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An Examination of the Relationship between School District FAFSA Completion Rates and District Poverty Levels

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Executive Summary

The Free Application for Federal Student Aid (FAFSA) is the gateway application to federal financial aid (as well as other sources of financial aid) for postsecondary education in the United States. In this report, we describe how school district-level FAFSA completion rates are related to district-level poverty rates across and within states in the US. Given that students from low-income backgrounds may be particularly dependent on financial aid, such as the Pell Grant, to make postsecondary education affordable, it might be reasonable to guess that districts that serve higher-poverty student populations have higher FAFSA filing rates than their wealthier counterparts. Unfortunately, we find the opposite – that, in most states, districts in higher-poverty areas have much 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 statistically significant and, for many states, quite substantial. On average, for every 10 percentage point difference in the percent of children 5 to 17 living in poverty, the district FAFSA completion rate is about 3 percentage points lower.

The gap in FAFSA filing between the poorest and wealthiest districts is quite large within states. At its most extreme, for example, this FAFSA completion gap is approximately 19 percentage points in Vermont, Wisconsin, and Ohio. In contrast, certain states, such as Maine and New Mexico, have narrow gaps – on the order of 1 percentage point – in FAFSA completion between the wealthiest and poorest districts.

In four states, high poverty is associated with slightly higher FAFSA rates

Counter to the overall trends that we observe, Alabama, California, Minnesota, and Montana have slightly higher rates of FAFSA completion among low-income districts than wealthier districts. In these four states, poorer districts outperform wealthier districts by 0.6-3.5 percentage points.

FAFSA completion 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 between 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.

Policy Recommendations

Increasing FAFSA completion among low-income school districts creates opportunities for more equitable access to higher education and to better subsequent labor market opportunities. Therefore, policies aimed at increasing FAFSA completion rates are powerful potential mechanisms for reducing economic inequality 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%.

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.

Introduction

The Free Application for Federal Student Aid (FAFSA) is the gateway application to federal financial aid (as well as other sources of financial aid) for postsecondary education in the United States. The goal of this work is to examine the variation in FAFSA completion rates across US 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 US 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 US Department of Education's records on recent high school graduates' June 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. The gaps in FAFSA filing between the wealthiest and poorest districts are most severe in Vermont, Wisconsin, and Ohio at about 19 percentage points.

Large gaps in FAFSA completion rates between wealthy and impoverished school districts exist between states and within states. There are, however, certain states that have narrow gaps in FAFSA completion between the wealthiest and poorest districts (such as Maine and New Mexico) and that have higher rates of completion among low-income districts than wealthier districts (such as California and Minnesota).

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.

Data

To conduct this analysis, we merge data from three sources. First, we utilize the 2015 US Census' school district-level Small Area Income and Poverty Estimates (SAIPE) on the share of children ages 5 to 17 living in poverty, which is calculated annually from the American Community Survey to determine income and poverty rates among children.[1,2] Second, to assess district-level FAFSA completion, we use the US Department of Education's June FAFSA filing rates by district from the 2016-2017 cycle (for more information about the merging process, please see Appendix A).[3,4] 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.[5] Our final sample includes 9,852 school districts from 49 states.[6]

Table 1. *Descriptive statistics for national child poverty rate and FAFSA completion rates, n=9,852*

	Mean	SD	Min	Max
Rate of children 5 to 17 living in poverty	18.9	9.8	1.6	62.2

[1] The US 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 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

[2] We do not use the percentage of students eligible for free or reduced price lunch (FRL) as a proxy for poverty as this 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

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

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

[5] Common Core of Data files can be accessed at the NCES website: https://nces.ed.gov/ccd/pubagency.asp

[6] In the current analysis, we capitalize on the variation in FAFSA completion and poverty rates across 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 analyses.

FAFSA completion rate	48.1	10.7	20.0	80.0

Note. FAFSA completion rates are from the U.S. Department of Education for June 2015. Poverty rates are from the 2015 Small Area Income and Poverty Estimates. Statistics are weighted by district enrollment size.

In Table 1, we report basic descriptive statistics for the district-level poverty and FAFSA completion measures. The average school district in the US serves a population where 18 percent of children between the ages of 5 and 17 live in poverty.

