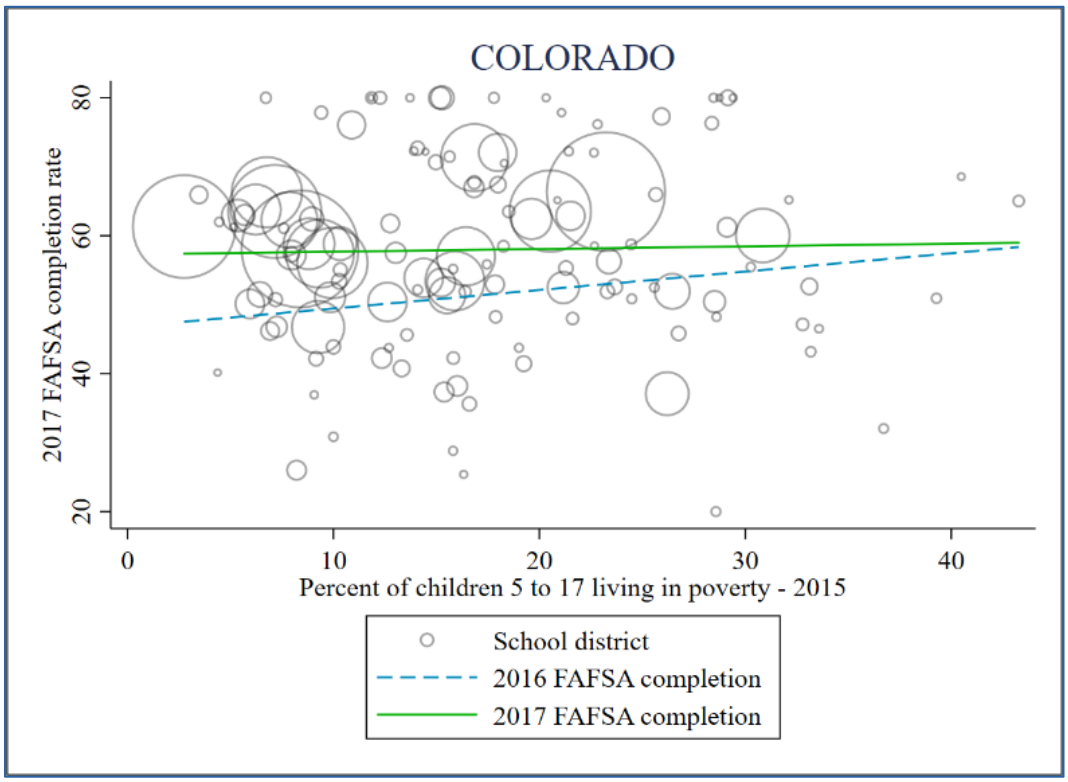


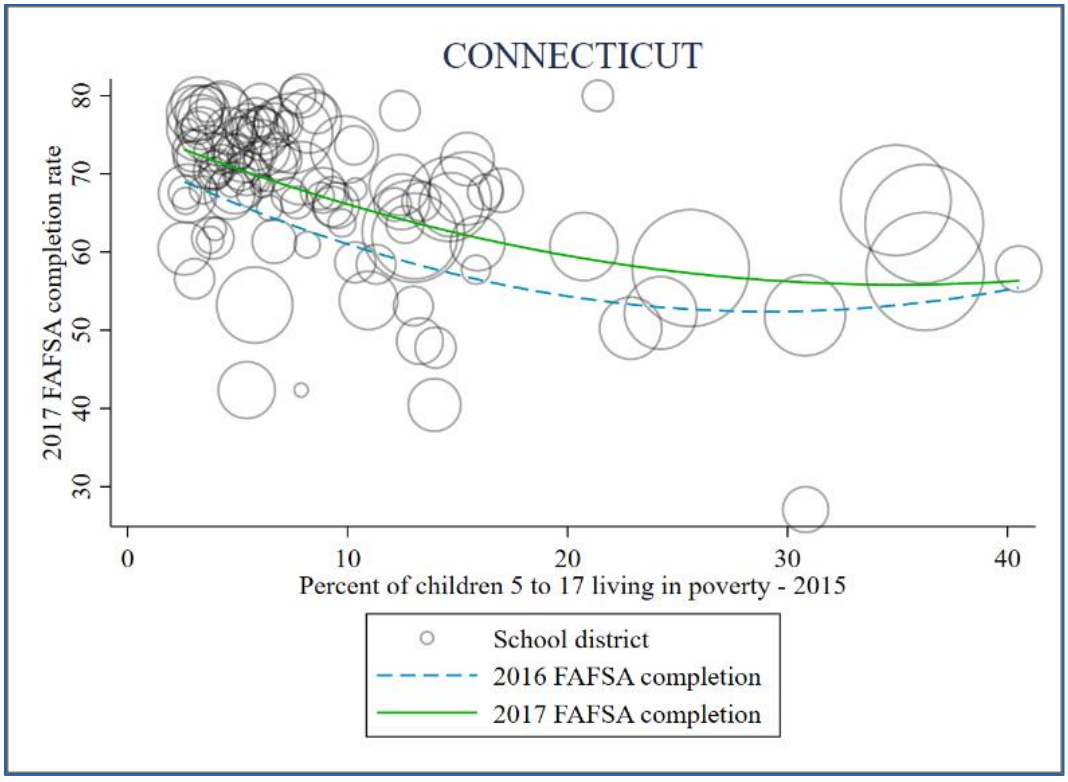



ARIZONA
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


ARKANSAS
2017 FAFSA completion rate
20
40
60
80
10
20
30
40
50
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


CALIFORNIA
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


COLORADO
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


CONNECTICUT
2017 FAFSA completion rate
30
40
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70
80
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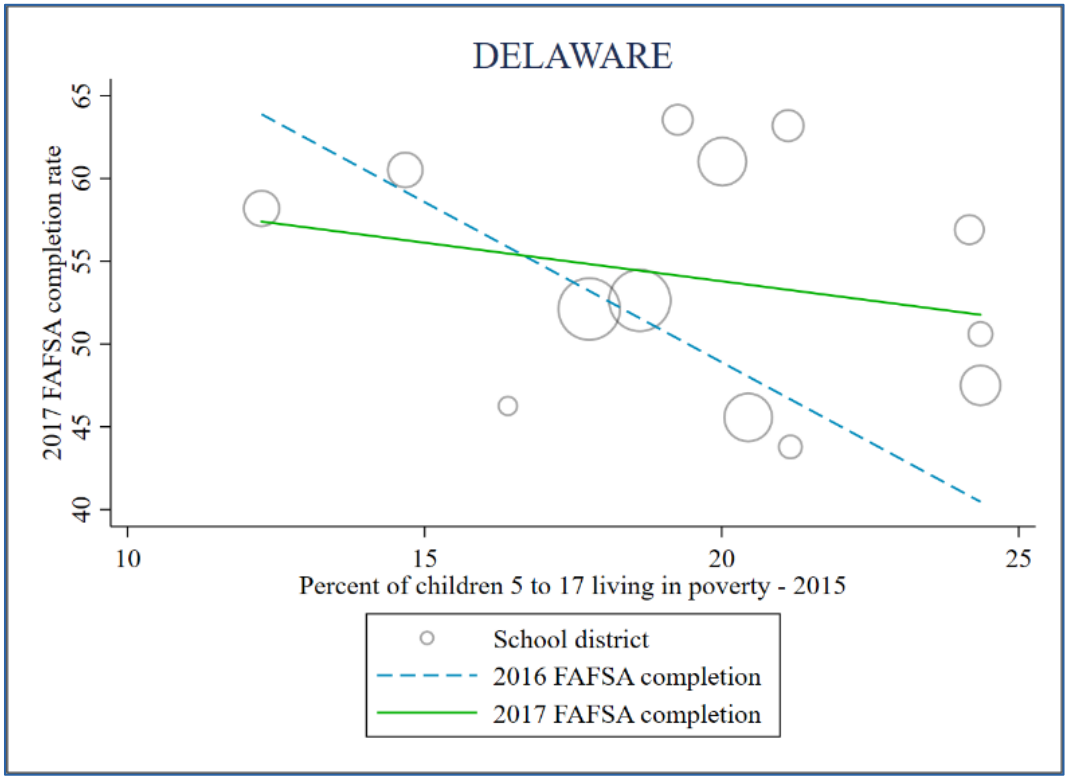
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


DELAWARE
2017 FAFSA completion rate
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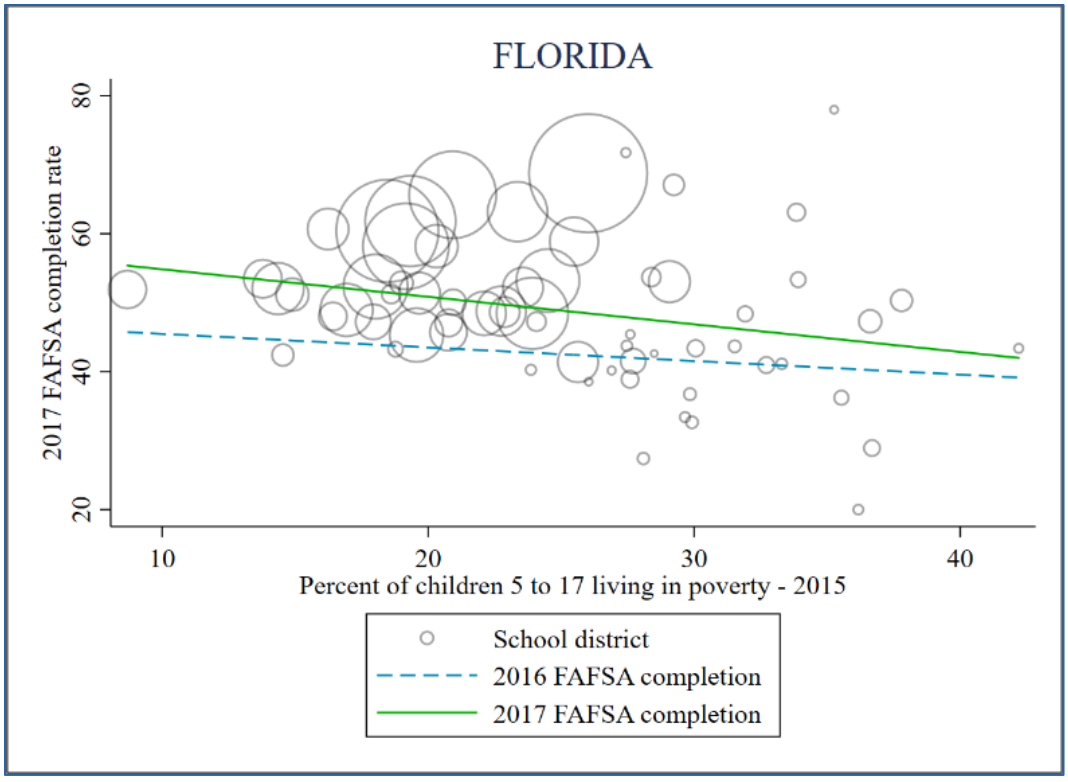
45
50
55
60
65
10
15
20
25
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


FLORIDA
2017 FAFSA completion rate
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60
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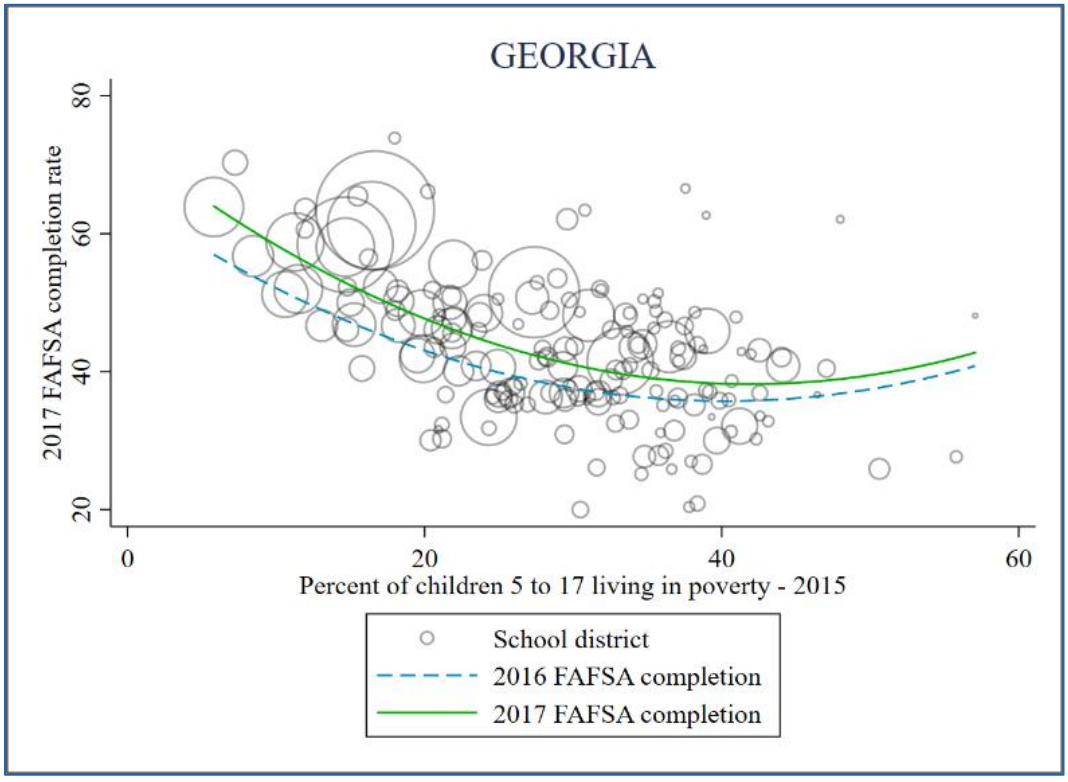
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


GEORGIA
2017 FAFSA completion rate
20
40
60
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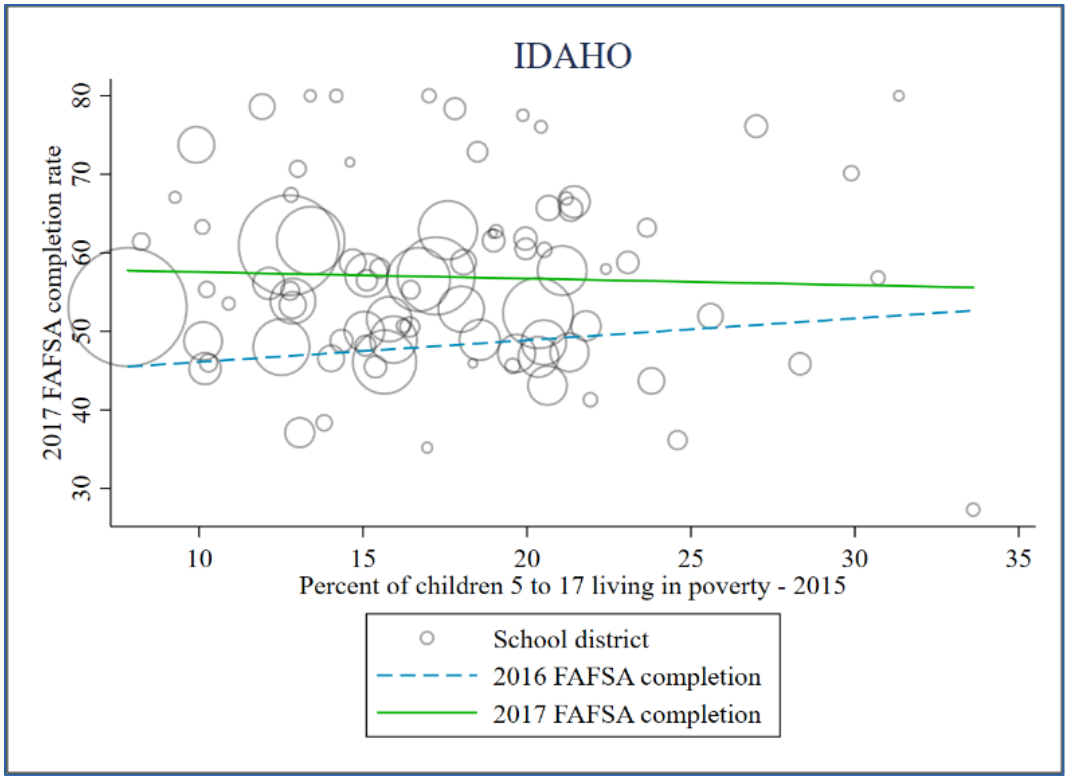
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


IDAHO
2017 FAFSA completion rate
30
40
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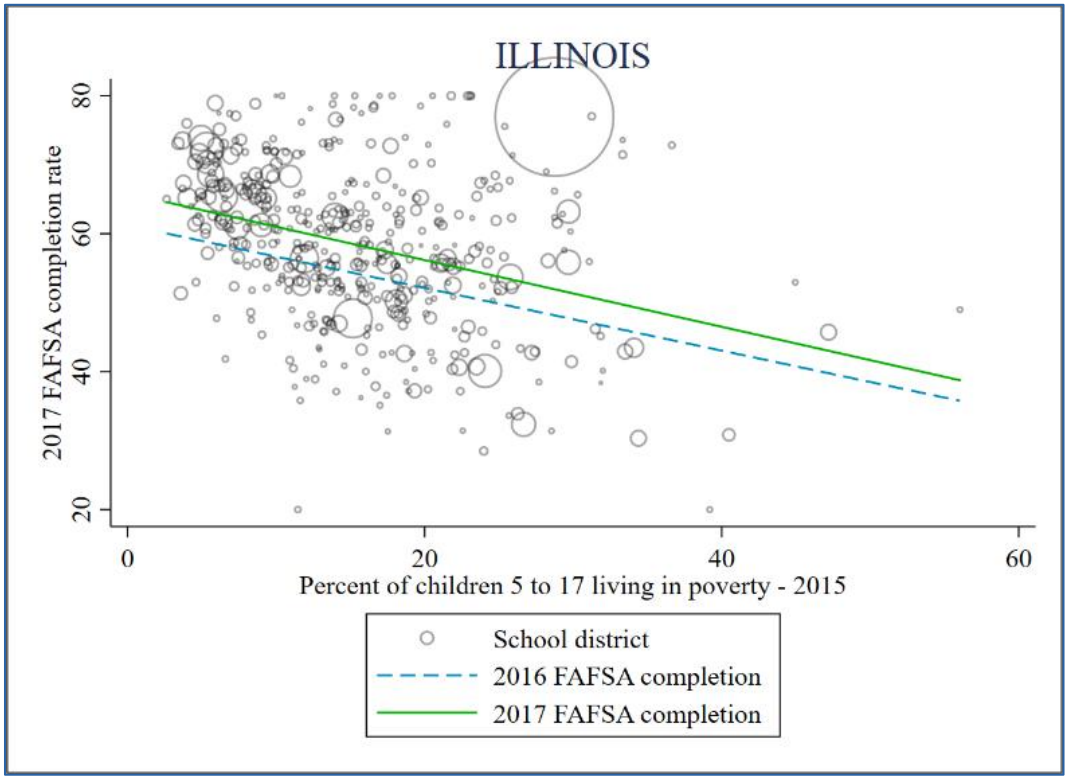
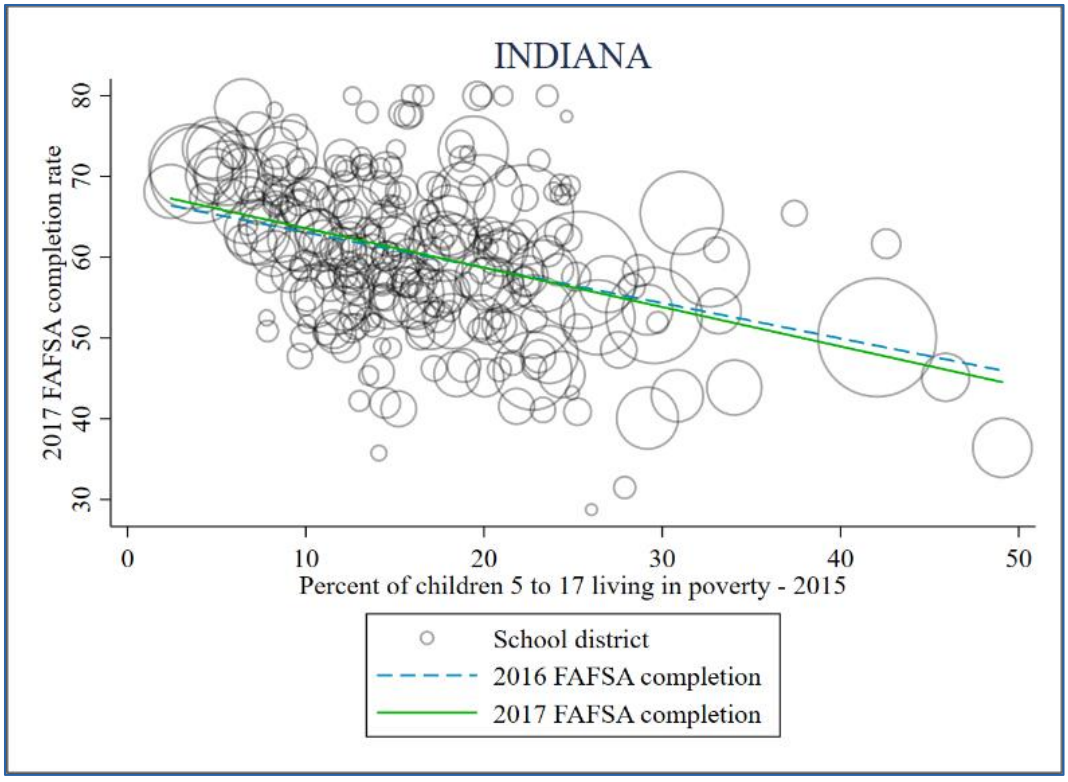
30
35
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