Beyond this national average, however, there is considerable variability, with district-level childhood poverty rates ranging from a low of 2% to a high of 62%. In Figure 1, we display variability in school district-level poverty rates across states. In this figure, we sort states according to the median district poverty level. States with the highest median district level poverty include southern states, such as Mississippi, Georgia, and Alabama. States with lower medians of poverty include northeastern states such as Connecticut, Massachusetts, and New Jersey.

Across districts, the June FAFSA completion rate is 49%, on average, and ranges substantially from 20% to 80%, although these specific bounds are likely to be an artifact of the fact that the US Department of Education does not report FAFSA completion rates below 20% or above 80%.[7]

In Figure 2, analogous in structure to Figure 1, we present the within-state variability in the proportion of students who completed the FAFSA. We observe low median completion rates across districts in Utah, Texas, and Oklahoma and high median completion rates in Massachusetts, Maine, and Connecticut.

We begin by visually examining the relationship between FAFSA completion rates and district poverty rates by each state individually. We present these state-by-state figures in Appendix B. In each appendix figure, 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. Note that in examining results across states, the axes of the figures change in order to best present the data in each particular state.

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 Louisiana and Indiana, we find that FAFSA completion rates are lower where there are greater

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

shares of children living in poverty. In other states, such as Oregon and California, we observe no clear relationship between FAFSA completion and poverty.

Further, in a few states, we find some evidence of a positive relationship such that FAFSA completion is higher in high poverty districts. None of these relationships appears particularly strong, except in the case of Utah. However, Utah has the lowest state FAFSA filing rate in our sample of 49 states.

In certain states, we observe curvature in the relationship between FAFSA completion and poverty. These states include: Arizona, Colorado, Connecticut, Delaware, Georgia, Maine, Missouri, New Hampshire, Ohio, Rhode Island, Tennessee, Texas, and Wyoming. In Colorado, for example, this curvature suggests that FAFSA completion rates are more similar for relatively high and low poverty districts and modestly lower for districts in the state of more middling levels of child poverty. In the next section, we discuss how we more carefully analyze these relationships.