ILLINOIS
2017 FAFSA completion rate
20
40
60
80
0
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


INDIANA
2017 FAFSA completion rate
30
40
50
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70
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0
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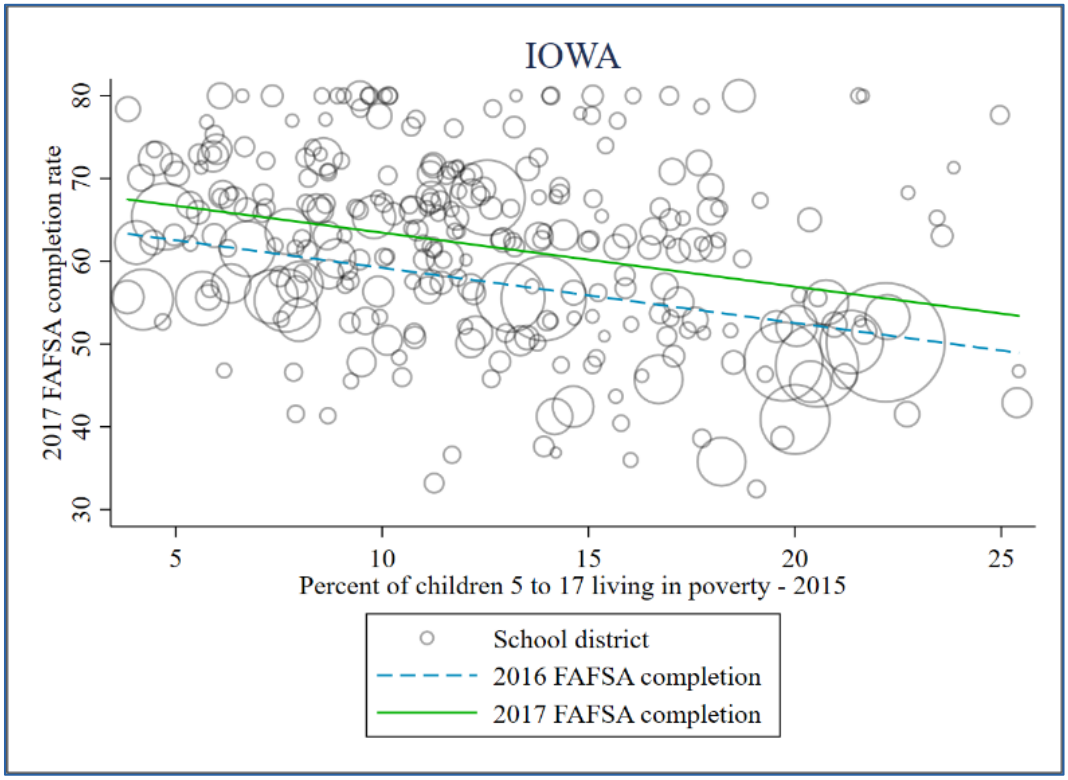
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


IOWA
2017 FAFSA completion rate
30
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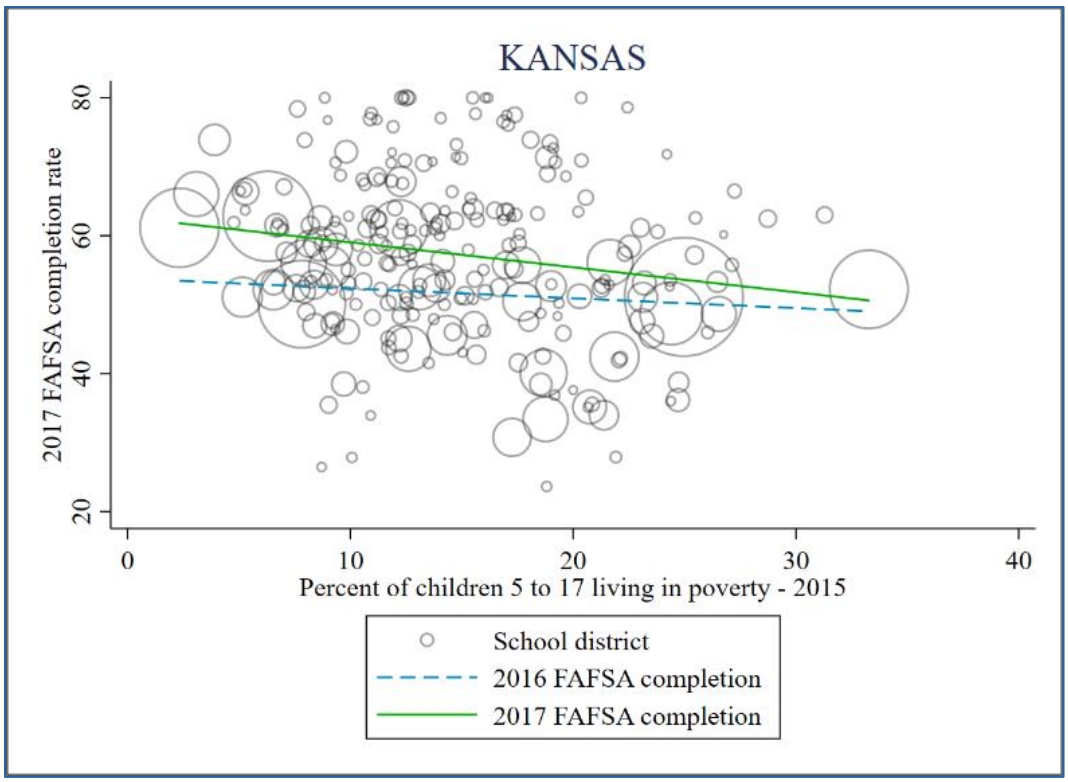
25
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


KANSAS
2017 FAFSA completion rate
20
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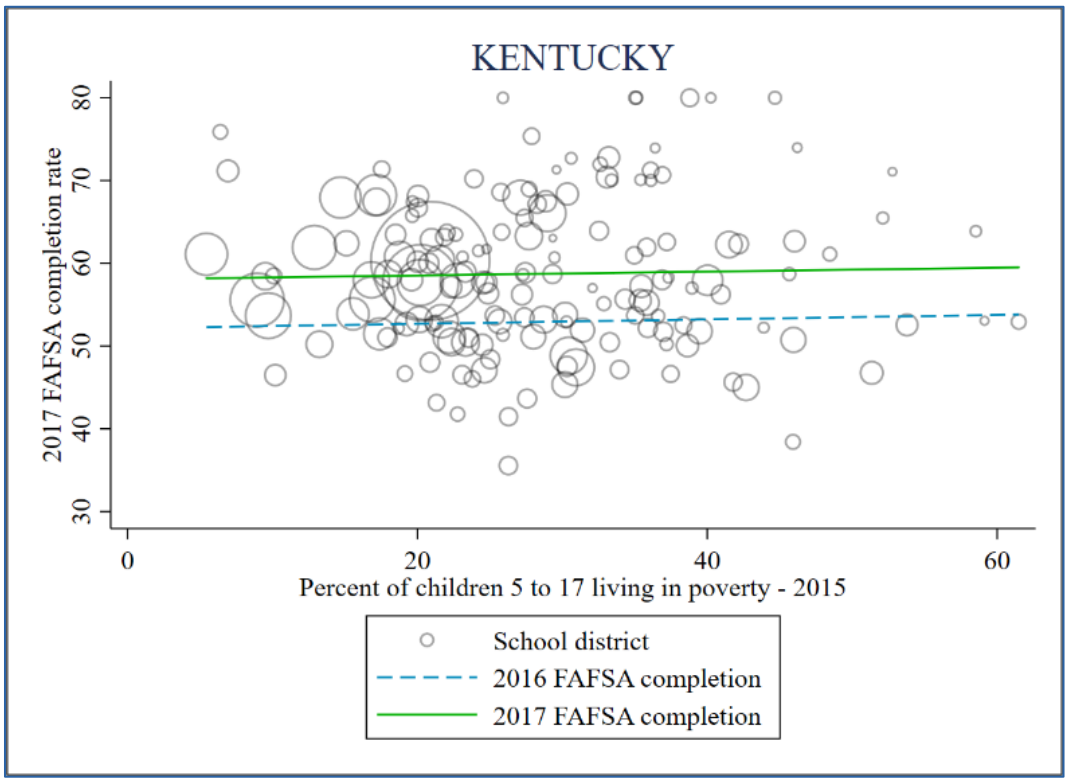
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


KENTUCKY
2017 FAFSA completion rate
30
40
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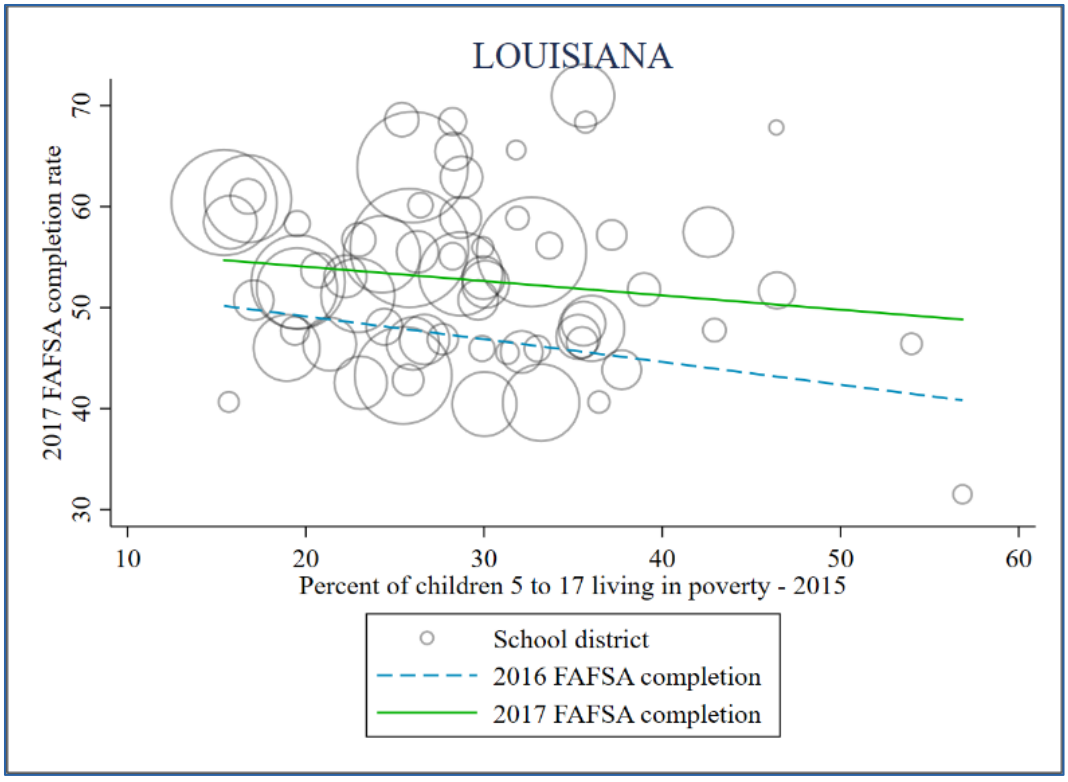
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


LOUISIANA
2017 FAFSA completion rate
30
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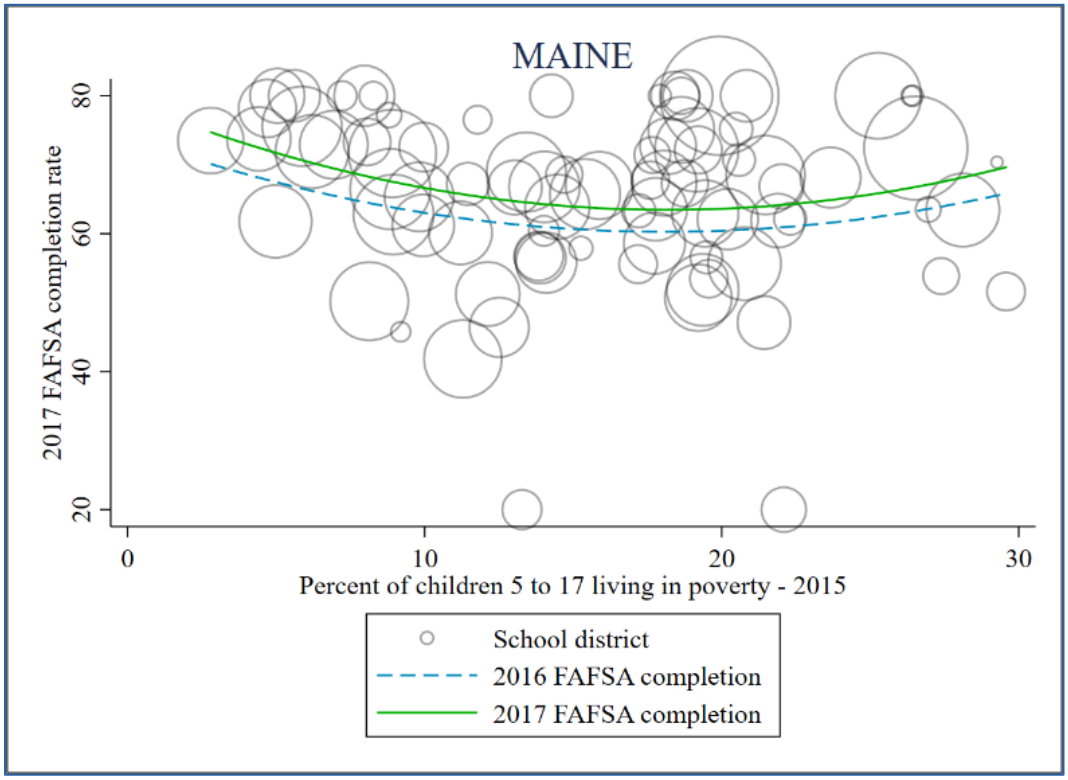
50
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MAINE
2017 FAFSA completion rate
20
40
60
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0
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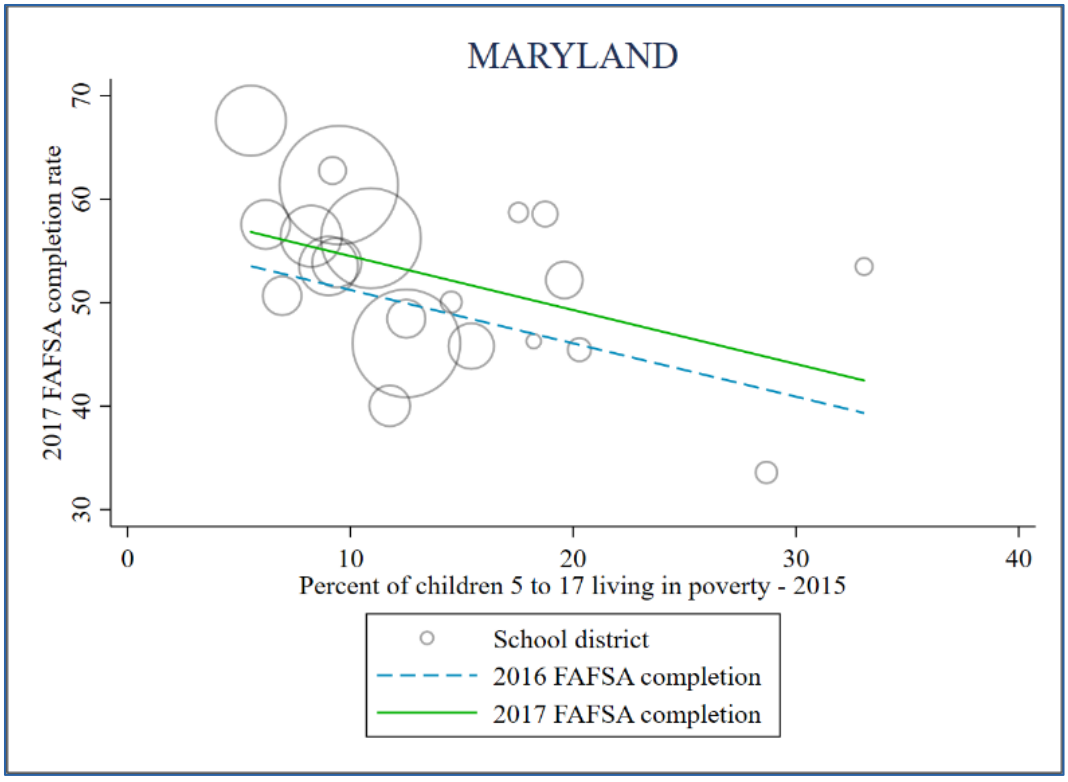
20
30
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MARYLAND
2017 FAFSA completion rate
30
40
50
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70
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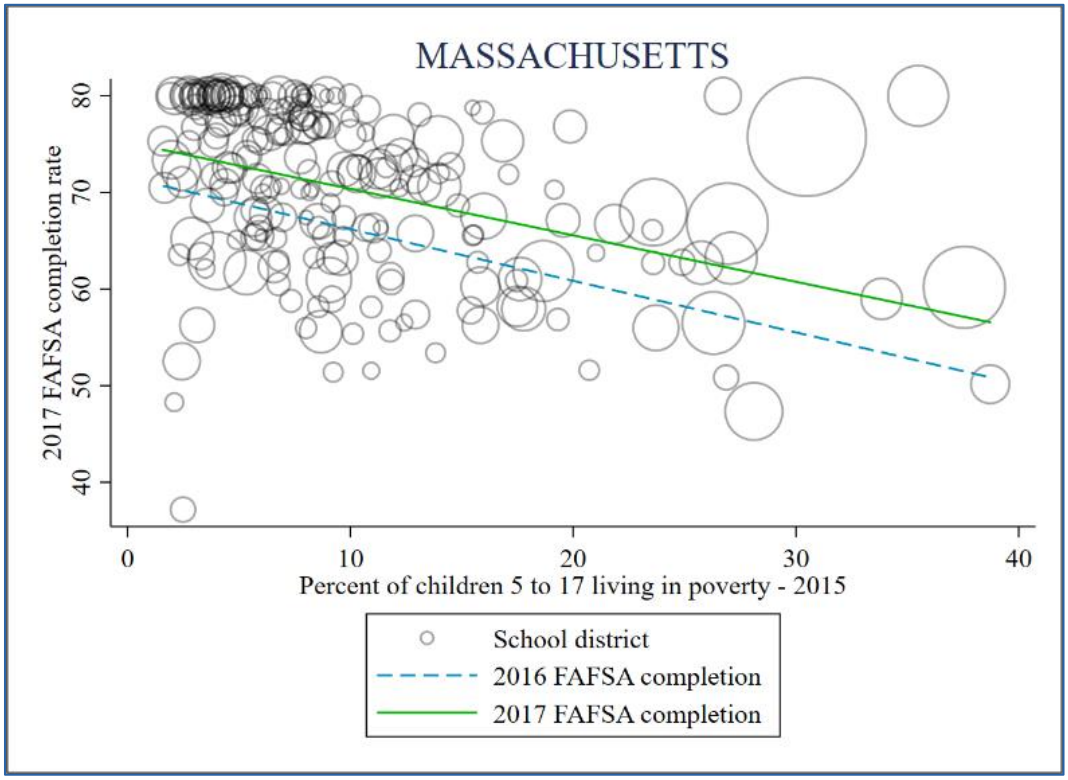
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MASSACHUSETTS
2017 FAFSA completion rate
40
50
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70
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20
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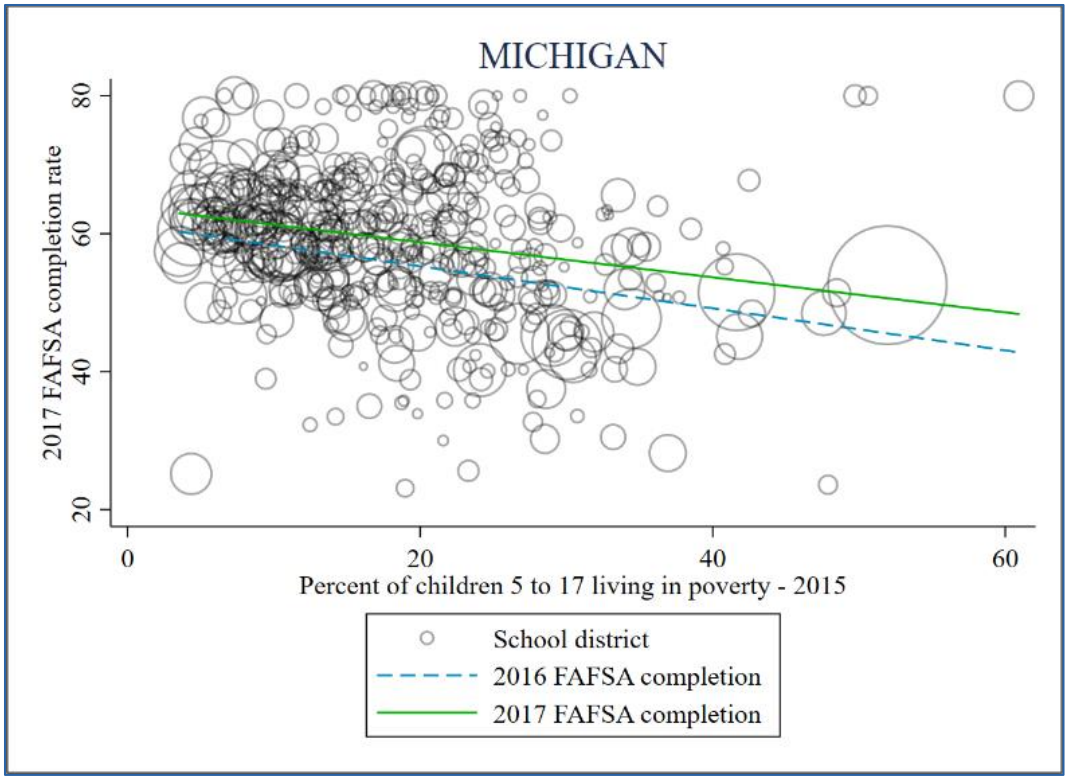
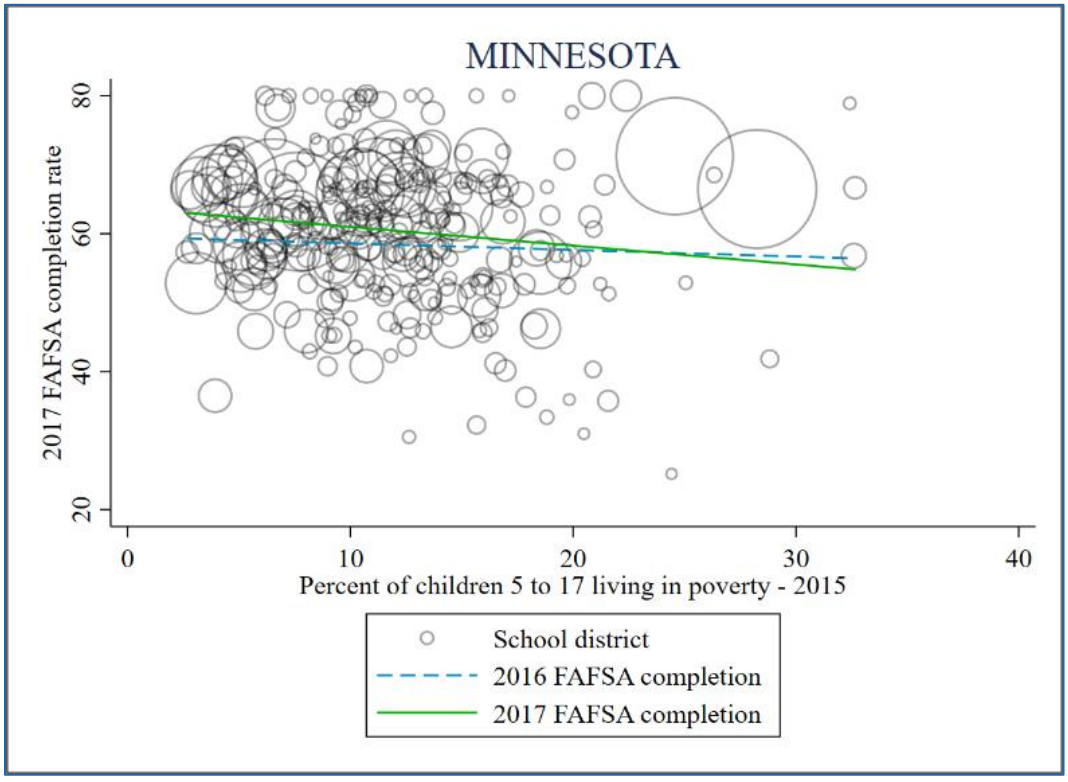
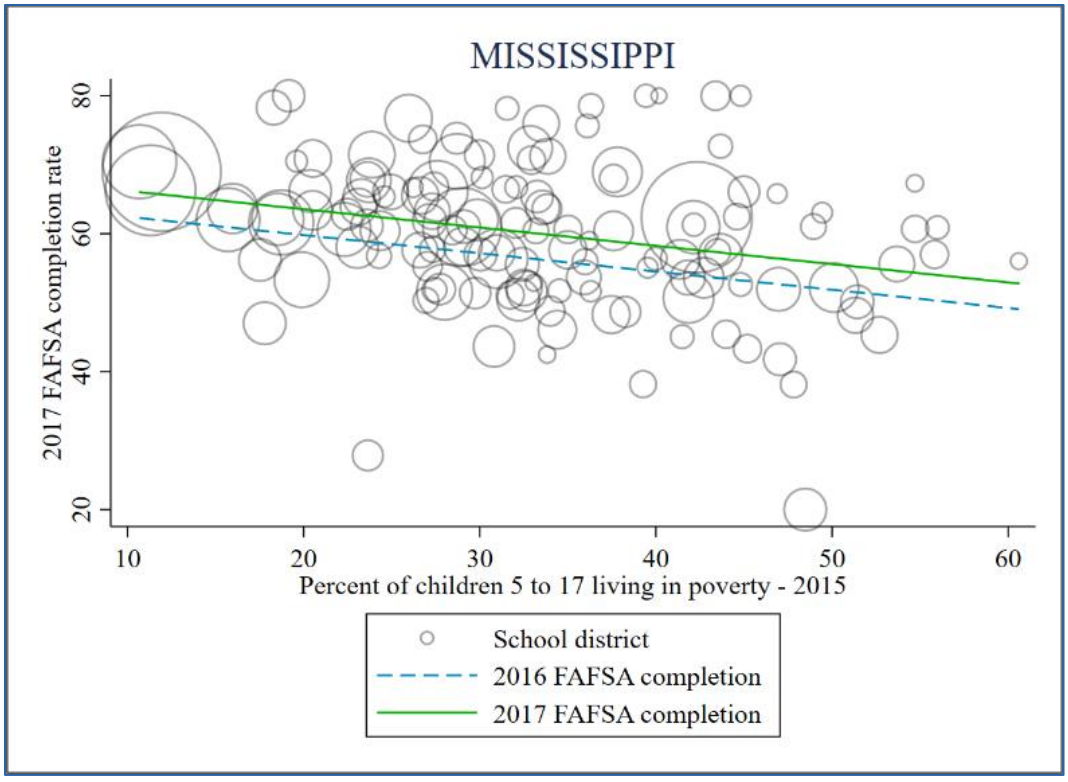
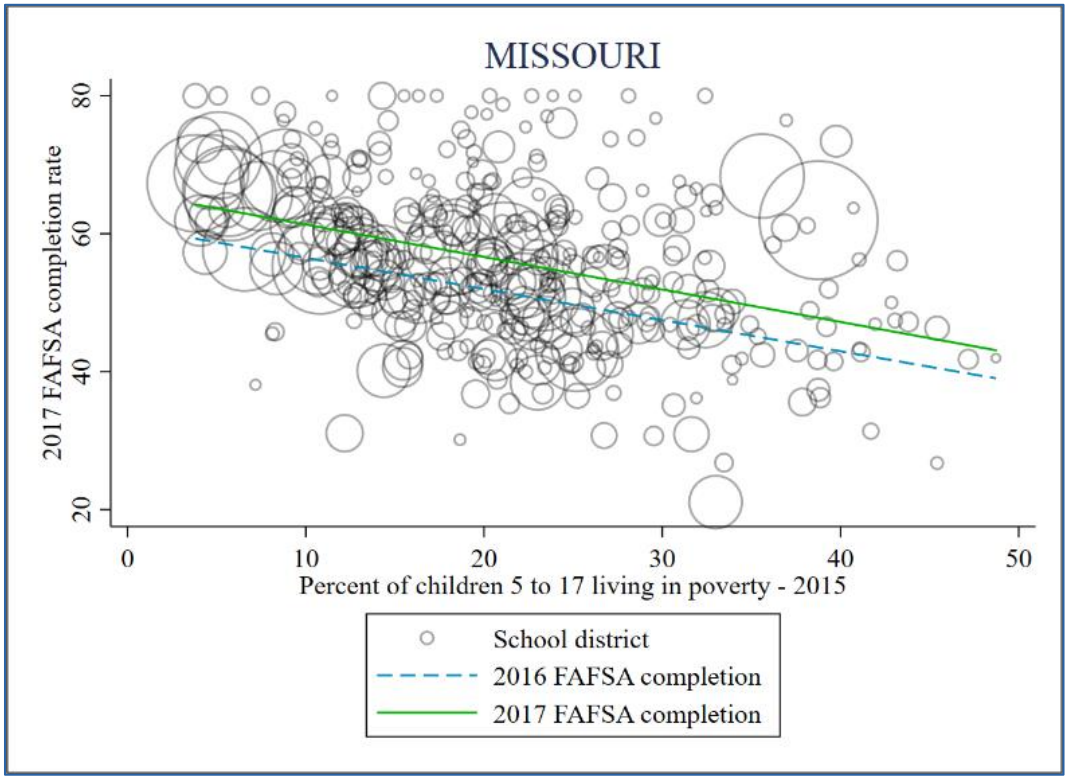
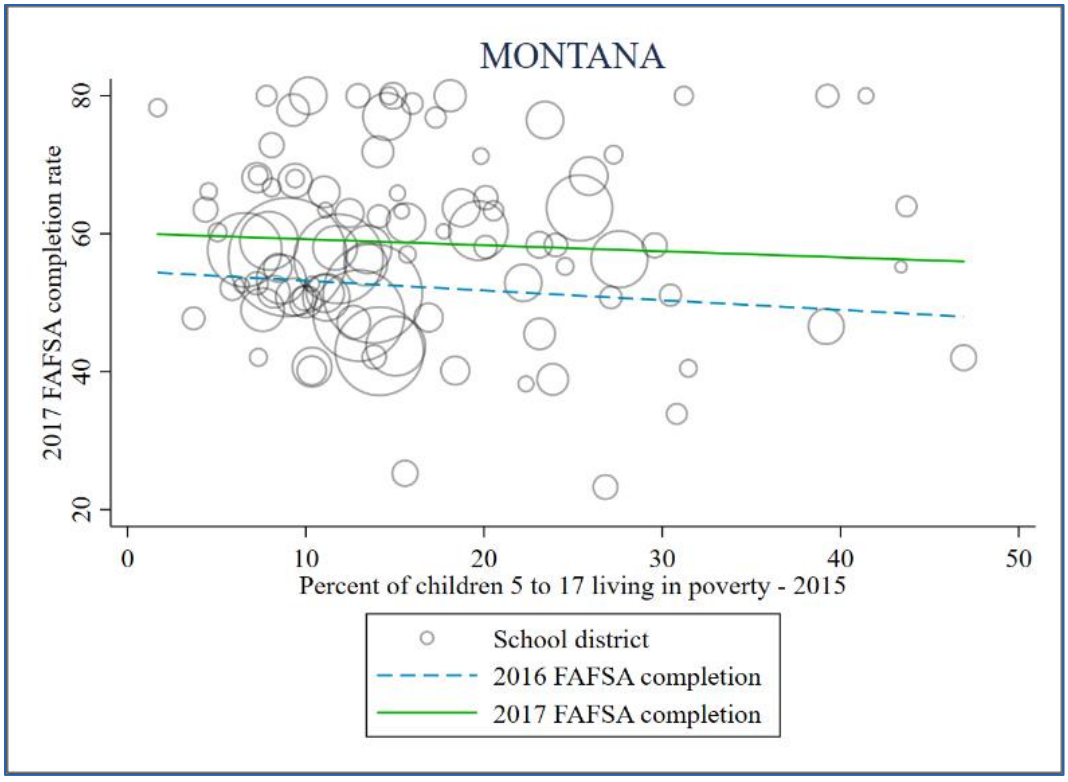
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MICHIGAN
2017 FAFSA completion rate
20
40
60
80
0
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MINNESOTA
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MISSISSIPPI
2017 FAFSA completion rate
20
40
60
80
10
20
30
40
50
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MISSOURI
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