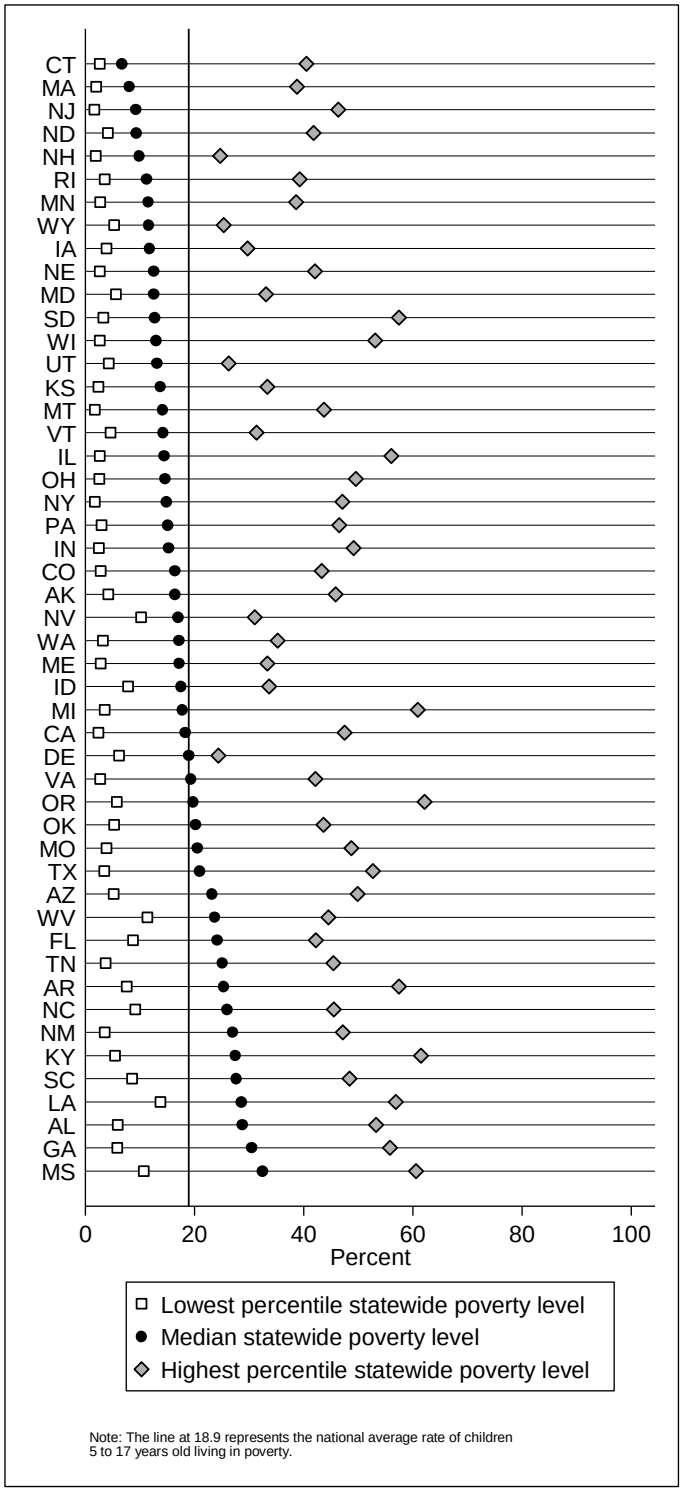


Figure 1. *Distribution of child poverty rate across states (sorted by median level)*

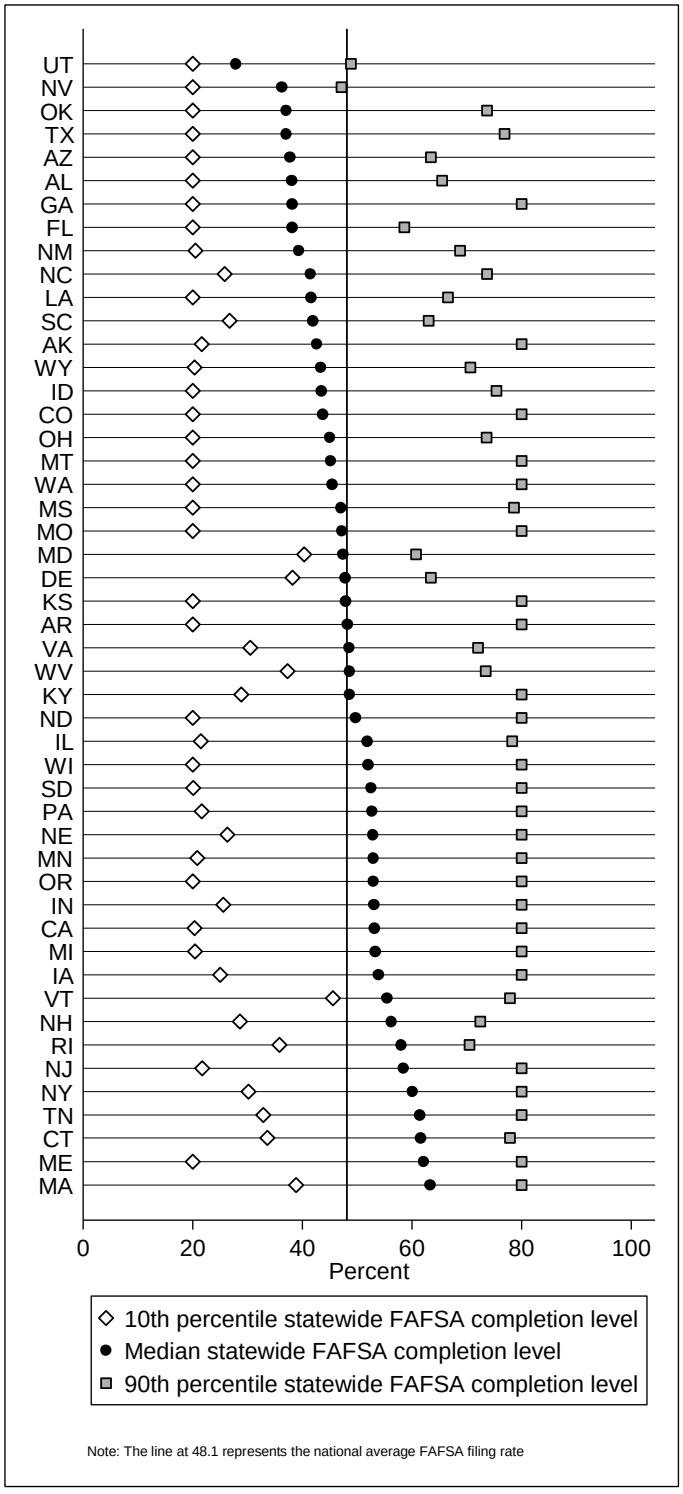


Figure 2. *Distribution of FAFSA completion rate across states (sorted by median level)*