MONTANA
2017 FAFSA completion rate
20
40
60
80
0
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20
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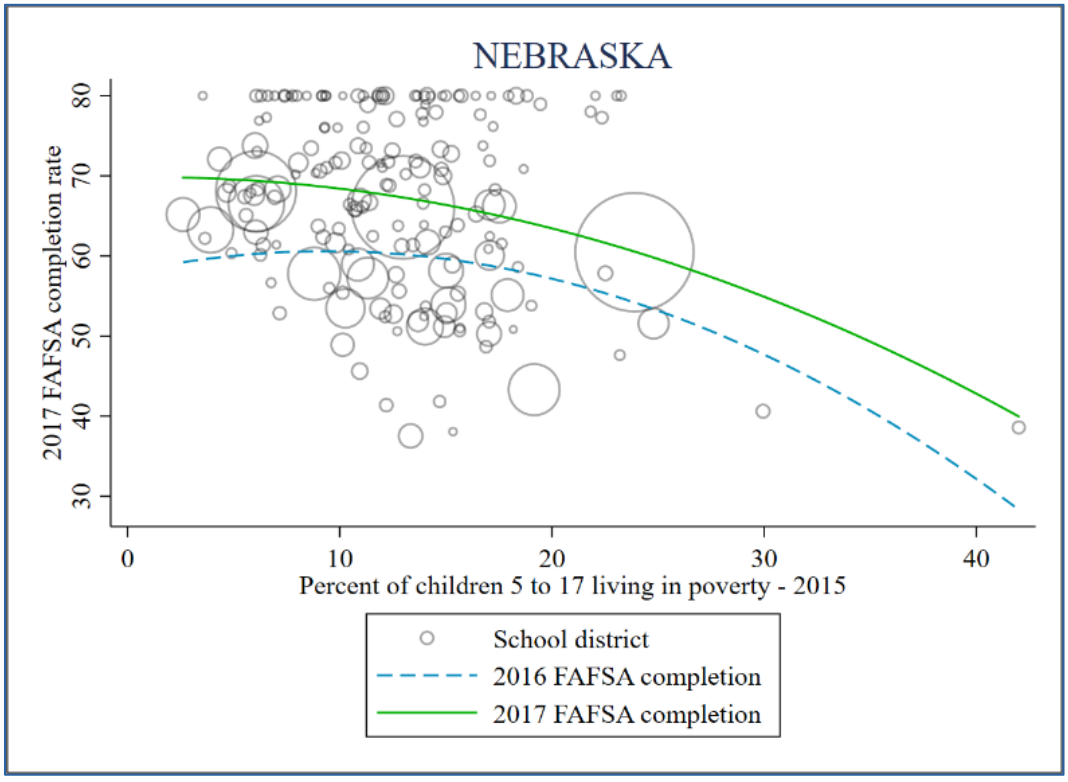
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEBRASKA
2017 FAFSA completion rate
30
40
50
60
70
80
0
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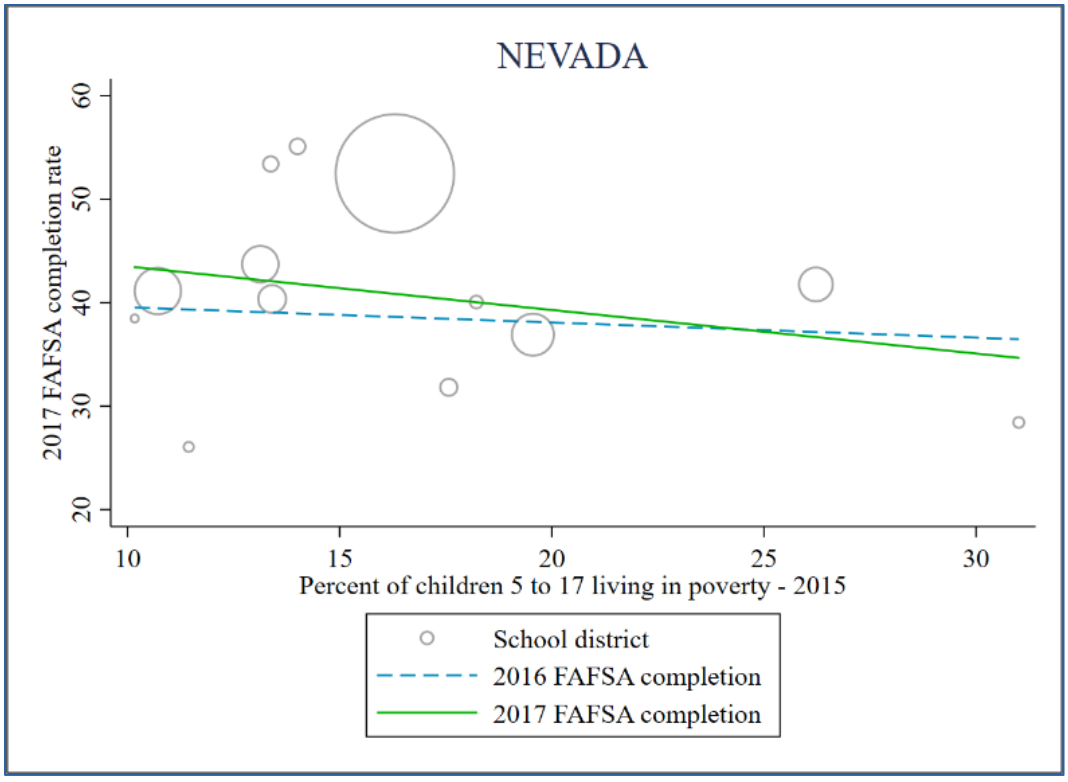
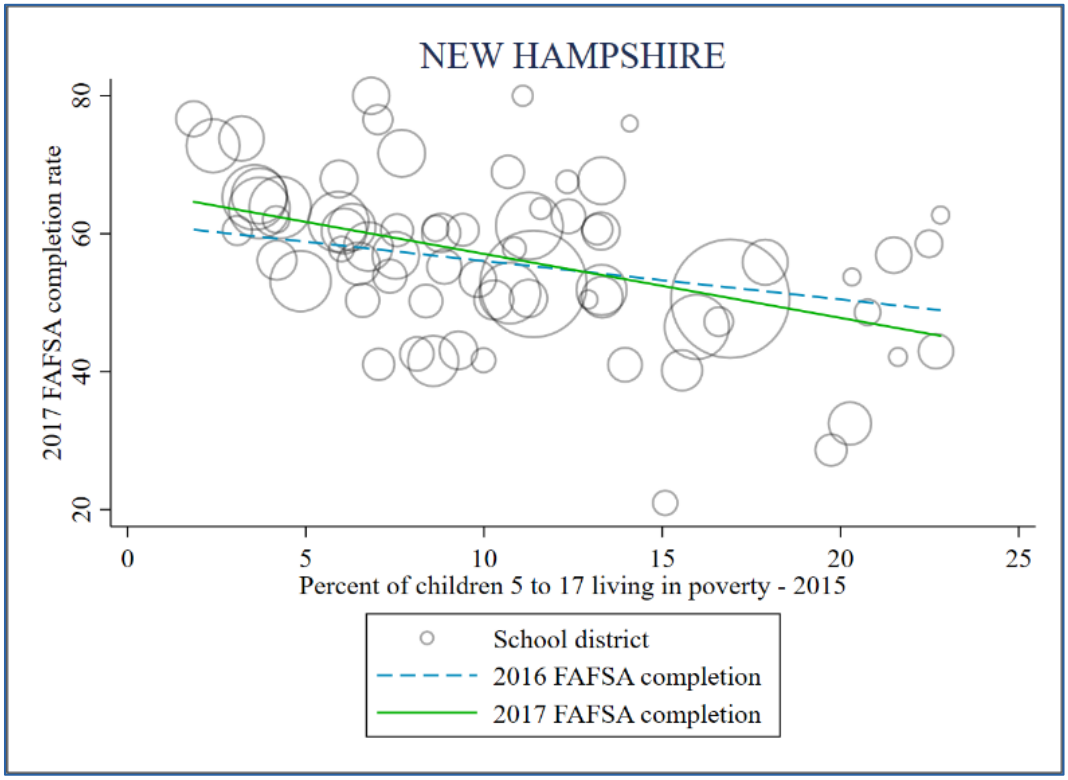
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEVADA
2017 FAFSA completion rate
20
30
40
50
60
10
15
20
25
30
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEW HAMPSHIRE
2017 FAFSA completion rate
20
40
60
80
0
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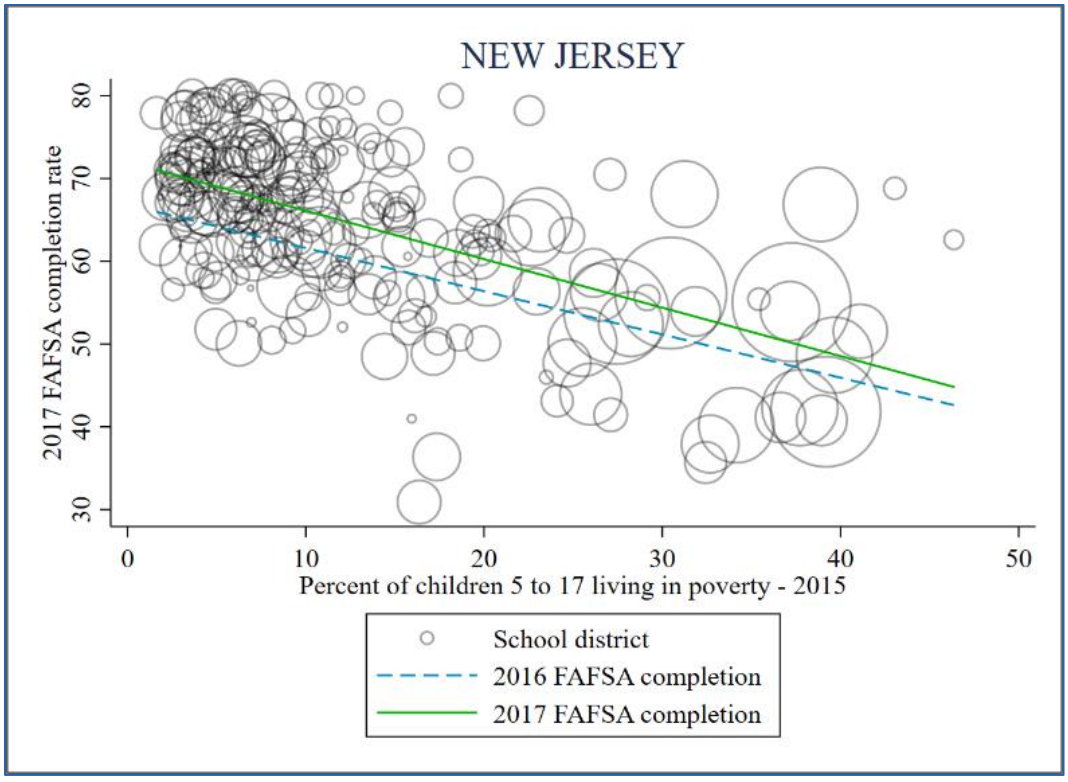
20
25
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEW JERSEY
2017 FAFSA completion rate
30
40
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70
80
0
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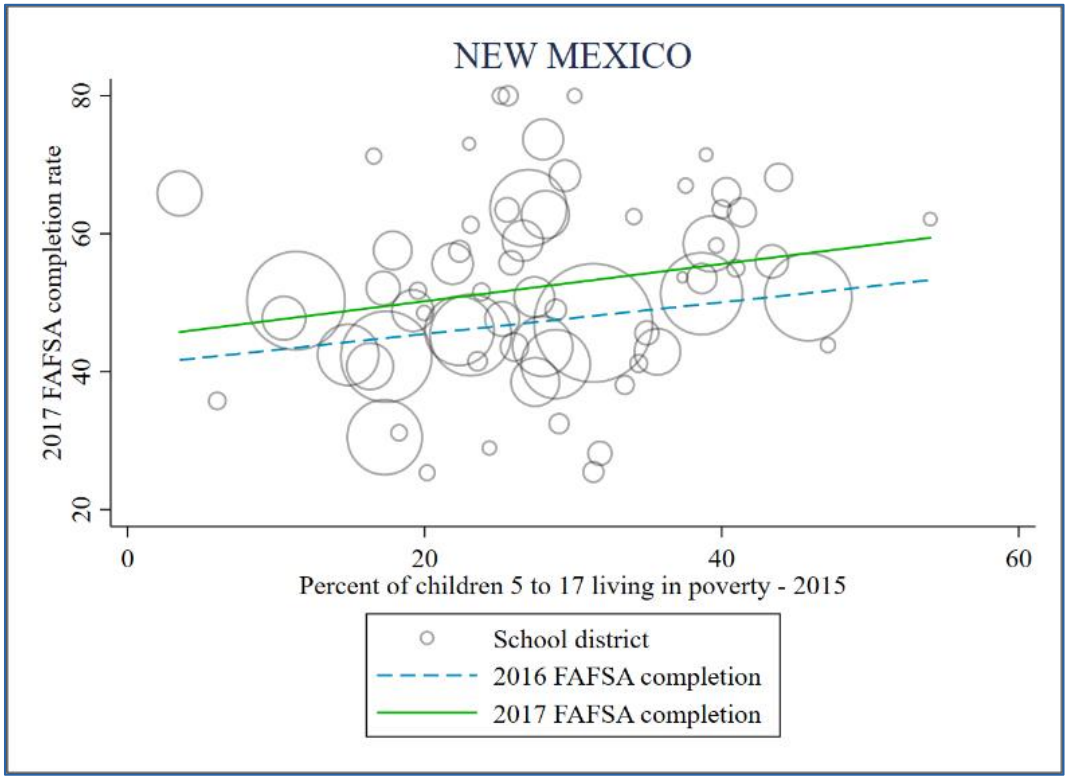
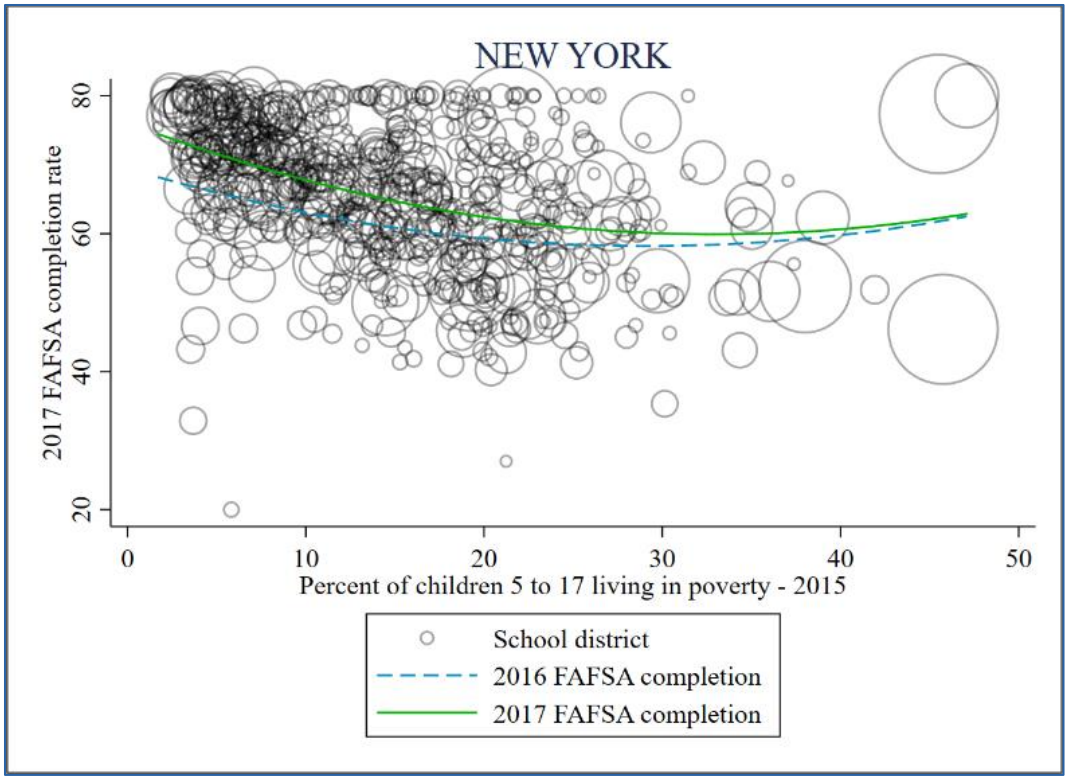
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEW MEXICO
2017 FAFSA completion rate
20
40
60
80
0
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NEW YORK
2017 FAFSA completion rate
20
40
60
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0
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20
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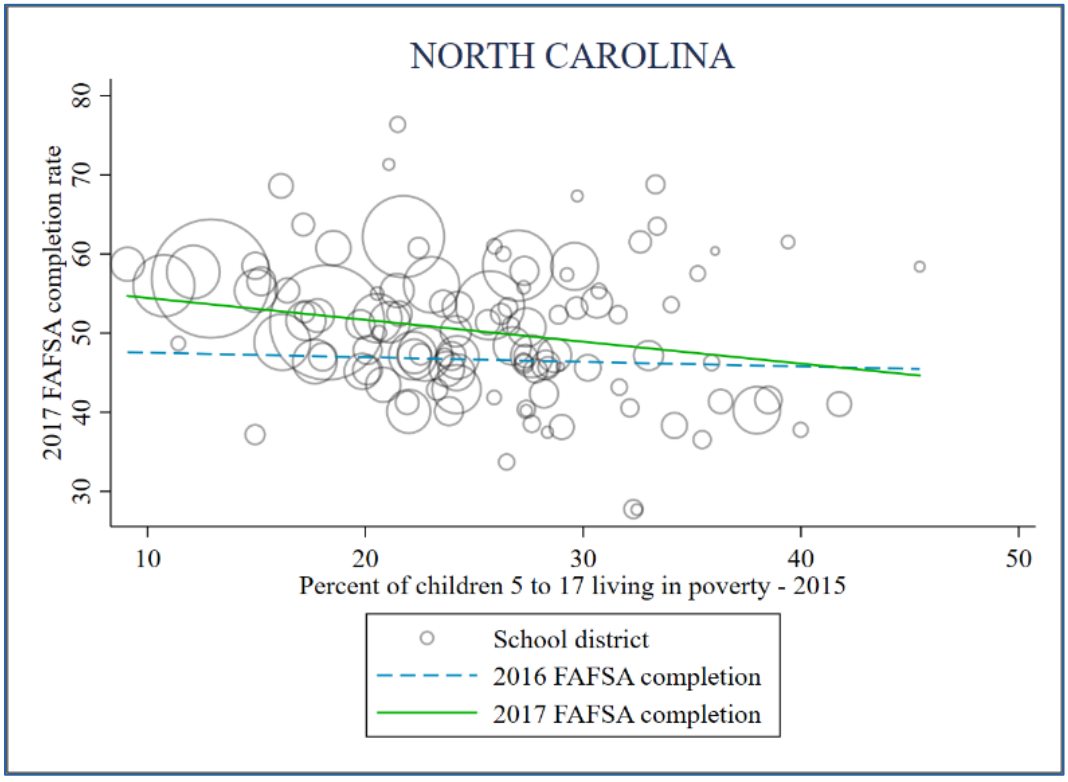
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NORTH CAROLINA
2017 FAFSA completion rate
30
40
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60
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80
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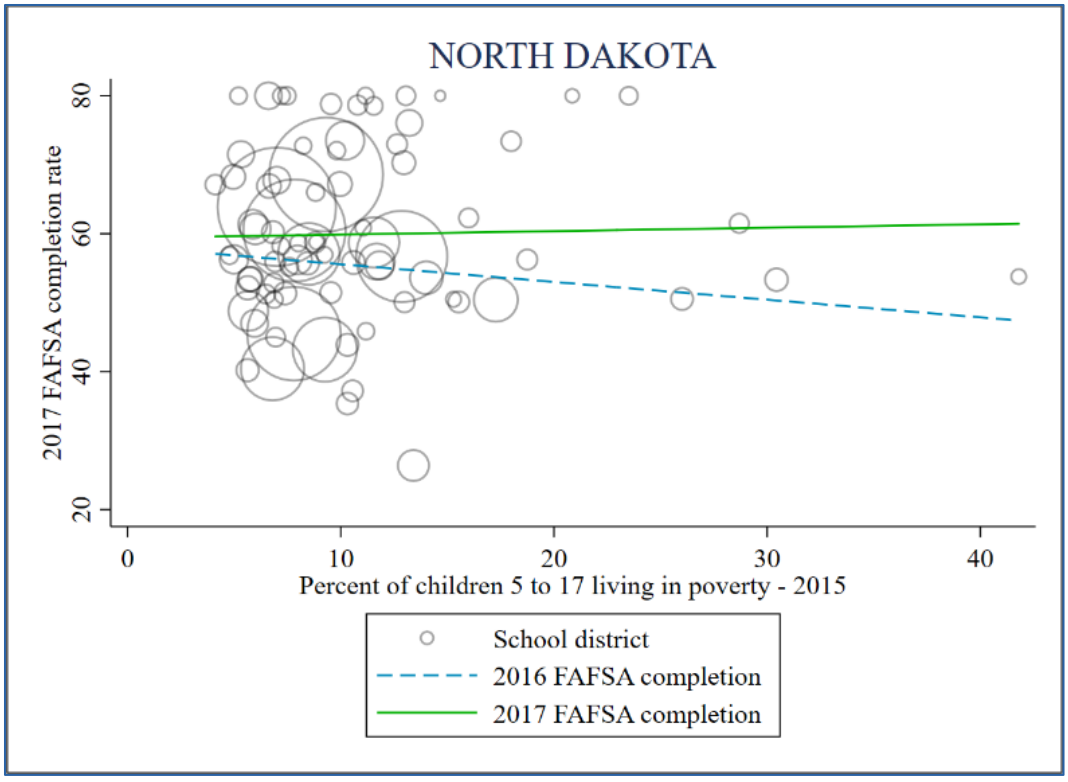
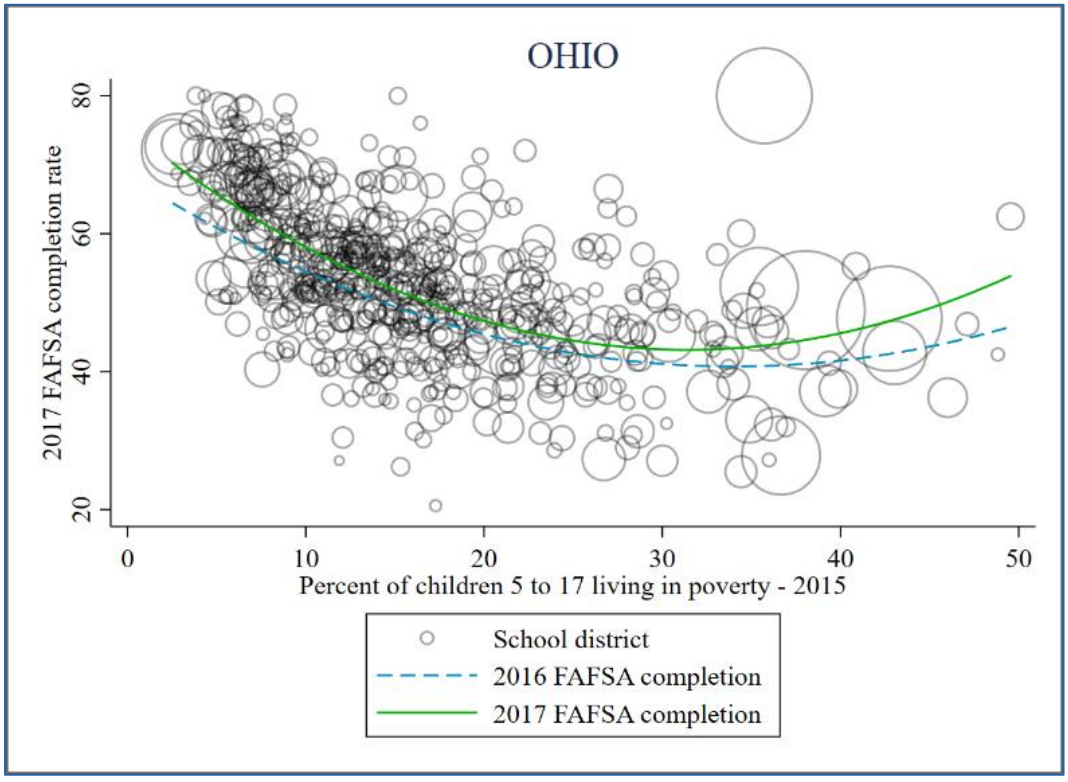
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


NORTH DAKOTA
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


OHIO
2017 FAFSA completion rate
20
40
60
80
0
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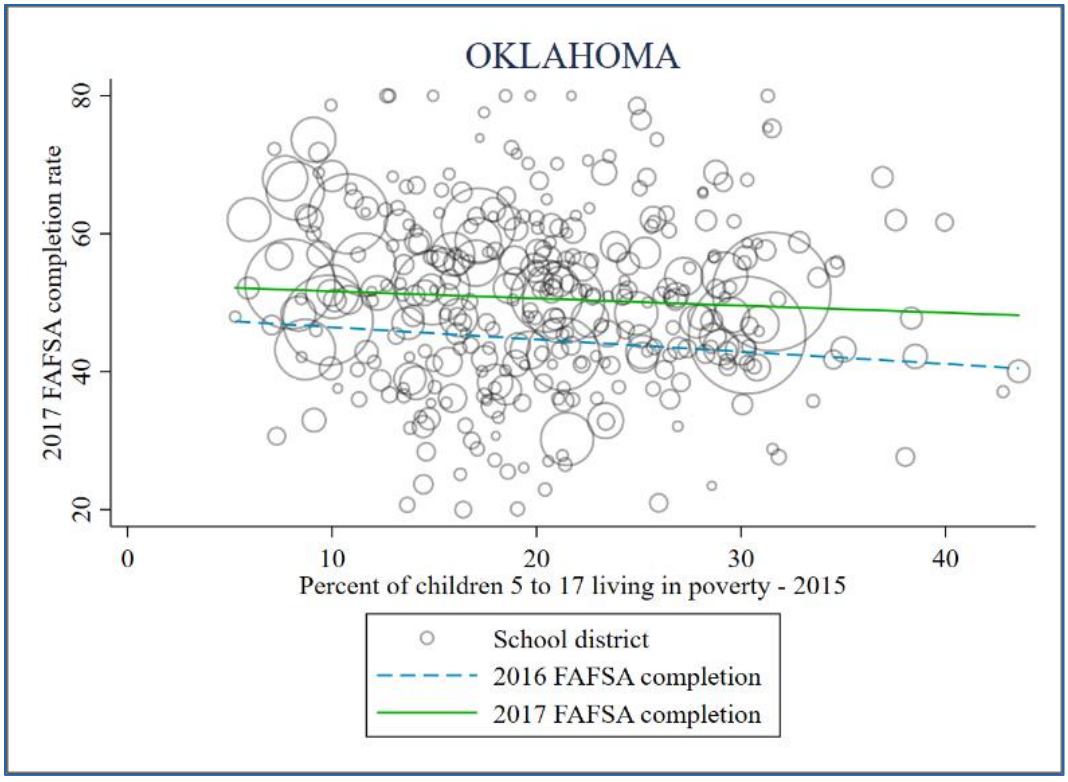
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


OKLAHOMA
2017 FAFSA completion rate
20
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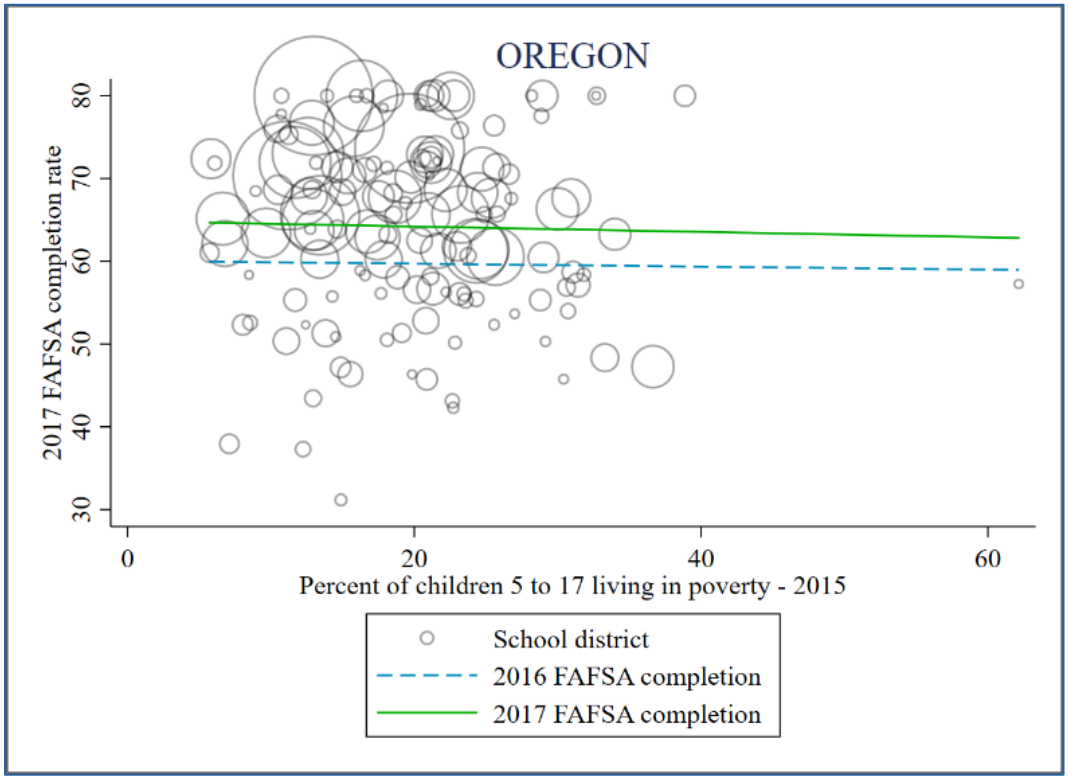
60
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


OREGON
2017 FAFSA completion rate
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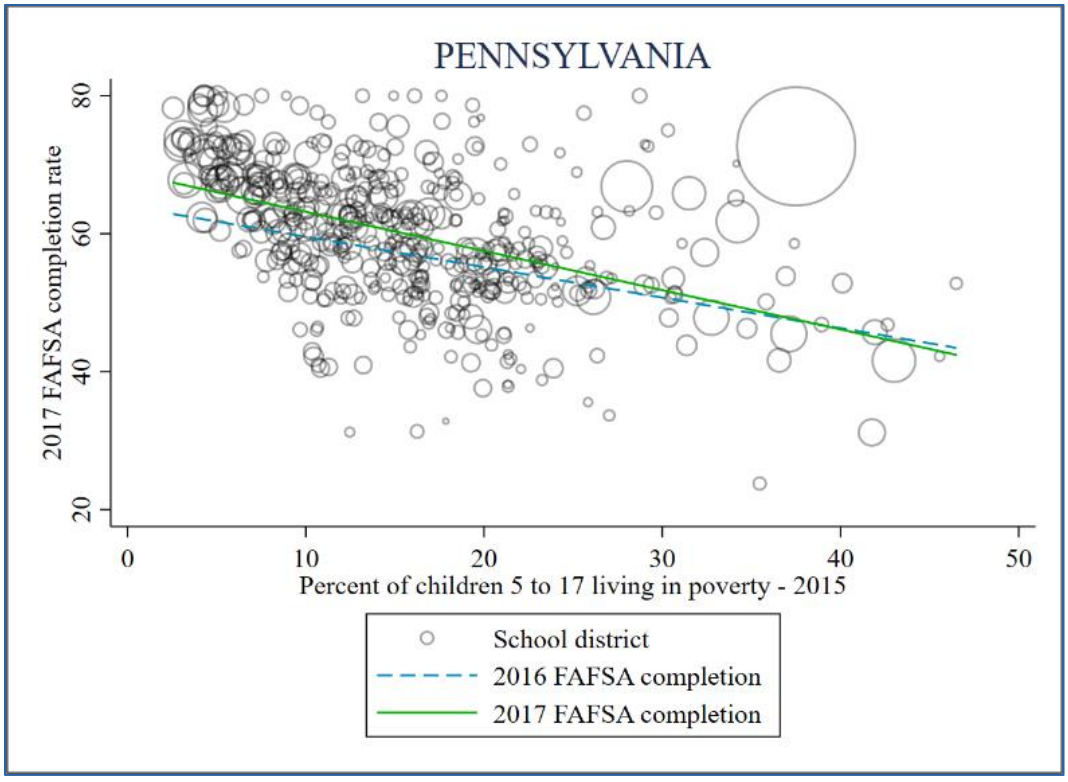
70
80
0
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


PENNSYLVANIA
2017 FAFSA completion rate
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40
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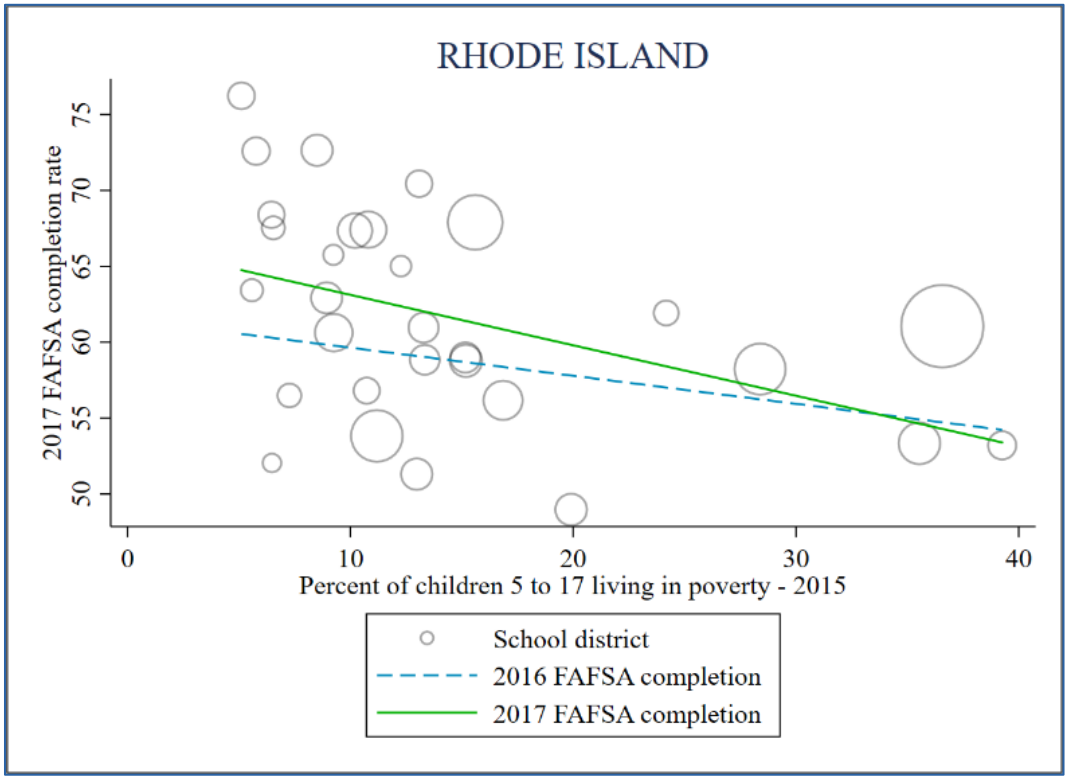
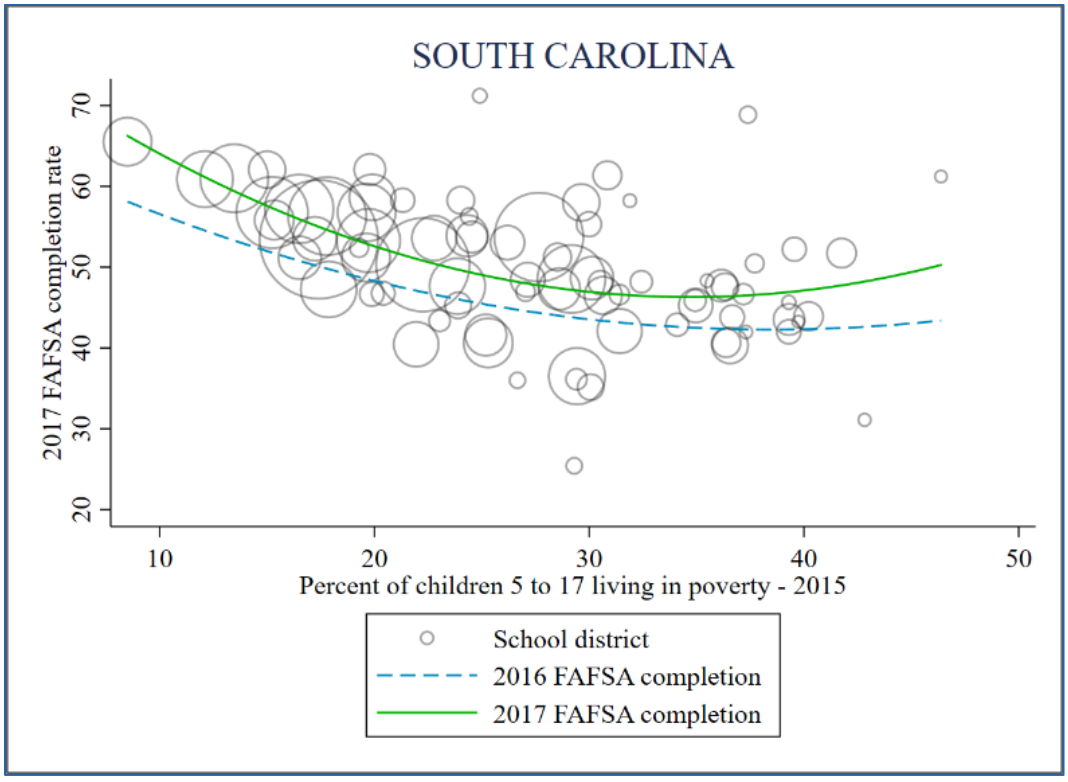
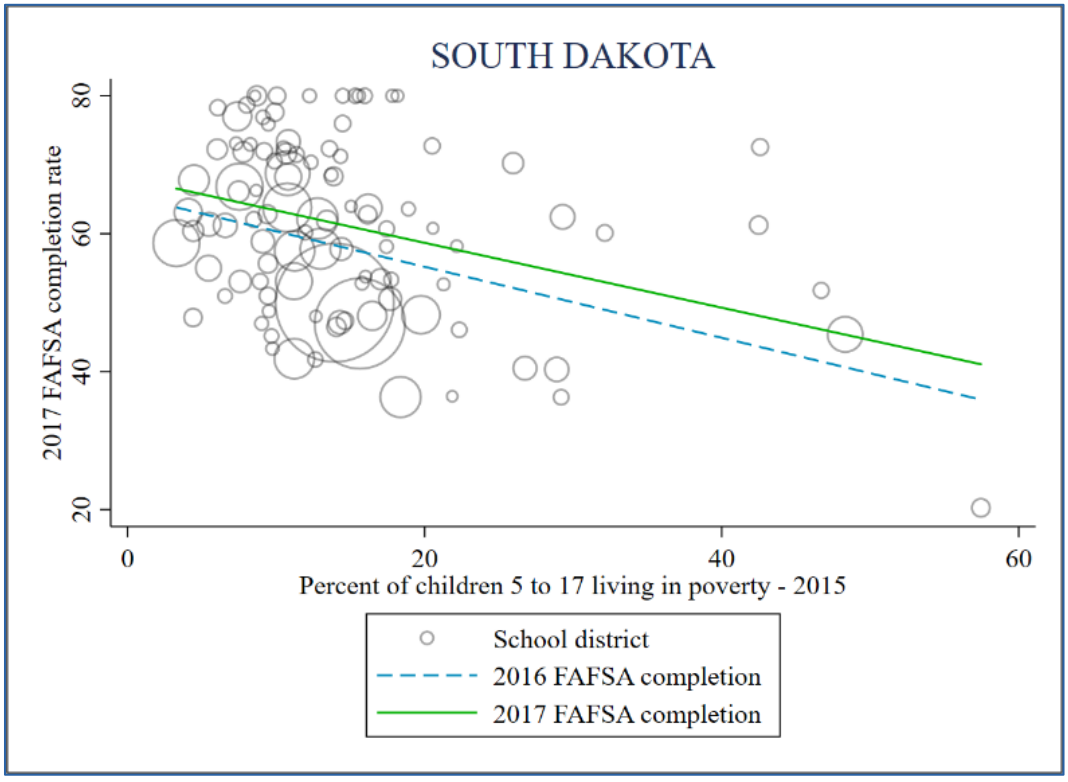
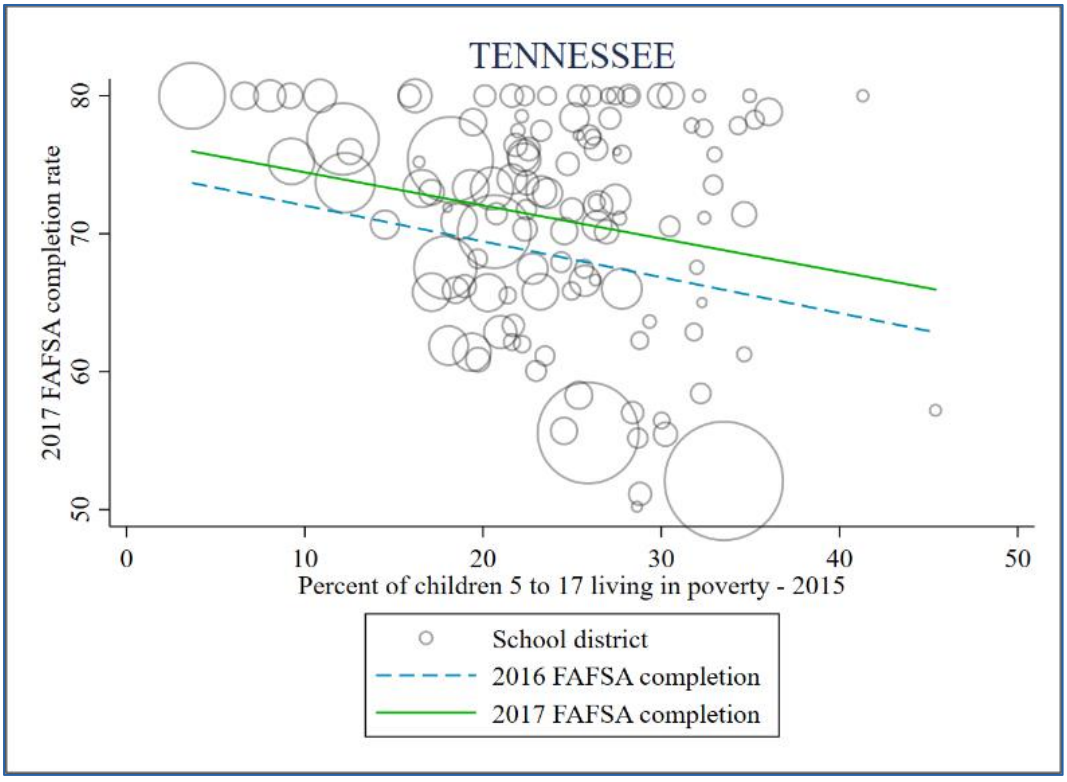
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


RHODE ISLAND
2017 FAFSA completion rate
50
55
60
65
70
75
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


SOUTH CAROLINA
2017 FAFSA completion rate
20
30
40
50
60
70
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


SOUTH DAKOTA
2017 FAFSA completion rate
20
40
60
80
0
20
40
60
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