Methods

We use regression analysis to estimate the relationship between FAFSA completion rates and the share of children 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 variables (e.g., we use a quadratic model in those states where we observe curvature). Using these fitted models, we then estimate 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 the SAIPE). These percentiles correspond to the following poverty rates, respectively: 6.9%, 10.9%, 16.7%, 23.8%, and 31.2%. Through this analysis, we aim to determine which states are doing relatively well or relatively less well with FAFSA completion at particular levels of district poverty.

Results

The relationship between FAFSA completion and poverty is statistically significant and, for many states, quite substantial. We separate our results into two tables, which are displayed in Appendix C. In Table C1 we report results from the fitted linear models and, in Table C2, we report results from the fitted quadratic models (e.g., corresponding to those appendix figures where we observe curvature in the relationship). The last row of Table C1 shows that, on average, for every 10 percentage point difference in the share of children aged 5 to 17 living in poverty, we estimate that the FAFSA completion rate is approximately three percentage points lower. Beyond this average, we observe substantial state-by-state variability. This relationship is most extreme in Iowa where, on average, we see a negative one-for-one difference in the FAFSA completion rate for every percentage point difference in the poverty rate. We observe a positive relationship between FAFSA completion and poverty among a few states. The most extreme example is Utah. On average, for every 10 percentage point difference in district poverty, the FAFSA completion rate is 7 percentage points higher in Utah. As mentioned previously, however, Utah has a very low average FAFSA completion rate. In fact, there are no school districts in Utah where more than half of the high school graduates complete the FAFSA. In Table C2, we report analogous results from the fitted models using a quadratic function.

We next use these same fitted models to estimate the average FAFSA completion rate 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 poverty from the highest FAFSA completion rate to the lowest completion rate.[8] We find that Tennessee, Maine, and Massachusetts at 60% to 62% have the highest FAFSA completion rates in the country at the 50th percentile of the national poverty rate. Conversely, we find Texas, Alabama, and Utah have the lowest completion rates between 32% and 38% at this same percentile.

Variation in FAFSA completion between districts within states is also large. The last column in Table 2 displays the difference in completion rates between the districts at the 90th and 10th percentile of poverty within each state. In Wisconsin and Vermont, a gap of 19 percentage points in FAFSA filing exists between the wealthiest and poorest districts. In four states (Minnesota, California, Montana, and Alabama), the poorest districts have higher FAFSA completion rates than the wealthiest districts, although the differentials are

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

modest. On average, gap in filing between the wealthiest and poorest districts within states is nearly 10 percentage points.

Figure 3 presents estimates from Table 2 visually. The national average FAFSA filing rate of 48.1% is plotted as a horizontal line serving as a benchmark for comparing individual states. Figure 3 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, New York, Massachusetts, and Maine, students in all districts irrespective of poverty rates file the FAFSA at a rate higher than the national average. In the states with low overall FAFSA completion rates, such as Alabama, Arizona, Oklahoma, and Texas, all students, including students from the relatively wealthier districts, file the FAFSA at 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 3 we see that in most states, poorer school districts have lower FAFSA filing rates, visually shown by arrows pointing towards the high-poverty districts' FAFSA completion rate values. In some states, such as Maine and New Mexico, gaps in FAFSA completion across poverty levels are narrow. However, given the differing statewide FAFSA averages, the stories of Maine and New Mexico are drastically different. Namely, all students in Maine file the FAFSA at very high levels, whereas all students in New Mexico file the FAFSA at a low level regardless of level of poverty. In four states, namely Alabama, California, Minnesota, and Montana, poorer districts have higher FAFSA rates than richer districts. However, the poorer districts outperform the richer districts in FAFSA completion by 0.6-3.5 percentage points.