TENNESSEE
2017 FAFSA completion rate
50
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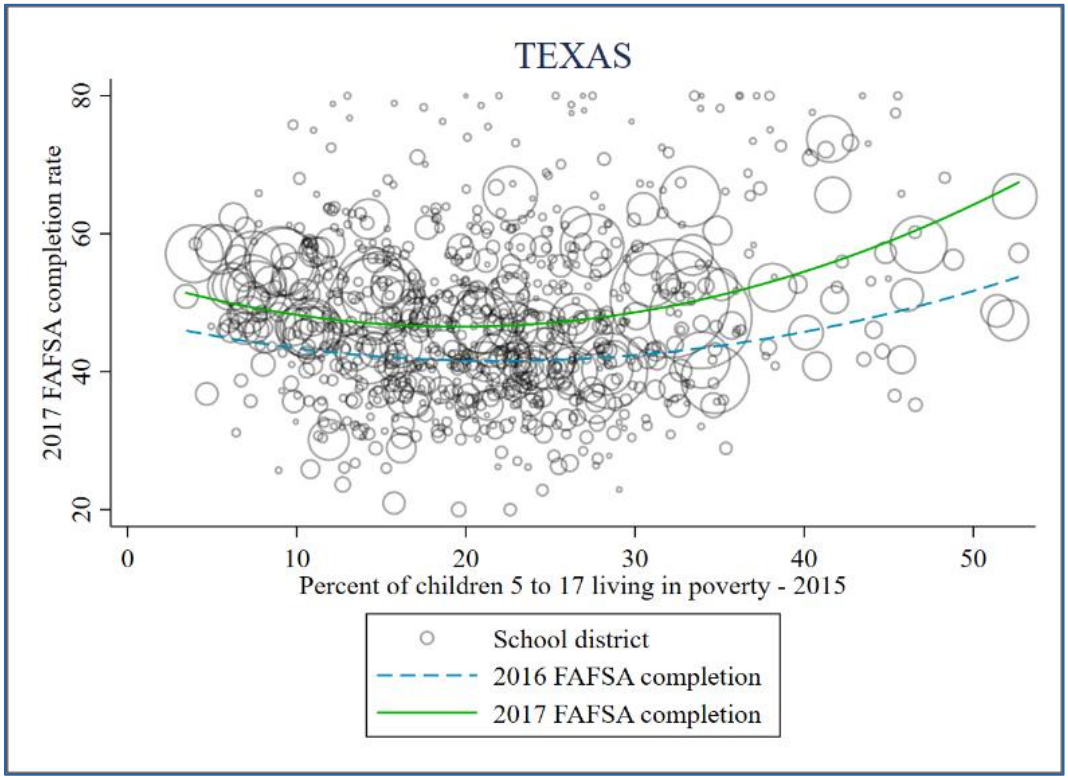
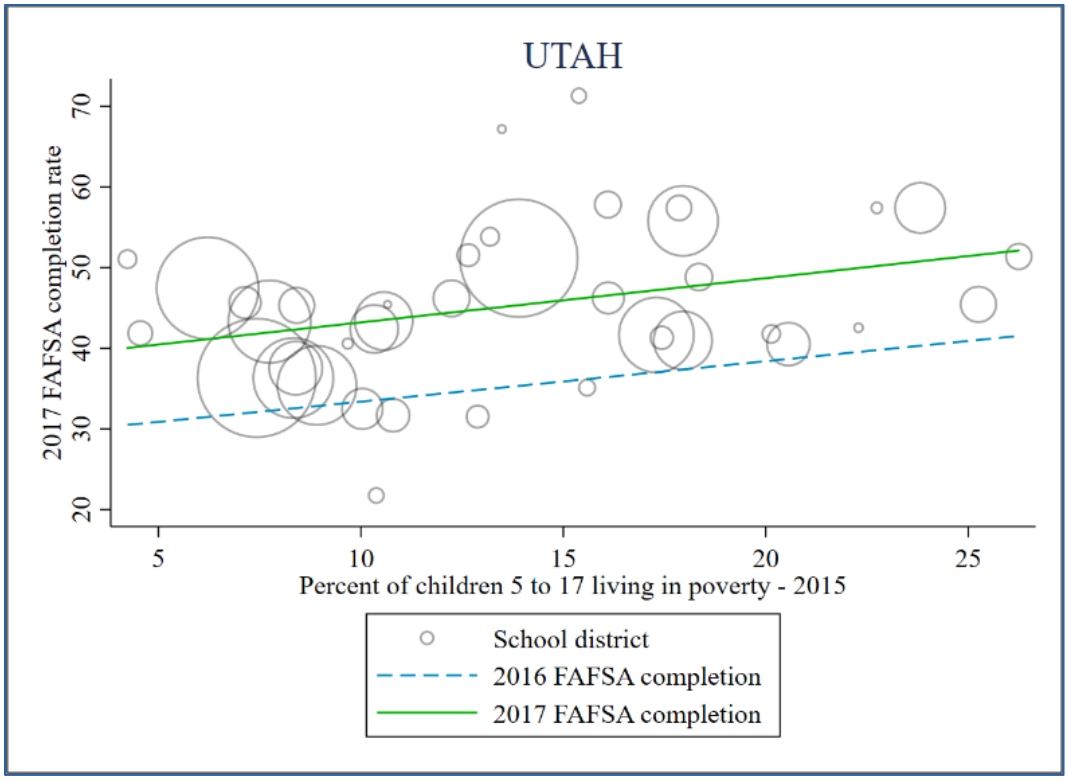
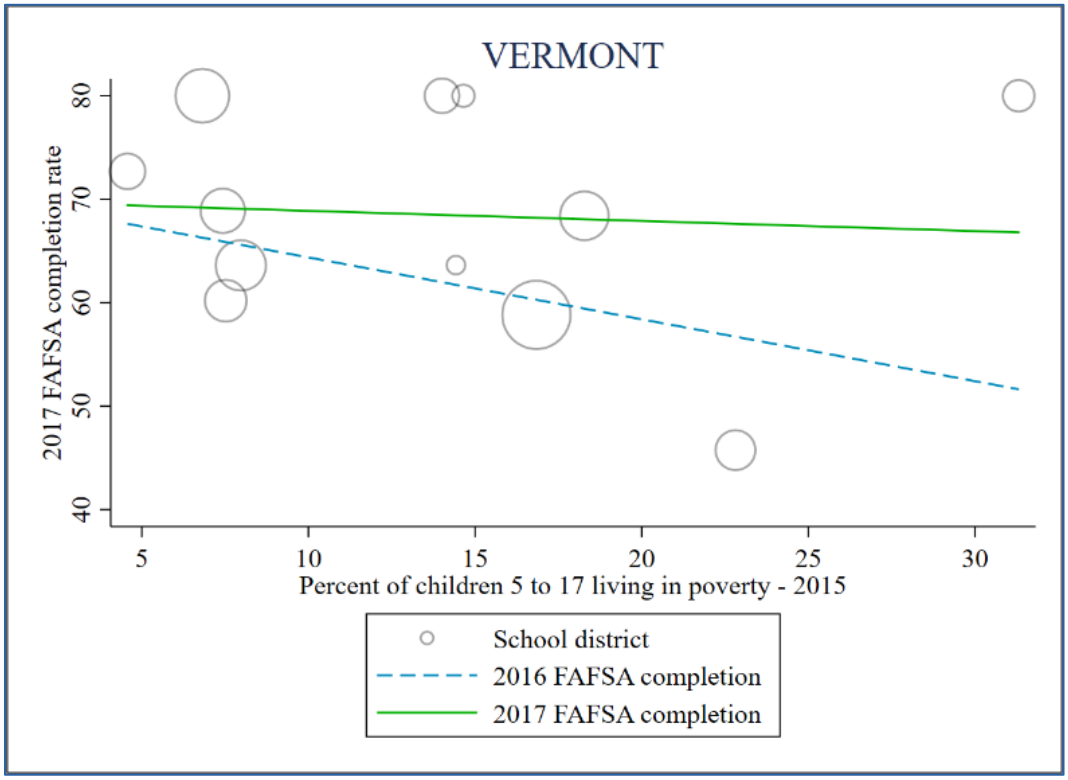
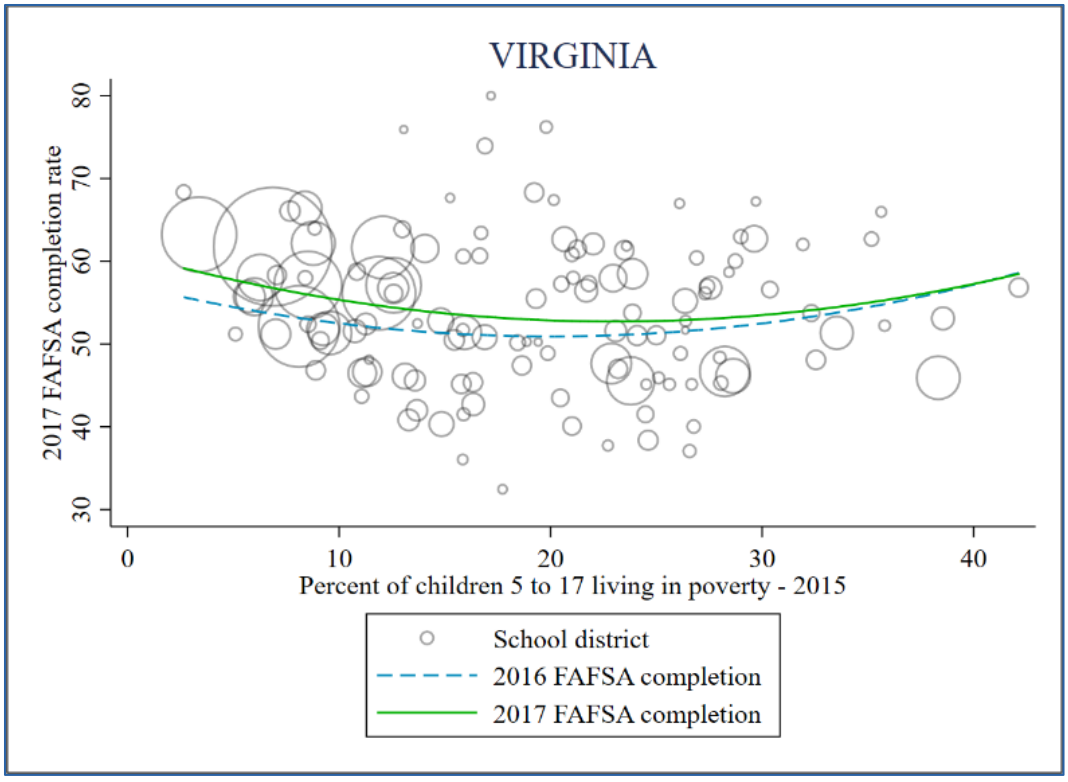
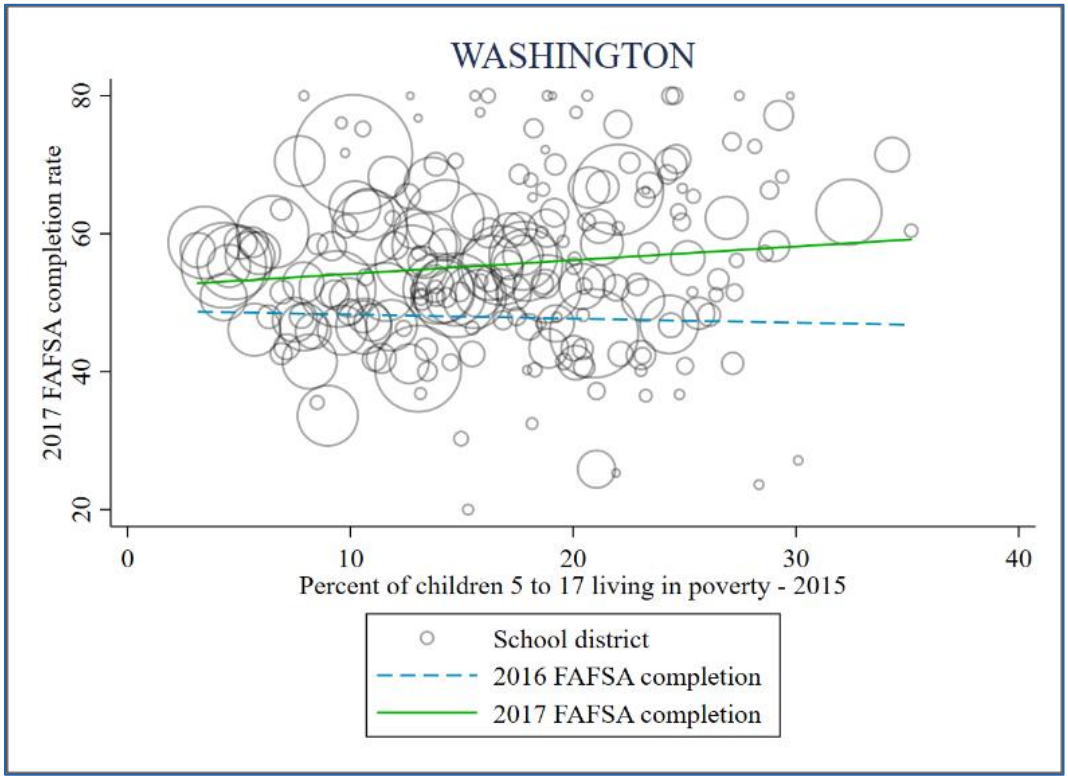
70
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion

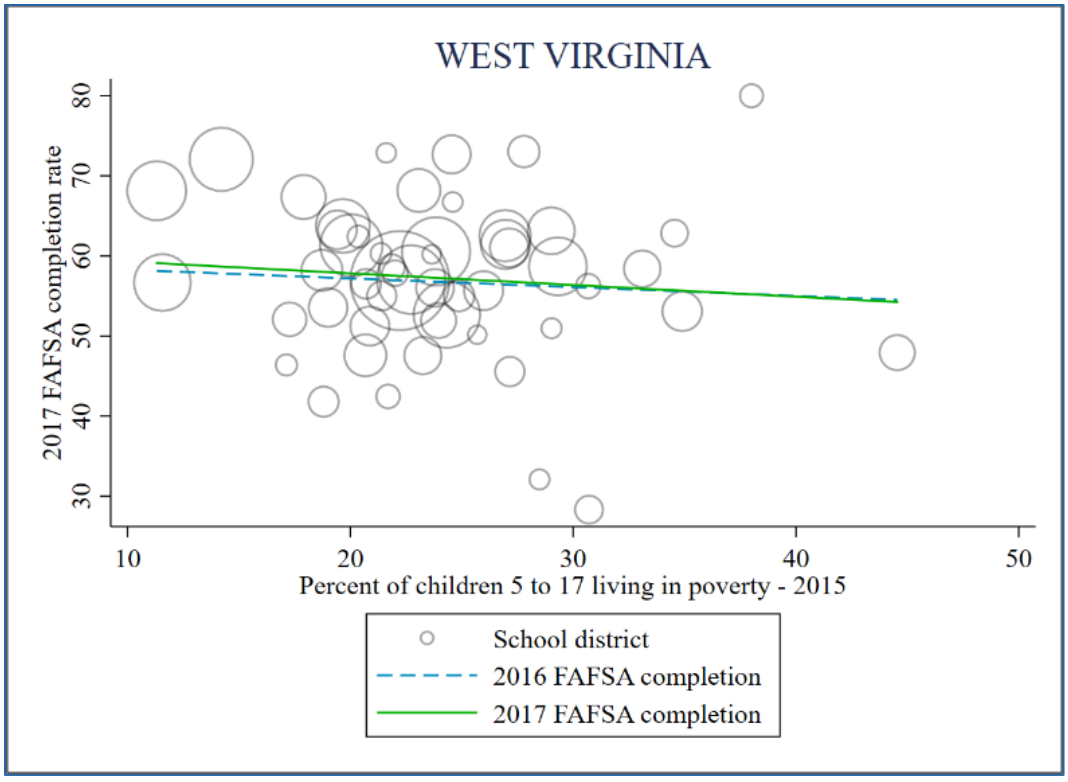

TEXAS
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion

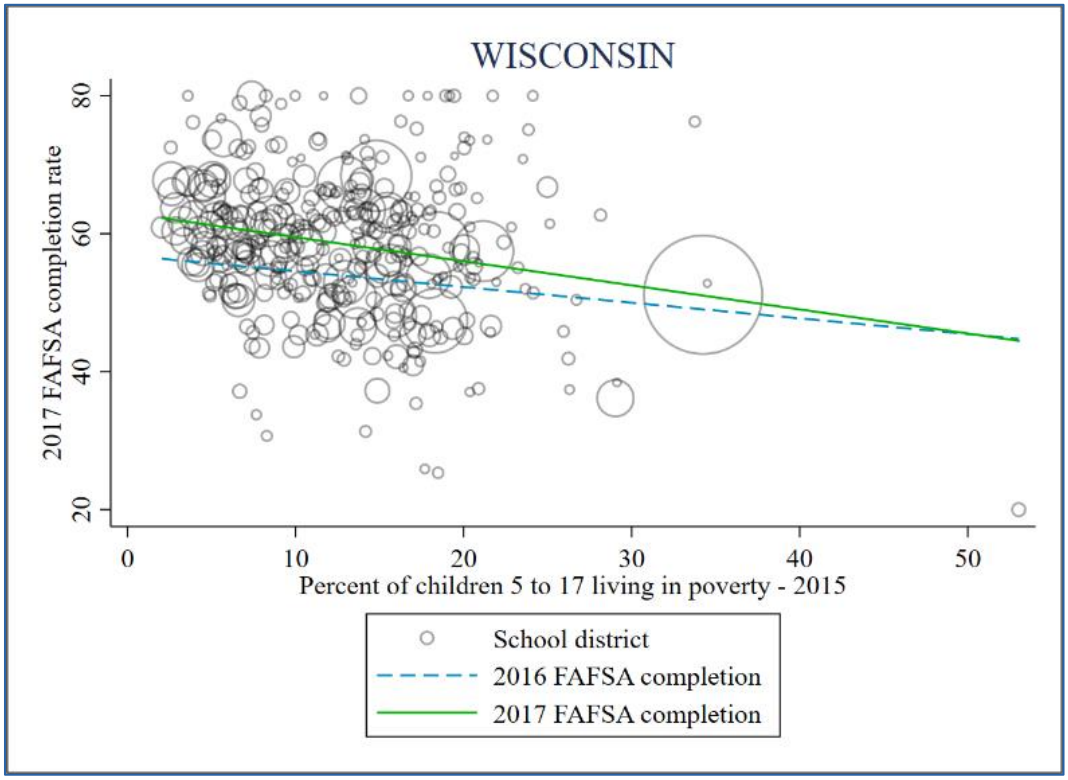

UTAH
2017 FAFSA completion rate
20
30
40
50
60
70
5
10
15
20
25
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion

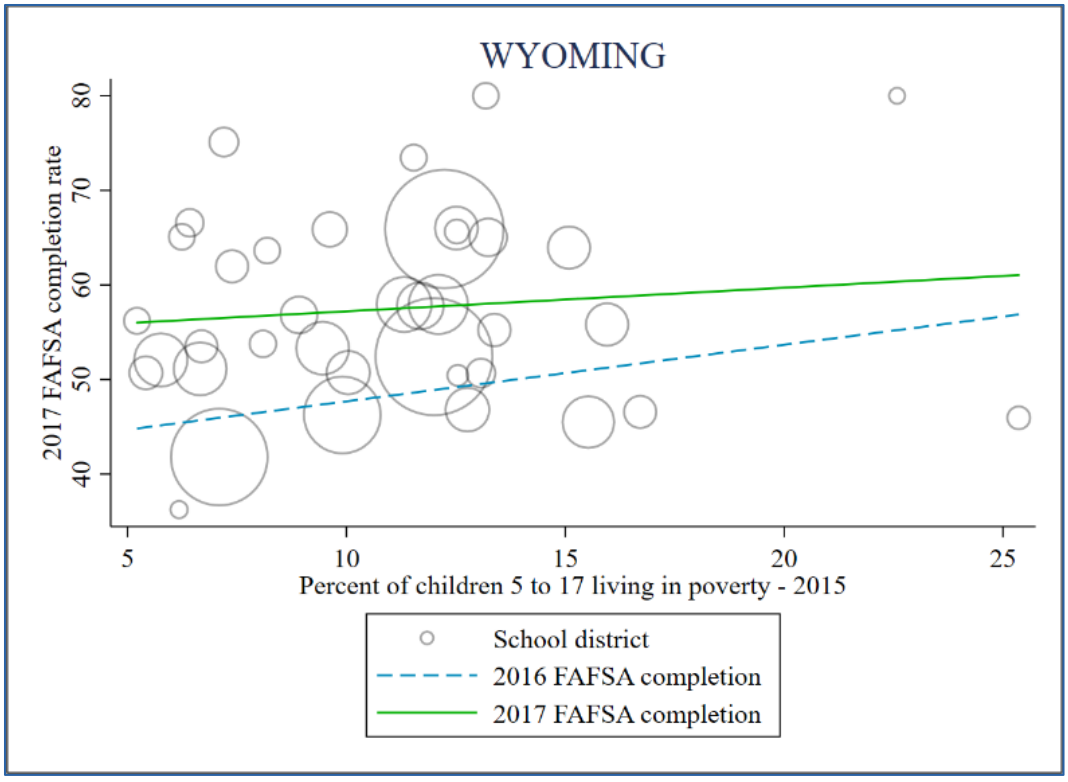

VERMONT
2017 FAFSA completion rate
40
50
60
70
80
5
10
15
20
25
30
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


VIRGINIA
2017 FAFSA completion rate
30
40
50
60
70
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


WASHINGTON
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


WEST VIRGINIA
2017 FAFSA completion rate
30
40
50
60
70
80
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


WISCONSIN
2017 FAFSA completion rate
20
40
60
80
0
10
20
30
40
50
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion


WYOMING
2017 FAFSA completion rate
40
50
60
70
80
5
10
15
20
25
Percent of children 5 to 17 living in poverty - 2015
School district
2016 FAFSA completion
2017 FAFSA completion

D: Regression results of district-level FAFSA completion rates on district-level child poverty, by state

Table D1

Relationship between FAFSA completion and district poverty from linear models, by state and year

	% Living in poverty		Change from 2016 to 2017
	2016	**2017**	
AK	-0.085***	-0.080***	0.004***
	(0.003)	(0.004)	(0.004)
	[0.002]	[0.004]	[0.000]
AL	-0.038***	-0.234***	-0.164***
	(0.003)	(0.001)	(0.001)
	[0.012]	[0.083]	[0.088]
AR	-0.273***	-0.319***	-0.040***
	(0.001)	(0.002)	(0.001)
	[0.077]	[0.086]	[0.002]
AZ	-0.233***	-0.316***	-0.083***
	(0.001)	(0.001)	(0.001)
	[0.115]	[0.126]	[0.043]
CA	0.255***	0.251***	-0.004***
	(0.000)	(0.000)	(0.000)
	[0.079]	[0.084]	[0.003]
CO	0.023***	0.060***	0.037***
	(0.001)	(0.001)	(0.001)
	[0.003]	[0.006]	[0.023]
DE	-1.767***	-0.633***	1.134***
	(0.006)	(0.007)	(0.006)
	[0.450]	[0.085]	[0.271]
FL	0.074***	0.090***	0.016***
	(0.001)	(0.001)	(0.000)
	[0.002]	[0.000]	[0.000]
IA	-0.884***	-0.847***	0.037***
	(0.002)	(0.002)	(0.002)
	[0.233]	[0.22]	[0.001]
ID	-0.115***	-0.101***	0.014***

	% Living in poverty		Change from 2016 to 2017
	2016	2017	
	(0.003)	(0.003)	(0.004)
	[0.015]	[0.000]	[0.023]
IL	0.103***	0.101***	-0.002***
	(0.001)	(0.001)	(0.001)
	[0.016]	[0.011]	[0.017]
IN	-0.535***	-0.547***	-0.013***
	(0.001)	(0.001)	(0.001)
	[0.351]	[0.327]	[0.000]
KS	-0.404***	-0.433***	-0.044***
	(0.001)	(0.002)	(0.001)
	[0.137]	[0.140]	[0.002]
KY	-0.109***	-0.098***	0.051***
	(0.001)	(0.001)	(0.001)
	[0.022]	[0.017]	[0.005]
LA	-0.176***	-0.204***	-0.049***
	(0.001)	(0.001)	(0.001)
	[0.038]	[0.036]	[0.004]
MD	-1.014***	-1.167***	-0.153***
	(0.002)	(0.002)	(0.001)
	[0.313]	[0.365]	[0.046]
MI	-0.196***	-0.286***	-0.117***
	(0.001)	(0.001)	(0.001)
	[0.055]	[0.122]	[0.027]
MN	0.439***	0.163***	-0.276***
	(0.001)	(0.001)	(0.001)
	[0.123]	[0.019]	[0.044]
MO	-0.542***	-0.430***	0.112***
	(0.001)	(0.001)	(0.001)
	[0.338]	[0.189]	[0.022]
MS	-0.371***	-0.315	0.064***
	(0.001)	(0.001)	(0.001)
	[0.207]	[0.156]	[0.009]
MT	-0.093***	0.009	0.113***
	(0.005)	(0.007)	(0.006)
	[0.007]	[0.000]	[0.007]
NC	-0.248***	-0.406***	-0.054***
	(0.001)	(0.001)	(0.001)
	[0.054]	[0.174]	[0.005]

	% Living in poverty		Change from 2016 to 2017
	2016	2017	
ND	0.171***	0.022*	-0.149***
	(0.009)	(0.008)	(0.009)
	[0.006]	[0.000]	[0.007]
NH	-0.840***	-1.049***	-0.210***
	(0.004)	(0.004)	(0.004)
	[0.234]	[0.366]	[0.004]
NJ	-0.524***	-0.609***	-0.085***
	(0.001)	(0.001)	(0.000)
	[0.382]	[0.502]	[0.028]
NM	0.121***	0.206***	0.085***
	(0.002)	(0.002)	(0.002)
	[0.020]	[0.029]	[0.015]
NV	-0.303***	-0.242***	-0.033***
	(0.008)	(0.006)	(0.004)
	[0.013]	[0.017]	[0.001]
OK	-0.348***	-0.221***	0.162***
	(0.001)	(0.001)	(0.002)
	[0.088]	[0.036]	[0.016]
OR	-0.133***	-0.347***	-0.215***
	(0.002)	(0.002)	(0.002)
	[0.011]	[0.076]	[0.032]
PA	-0.282***	-0.231***	0.078***
	(0.001)	(0.001)	(0.000)
	[0.121]	[0.069]	[0.016]
RI	-0.095***	-0.204***	-0.157***
	(0.002)	(0.002)	(0.002)
	[0.022]	[0.124]	[0.074]
SD	-0.561***	-0.476***	0.047***
	(0.004)	(0.004)	(0.003)
	[0.150]	[0.129]	[0.002]
TN	-0.589***	-0.759***	-0.171***
	(0.001)	(0.001)	(0.001)
	[0.426]	[0.395]	[0.067]
UT	0.693***	0.785***	0.091***
	(0.002)	(0.002)	(0.001)
	[0.169]	[0.242]	[0.000]
VT	-0.630***	-0.379***	0.250***
	(0.008)	(0.011)	(0.009)

	% Living in poverty		Change from 2016 to 2017
	2016	**2017**	
	[0.293]	[0.078]	[0.030]
WA	0.021***	0.131***	0.109***
	(0.001)	(0.001)	(0.001)
	[0.001]	[0.004]	[0.018]
WI	-0.407***	-0.441***	-0.058***
	(0.001)	(0.001)	(0.001)
	[0.210]	[0.199]	[0.004]
WV	-0.246***	-0.312***	-0.120***
	(0.002)	(0.002)	(0.002)
	[0.055]	[0.067]	[0.010]
WY	0.837***	0.836***	-0.001***
	(0.011)	(0.010)	(0.008)
	[0.530]	[0.068]	[0.000]
Average	-0.265***	-0.261***	0.004***
	(0.000)	(0.000)	(0.001)
	[0.057]	[0.058]	[0.000]

*p<0.05, **p<0.01, ***p<0.001
Notes: June 2016 and June 2017 FAFSA completion rates are computed by the U.S. Department of Education. Poverty rates are from the U.S. Census' 2015 Small Area Income and Poverty Estimates (SAIPE). Coefficients presented in Table D1 are generated from a linear model of FAFSA completion on district poverty. Standard errors are presented in parentheses and R^2 is presented in brackets. Estimations are weighted by school district size based on the Common Core of Data for the 2015-2016 academic year. Hawaii and D.C. are not included.

Table D2

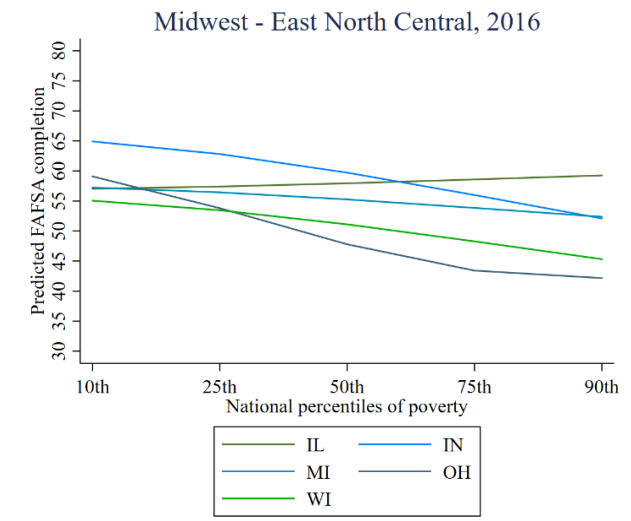
Relationship between FAFSA completion and district poverty from quadratic models, by state and year

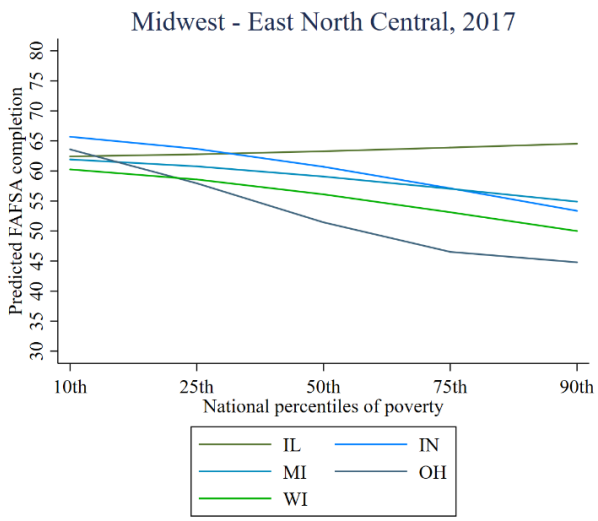
State	2016			2017				
	% living in poverty	% living in poverty-squared	R^2	% living in poverty	% living in poverty-squared	R^2	Change from 2016 to 2017	R^2
CT	-1.717***	0.036***		-1.418***	0.025***		-0.164***	
	(0.005)	(0.000)	0.309	(0.05)	(0.000)	0.322	(0.001)	0.001
GA	-1.233***	0.011***		-1.220***	0.009***		-0.123***	
	(0.003)	(0.000)	0.492	(0.003)	(0.000)	0.501	(0.000)	0.063
ME	-1.953***	0.061***		-1.534***	0.048***		0.0032***	
	(0.018)	(0.001)	0.075	(0.020)	(0.001)	0.040	(0.004)	0.001
NE	0.243***	-0.016***		-0.320***	-0.004***		-0.186***	
	(0.008)	(0.000)	0.059	(0.010)	(0.000)	0.109	(0.002)	0.028
NY	-1.151***	0.019***		-1.291***	0.021***		-0.061***	
	(0.002)	(0.000)	0.201	(0.002)	(0.000)	0.234	(0.001)	0.009
OH	-1.892***	0.031***		-1.986***	0.032***		-0.078***	
	(0.003)	(0.000)	0.330	(0.003)	(0.000)	0.378	(0.000)	0.016
SC	-1.251***	0.015***		-2.142***	0.032***		-0.117***	
	(0.004)	(0.000)	0.400	(0.004)	(0.000)	0.493	(0.001)	0.023
TX	-0.792***	0.016***		-0.922***	0.019***		0.034***	
	(0.001)	(0.000)	0.079	(0.001)	(0.000)	0.102	(0.000)	0.005
VA	-1.120***	0.022***		-0.816***	0.013***		-0.077***	
	(0.002)	(0.000)	0.265	(0.002)	(0.000)	0.238	(0.000)	0.027

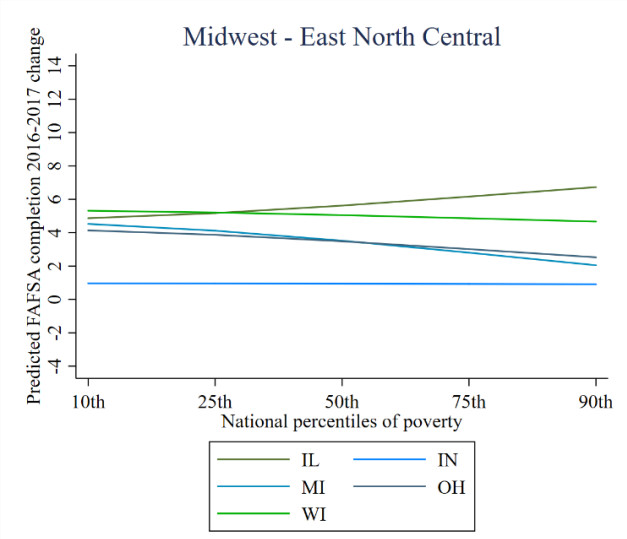
Notes: June 2016 and June 2017 FAFSA completion rates are computed by the U.S. Department of Education. Poverty rates are from the U.S. Census' 2015 Small Area Income and Poverty Estimates (SAIPE). Coefficients presented in table C2 are generated from a quadratic model of FAFSA completion on district poverty. Standard errors are presented in parentheses. Estimations are weighted by school district size based on the Common Core of Data for the 2015-2016 academic year. Hawaii and D.C. are not included.