Figure 4 helps to visualize the gaps in FAFSA completion between the highest and lowest rated states at each of the percentiles reported in Table 2. As shown in Figure 4, the differences between districts of similar levels of poverty coming from high-FAFSA and low-FAFSA states are dramatic. Among the wealthiest school districts (or those at the 10^{th} percentile of child poverty), the difference in average completion rates between the high-FAFSA and low-FAFSA states is almost 40 percentage points. At the 75^{th} percentile of poverty, the spread is similar; Tennessee has the highest average completion rate at 60%, and Wyoming has the lowest at 18%. The gap between states shrinks somewhat at the 90^{th} percentile of poverty, or among some of the most impoverished districts—although the gap remains quite large with an average 62% completion rate in Maine and a 35% completion rate in Oklahoma. Notably, across the distribution of poverty, Tennessee consistently maintains the highest completion rate among the 49 states in the

sample. This is not necessarily surprising, given the statewide focus on FAFSA completion in Tennessee.[9]

Table 2. *States ranked by within-state estimated average FAFSA completion for districts meeting 50th percentile of the district-level poverty rate among children 5 to 17*

State	10th	25th	50th	75th	90th	Gap (pp)
TN	67.1%	64.8%	62.2%	60.1%	59.3%	7.8
ME	63.5%	61.3%	59.5%	59.5%	62.1%	1.4
MA	63.8%	62.1%	59.5%	56.3%	53.1%	10.7
NY	62.6%	60.8%	58.1%	54.9%	51.5%	11.1
NJ	61.3%	59.1%	56.0%	52.2%	48.2%	13.1
MN	54.4%	55.0%	55.8%	56.9%	58.0%	-3.6
IL	56.0%	55.6%	55.0%	54.3%	53.6%	2.4
OR	55.2%	54.9%	54.5%	53.9%	53.3%	1.9
CA	52.6%	53.0%	53.6%	54.4%	55.1%	-2.5
PA	58.1%	56.3%	53.6%	50.4%	47.0%	11.1
VT	61.3%	58.2%	53.6%	48.0%	42.2%	19.1
IN	58.5%	56.4%	53.3%	49.6%	45.7%	12.8
RI	59.8%	56.4%	53.0%	51.4%	52.8%	7.0
MI	56.2%	54.7%	52.4%	49.7%	46.8%	9.4
WV	--	--	51.3%	49.5%	47.6%	--
CT	59.9%	55.7%	51.1%	47.6%	46.8%	13.1
KY	51.7%	51.1%	50.2%	49.2%	48.0%	3.7
AR	--	51.9%	49.9%	47.5%	45.0%	--
MS	--	50.4%	49.5%	48.3%	47.1%	--
NE	54.3%	52.2%	49.1%	45.3%	41.4%	12.9
GA	55.4%	52.5%	48.5%	44.0%	39.8%	15.6
VA	52.5%	50.9%	48.5%	45.6%	42.6%	9.9
SC	--	50.7%	47.8%	44.4%	40.8%	--
DE	59.8%	53.5%	47.5%	45.3%	--	--
IA	57.4%	53.3%	47.3%	40.0%	--	--
WI	55.2%	52.0%	47.3%	41.7%	35.7%	19.5
MO	54.9%	51.1%	46.6%	42.8%	40.7%	14.2
WA	47.5%	47.1%	46.5%	45.8%	45.0%	2.5
NH	54.8%	49.3%	46.4%	51.3%	--	--
MD	50.0%	48.5%	46.3%	43.7%	40.9%	9.1
CO	49.7%	47.7%	46.0%	45.5%	47.2%	2.5
KS	49.3%	47.8%	45.6%	43.0%	40.2%	9.1

[9] For example, Tennessee is currently implementing a statewide "FAFSA Frenzy" campaign: https://www.tn.gov/gearuptn/article/tn-fafsa-frenzy-testing.

Table 2. *States ranked by within-state estimated average FAFSA completion for districts meeting 50th percentile of the district-level poverty rate among children 5 to 17*