E: Fitted FAFSA completion at percentiles of national poverty by state

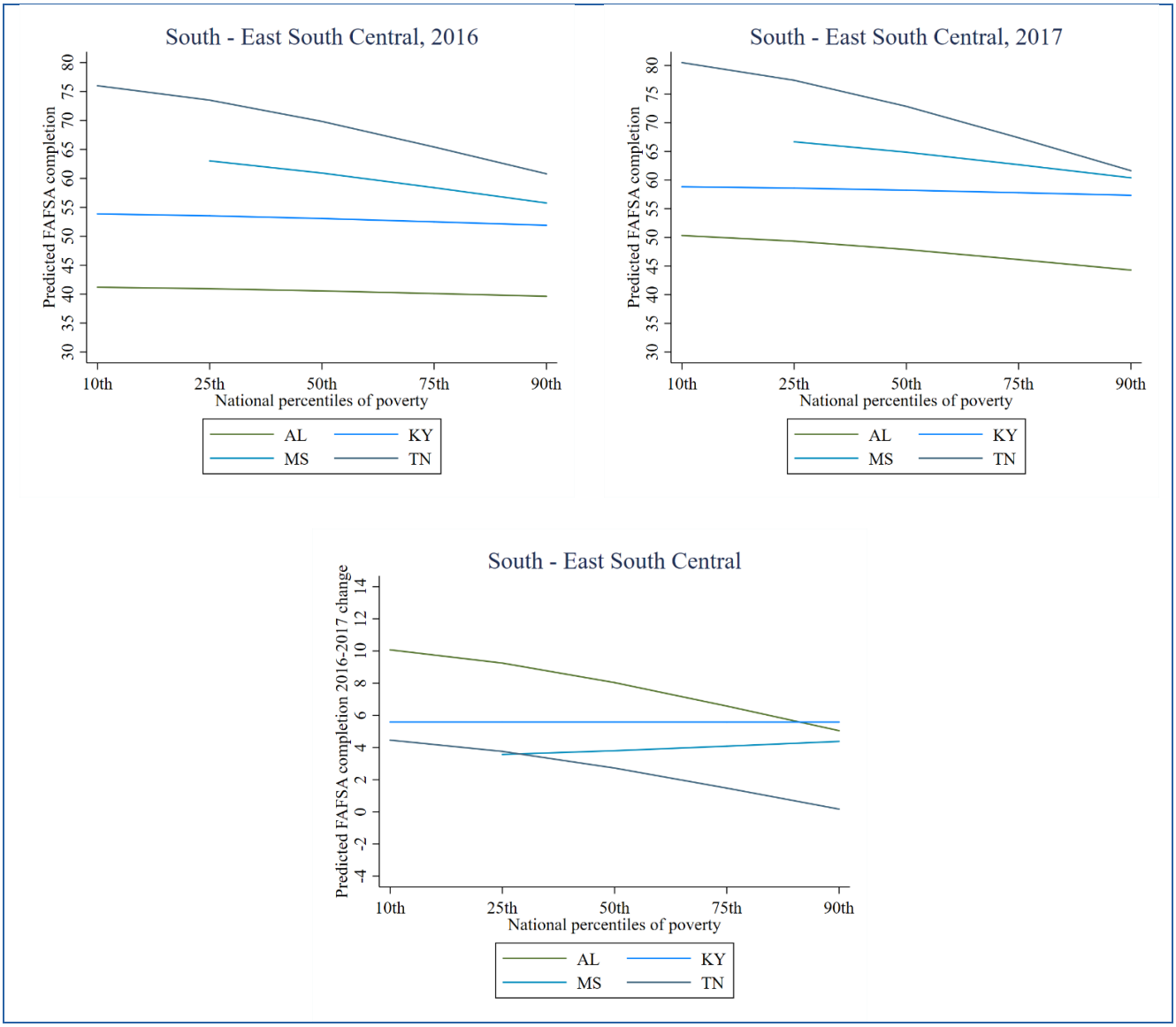
Midwest



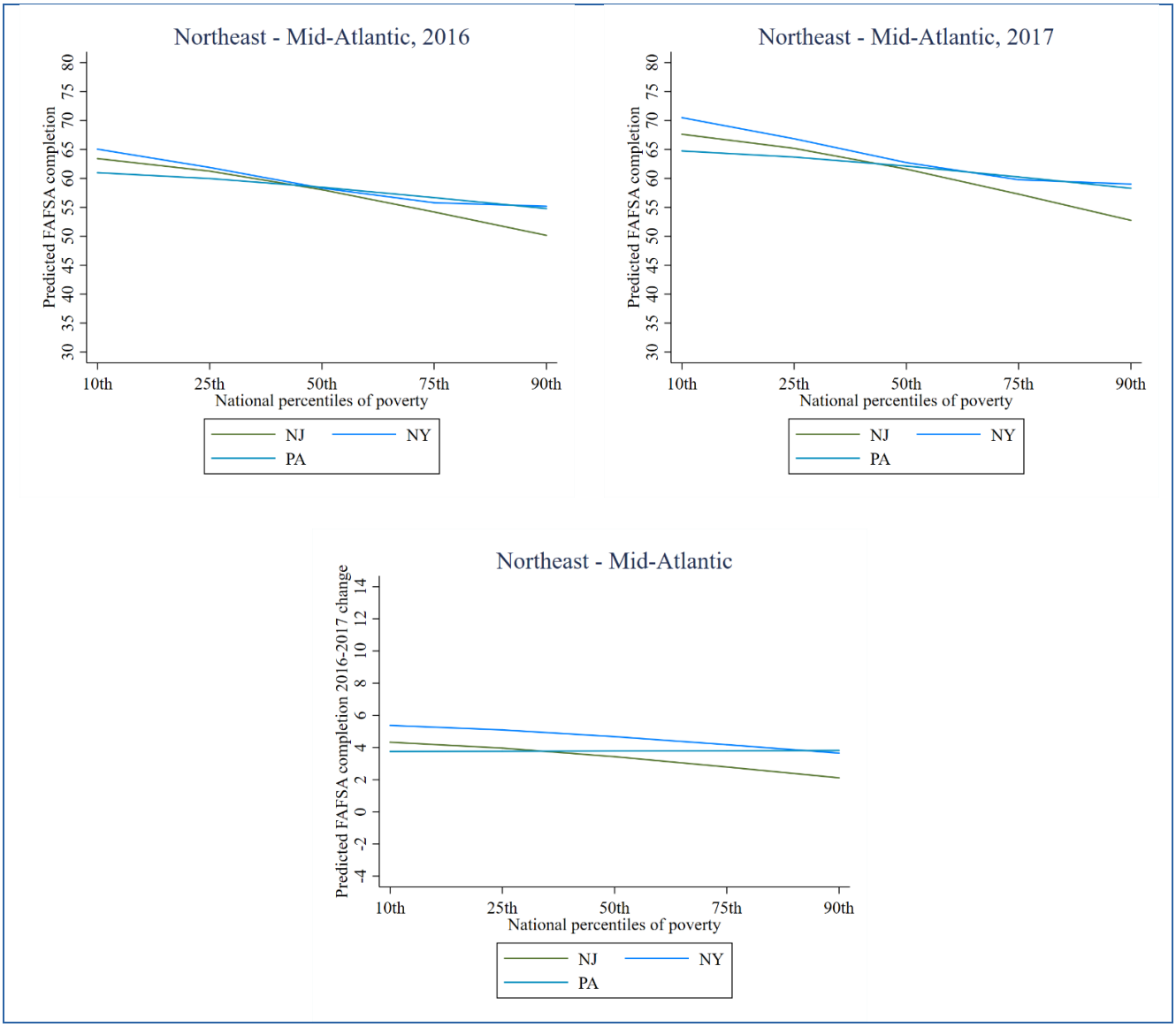




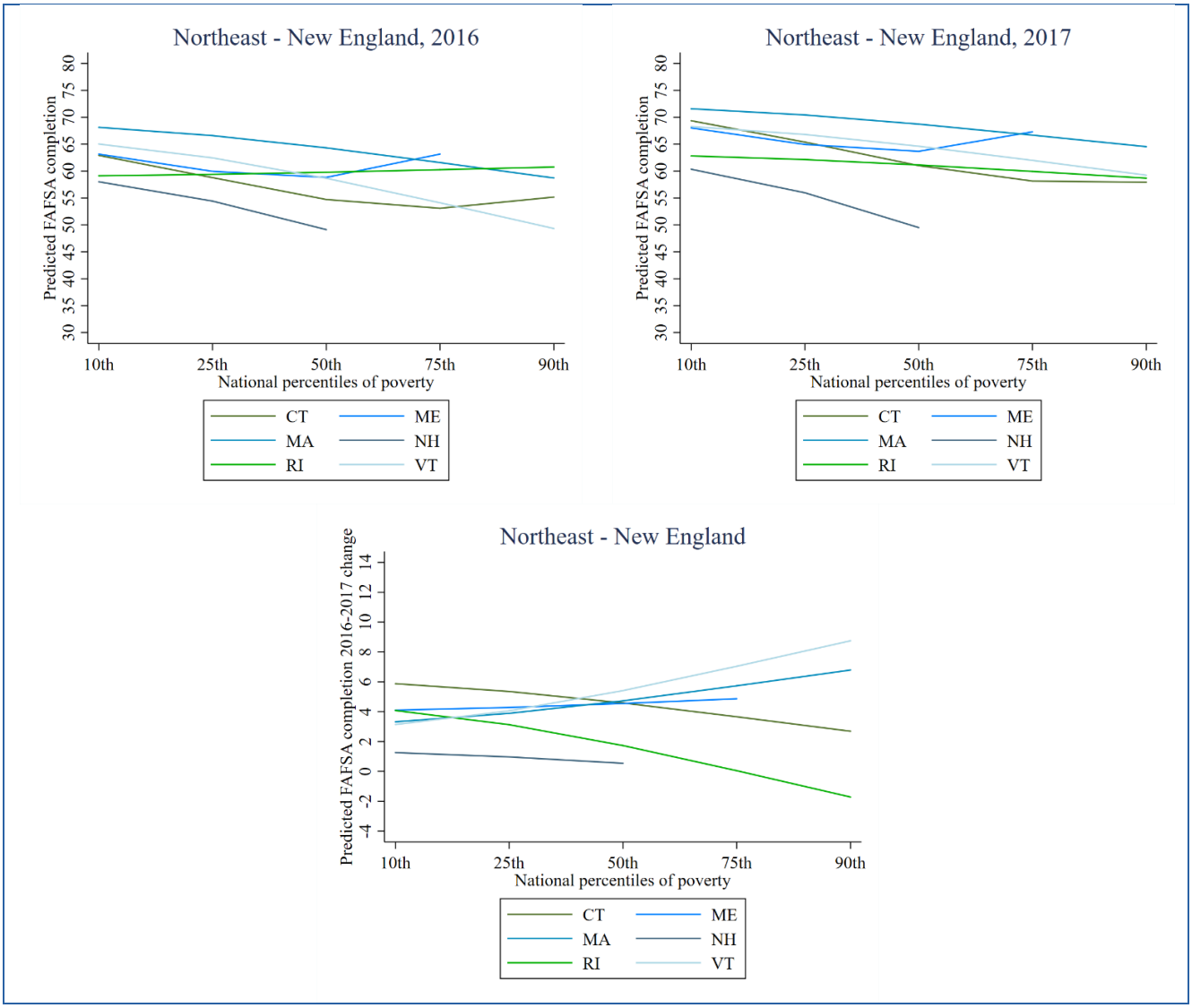
South – East South Central



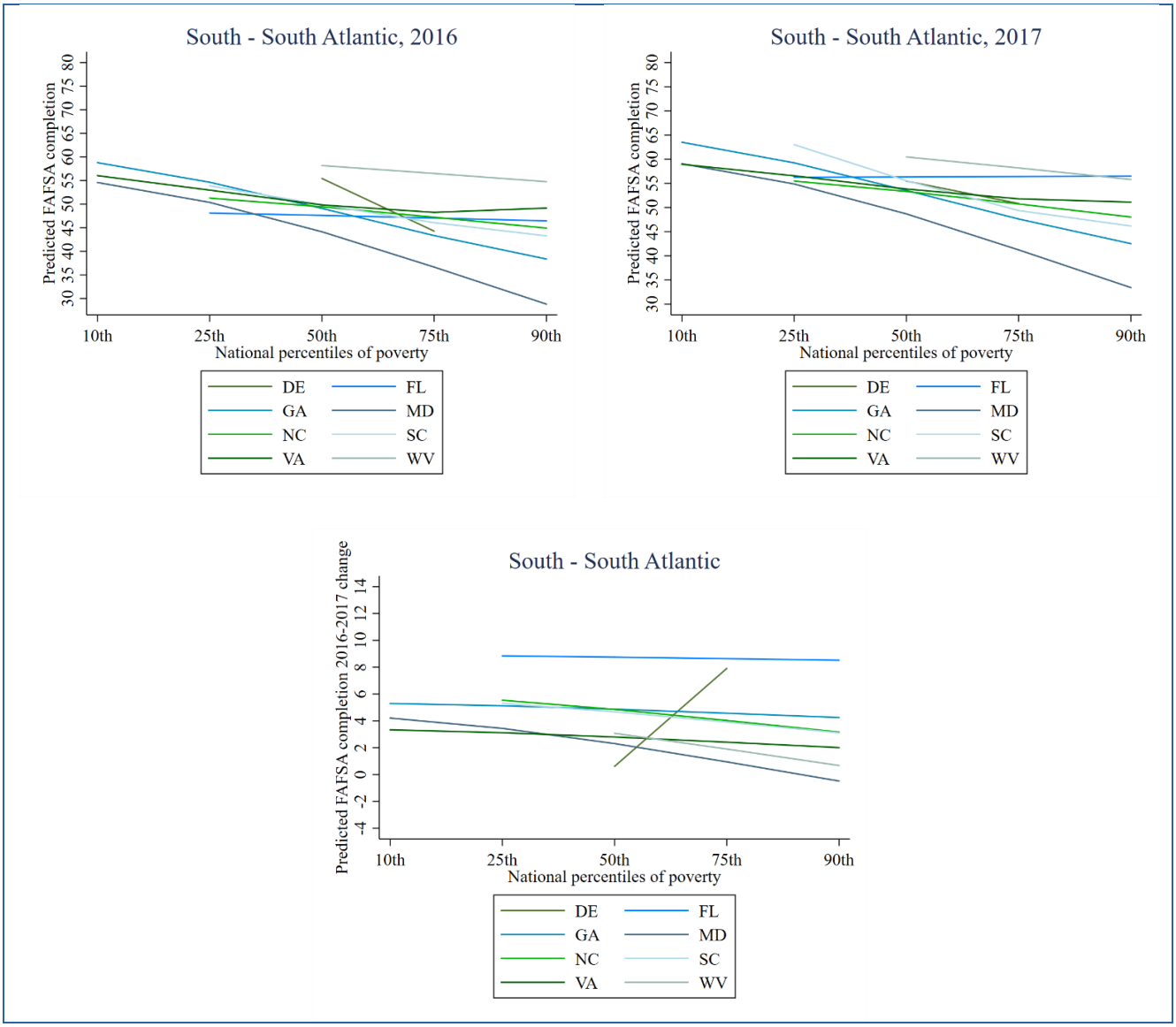
Northeast – Mid-Atlantic



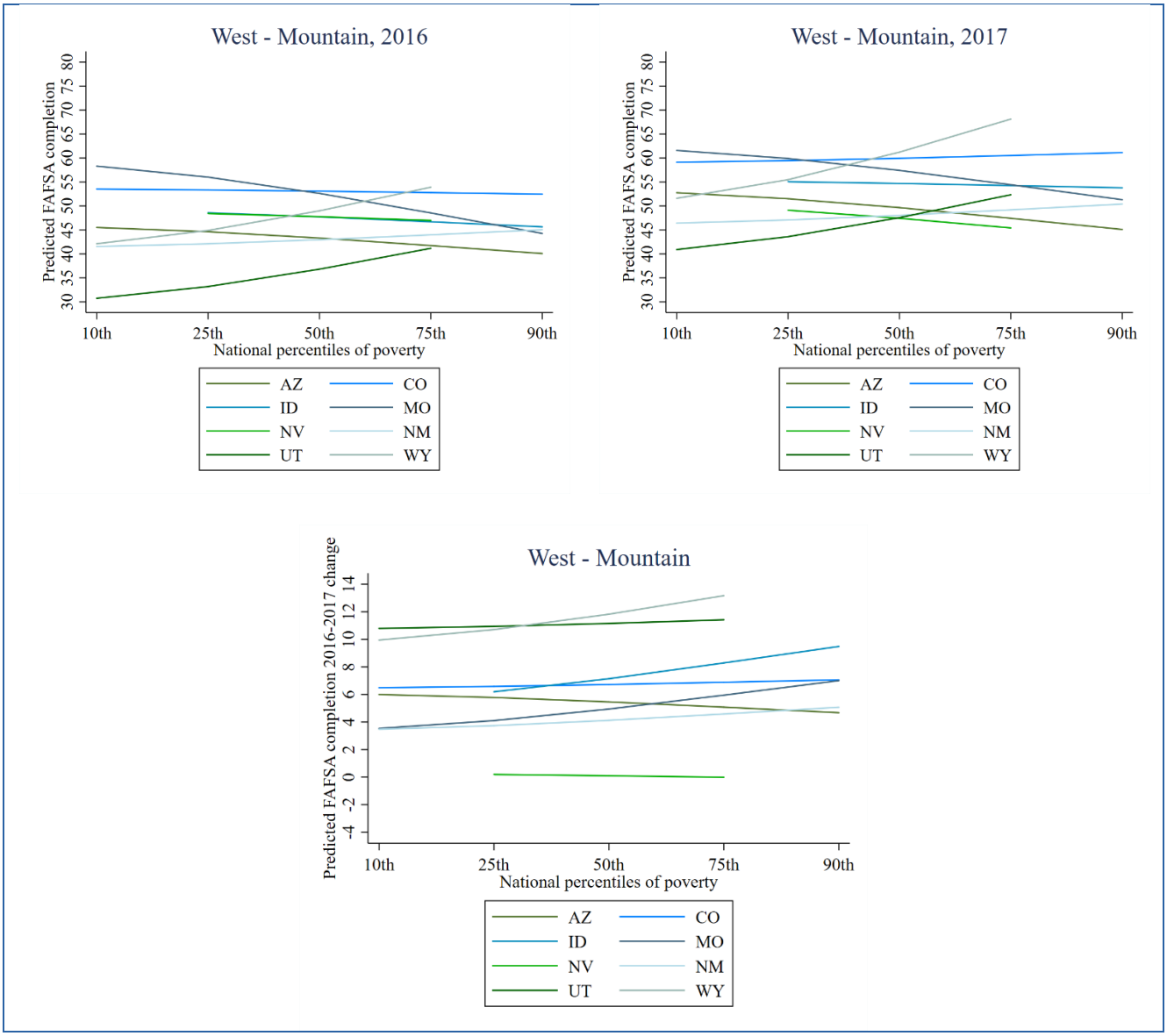
Northeast – New England



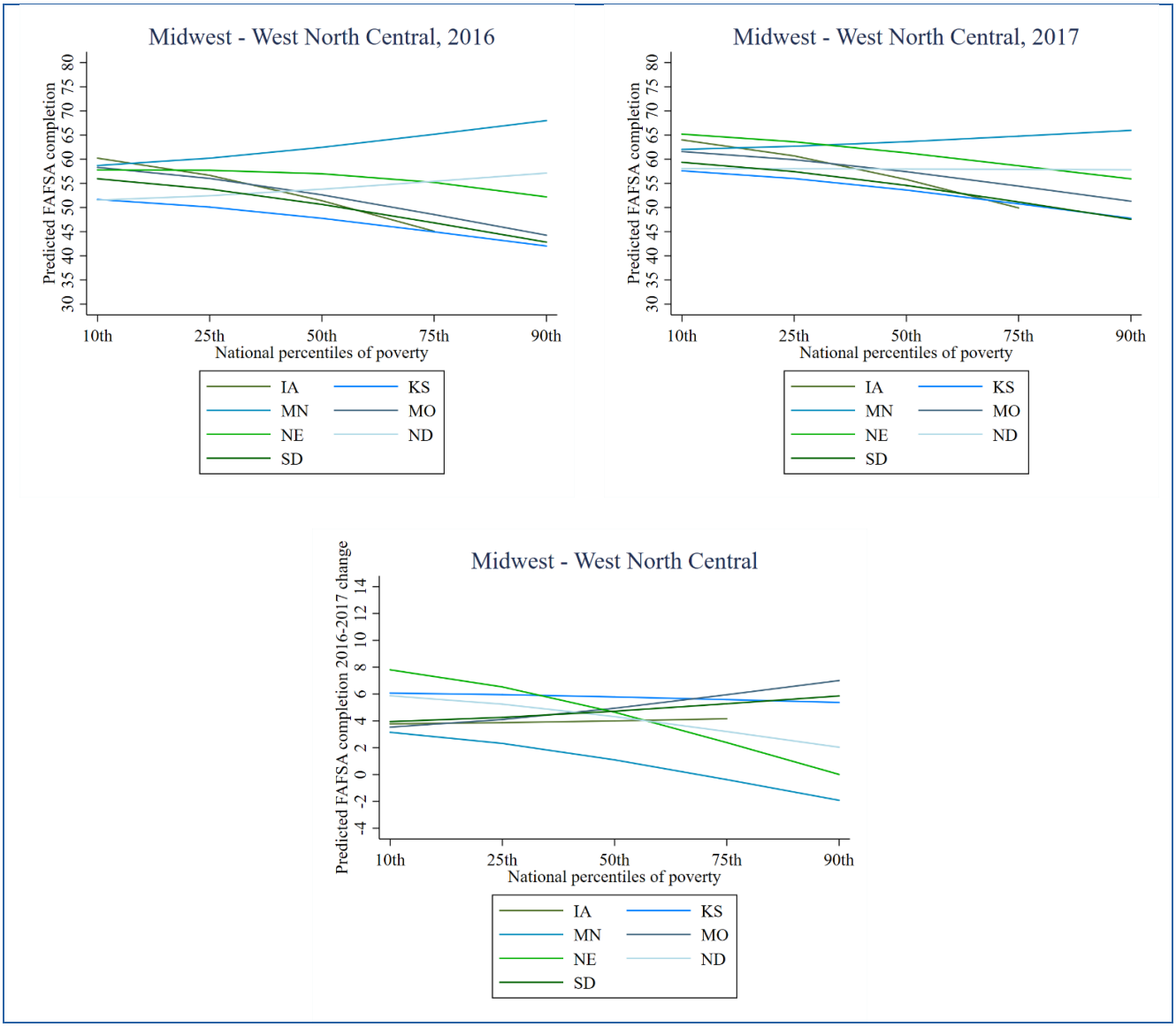
South – South Atlantic



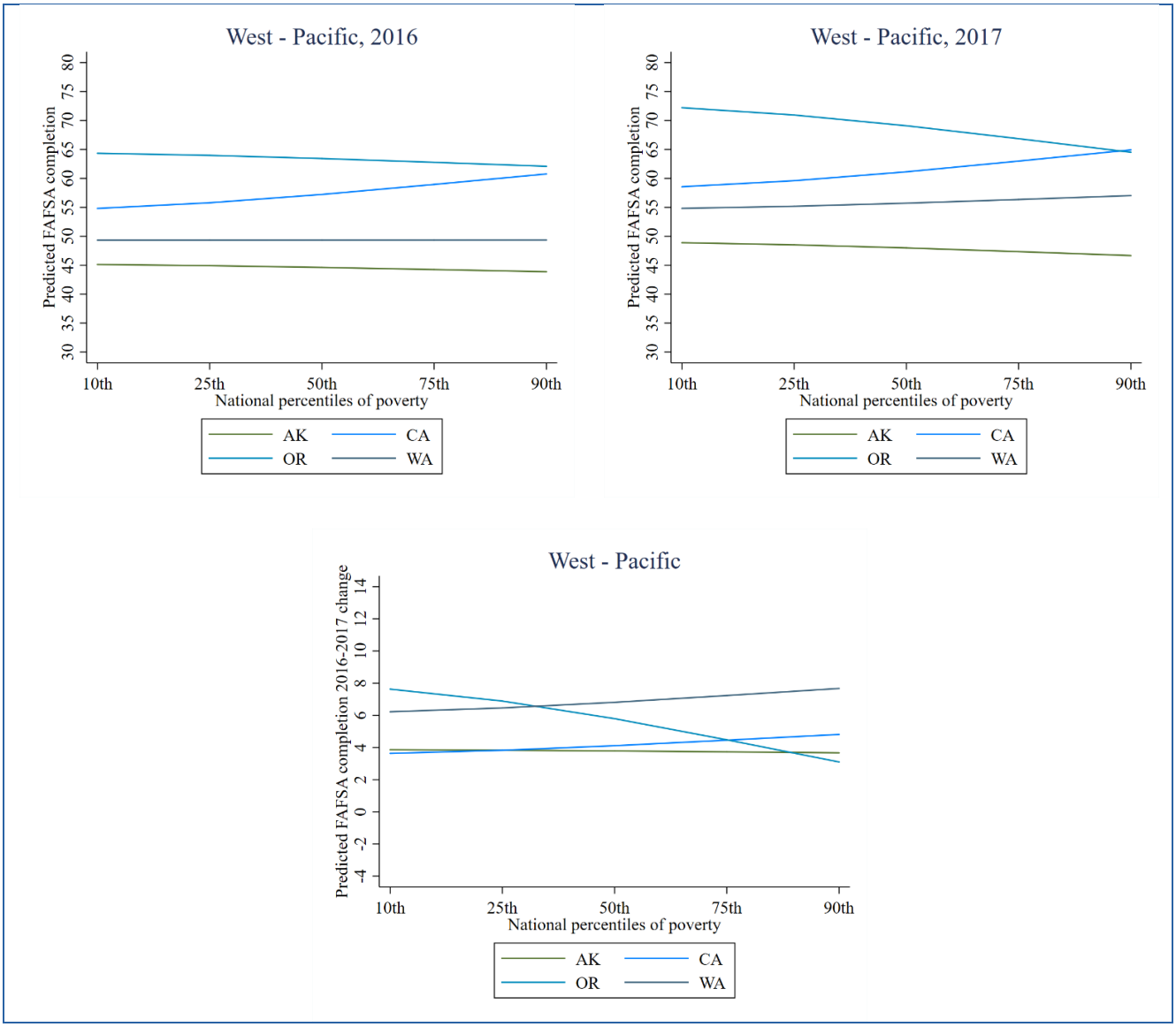
West - Mountain



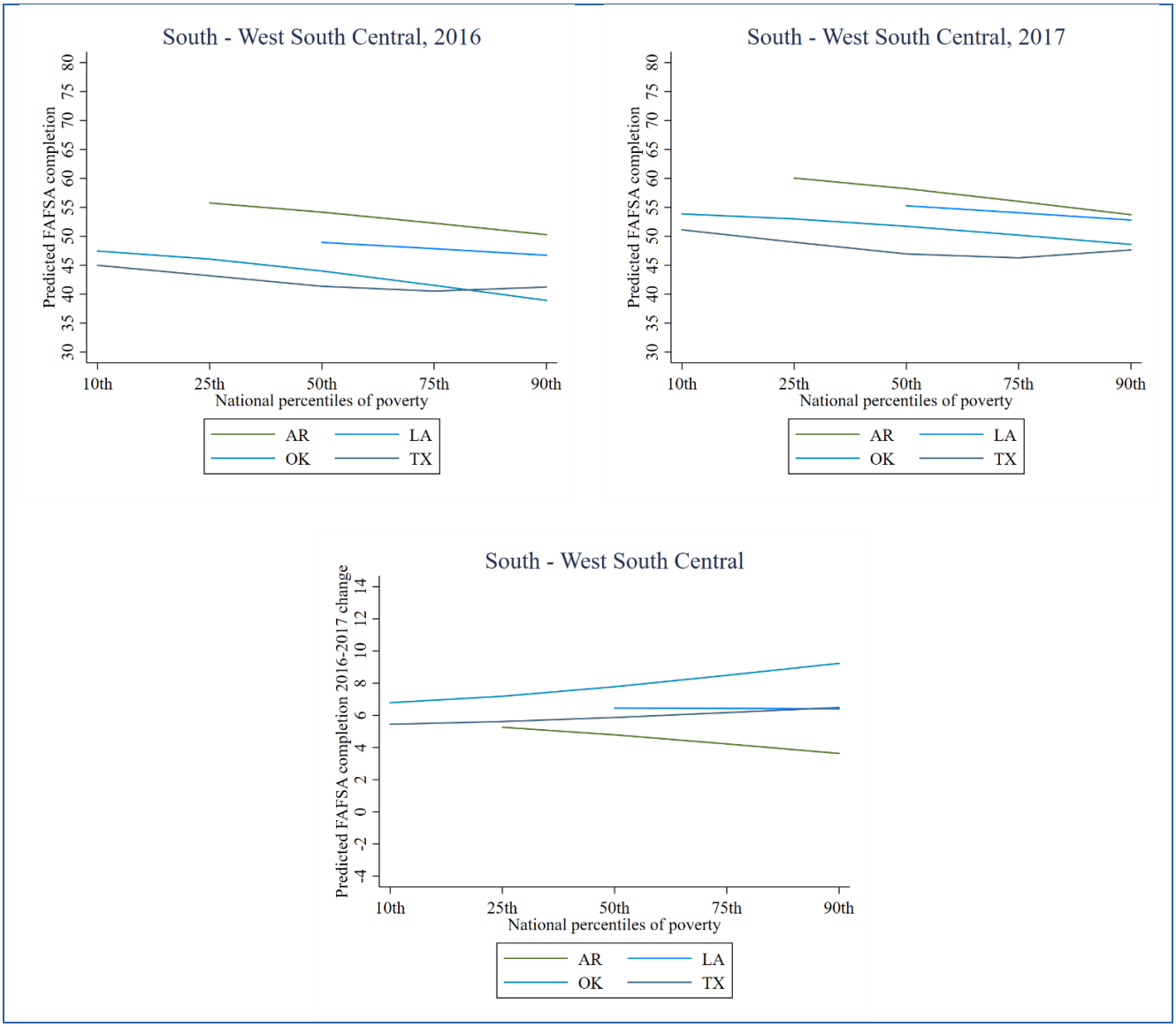
Midwest – West North Central



West - Pacific



South – West South Central



F: School districts with higher FAFSA filing than what is predicted from regression models

Table F1

Exemplary school districts with higher rates of FAFSA filing than what is predicted

State name	District name	Observed FAFSA completion rate 2017	Fitted FAFSA completion rate 2017	Residual	Number of students enrolled	% Children in poverty
Alabama	Lauderdale County School District	58.95	47.53	11.42	8517	18.09
Arizona	Yuma Union High School District	58.13	45.17	12.96	10676	30.66
California	Oakland Unified School District	80.00*	62.60	17.40	48077	23.48
California	Val Verde Unified School District	76.28	62.59	13.69	19841	23.44
California	Alhambra Unified School District	75.54	62.19	13.35	17617	21.76
California	Garden Grove Unified School District	73.61	62.65	10.96	46177	23.69
California	Calexico Unified School District	80.00*	66.67	13.33	9263	40.39
California	Jurupa Unified School District	76.88	62.43	14.45	19330	22.79
California	Alvord Unified School District	73.26	62.20	11.07	19390	21.81
California	Compton Unified School District	77.49	64.25	13.24	22106	30.34
Colorado	Mapleton School District 1	71.23	60.16	11.07	8670	17.97
Florida	Dade County School District	67.47	56.38	11.09	356964	26.02
Florida	Columbia County School District	68.07	56.42	11.65	10184	29.24
Florida	Orange County School District	67.74	56.31	11.43	191648	20.93
Illinois	Chicago Public School District 299	75.81	63.50	12.31	392558	28.74
Indiana	Wayne Township Metropolitan School District	68.44	53.36	15.08	15410	31.09
Indiana	Washington Township Metropolitan School District	70.93	59.40	11.53	10816	19.40

State name	District name	Observed FAFSA completion rate 2017	Fitted FAFSA completion rate 2017	Residual	Number of students enrolled	% Children in poverty
Indiana	Evansville-Vanderburgh School Corporation	68.02	57.94	10.08	22518	22.22
Kentucky	Pike County School District	67.74	57.54	10.20	9361	28.97
Louisiana	Orleans Parish School District	73.19	52.28	20.92	13271	35.55
Massachusetts	Lawrence School District	80.00*	65.27	14.73	13889	35.49
Massachusetts	Boston School District	78.83	66.37	12.46	54312	30.49
Michigan	Bay City School District	70.87	57.79	13.08	8132	19.94
Michigan	Warren Consolidated Schools	73.26	57.67	15.59	14876	20.30
Missouri	Kansas City 33 School District	67.56	49.45	18.11	15386	35.61
Missouri	St. Louis City School District	62.54	48.08	14.47	30831	38.77
North Carolina	Guilford County Schools	63.25	51.94	11.31	73416	21.75
New Jersey	East Orange City School District	67.88	53.16	14.71	10858	31.25
New Jersey	Union City School District	67.69	48.64	19.05	13560	38.88
New Mexico	Roswell Independent Schools	60.59	49.10	11.48	10445	26.99
New York	Utica City School District	80.00*	63.40	16.60	9998	47.08
New York	Albany City School District	75.49	58.65	16.84	8942	29.36
New York	Buffalo City School District	75.42	62.48	12.94	35234	45.51
New York	Yonkers City School District	78.52	60.55	17.97	26828	21.46
Ohio	Cincinnati City School District	80.00*	45.67	34.33	32444	35.73
Oklahoma	Union Public Schools	62.59	51.49	11.10	15826	17.15
Pennsylvania	Philadelphia City School District	72.81	57.48	15.33	134241	37.51
Texas	Southwest Independent School District	63.00	46.41	16.58	13524	26.52
Texas	Lufkin Independent School District	57.64	46.57	11.07	8348	27.70
Texas	San Antonio Indepen-dent School District	67.85	48.02	19.83	53750	33.27

State name	District name	Observed FAFSA completion rate 2017	Fitted FAFSA completion rate 2017	Residual	Number of students enrolled	% Children in poverty
Texas	Pharr-San Juan-Alamo Independent School District	73.99	52.34	21.65	32288	41.52
Texas	Sharyland Independent School District	57.30	46.25	11.05	10280	23.34
Texas	McAllen Independent School District	58.44	48.07	10.37	24692	33.41
Texas	Harlingen Consolidated Independent School District	66.95	52.45	14.50	18681	41.69
Texas	Socorro Independent School District	66.59	46.27	20.32	44561	22.63
Texas	Harlandale Independent School District	60.88	47.15	13.73	15289	30.49
Texas	Clint Independent School District	62.80	48.66	14.14	11745	34.87
Virginia	Lynchburg City Public Schools	62.47	50.50	11.97	8600	29.63
Washington	Spokane Public Schools	66.49	56.35	10.14	30641	22.02

Note: Data for this table is from the U.S. Department of Education and NCES Common Core of Data. The asterisks denote districts where the actual FAFSA completion rate may be higher but, due to the U.S. Department of Education's style of reporting, the highest possible value for FAFSA completion is 80%.