State	10th	25th	50th	75th	90th	Gap (pp)
SD	51.1%	48.8%	45.4%	41.3%	36.9%	14.2
ID	--	48.1%	45.2%	41.6%	37.9%	--
LA	--	--	45.1%	43.6%	42.0%	--
FL	--	45.8%	44.7%	43.4%	42.0%	--
NV	--	42.1%	44.5%	47.4%	50.5%	--
NC	--	46.4%	44.2%	41.5%	38.7%	--
ND	47.9%	46.3%	44.0%	41.1%	38.1%	9.8
MT	42.4%	42.9%	43.8%	44.8%	45.9%	-3.5
OH	54.3%	49.1%	43.0%	38.2%	36.0%	18.3
NM	43.4%	43.2%	42.9%	42.5%	42.1%	1.3
WY	40.8%	45.0%	40.6%	18.1%	--	--
AZ	45.1%	42.8%	40.2%	38.0%	36.9%	8.2
AK	42.6%	41.6%	40.1%	38.4%	36.5%	6.1
OK	42.4%	41.3%	39.6%	37.5%	35.4%	7.0
TX	40.6%	39.2%	37.6%	36.4%	35.9%	4.7
AL	35.7%	35.8%	36.0%	36.1%	36.3%	-0.6
UT	24.5%	27.3%	31.5%	36.5%	--	--

Notes: States are ranked largest to smallest based on FAFSA completion rates on the 50th percentile of nationwide poverty among school districts. The FAFSA completion rates reported here are the averages calculated from the fitted linear or quadratic models (as specified in Figures above) of district FAFSA completion on the percent of children 5 to 17 living in poverty within school districts. Estimates of FAFSA completion are not reported for those states without districts meeting the national percentiles of poverty reported here.

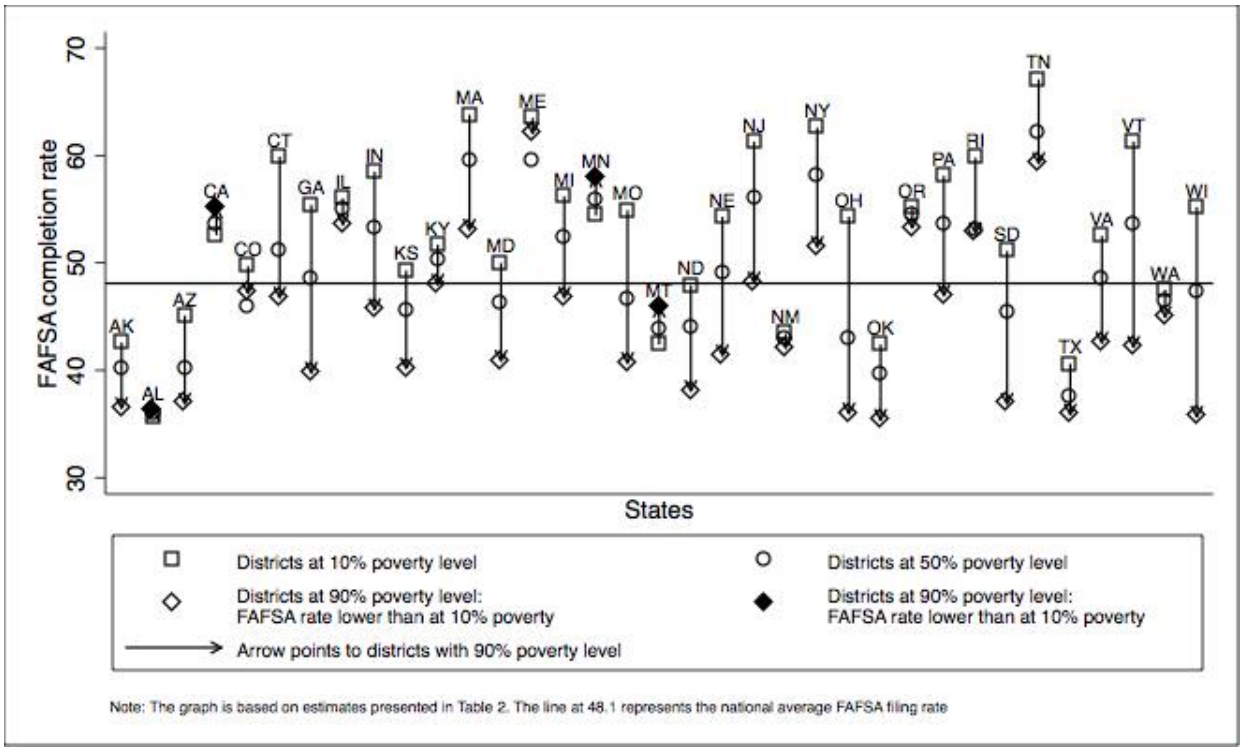


Figure 3. *FAFSA completion rates for districts at 10%, 50%, and 90% poverty levels across states compared to the national average FAFSA completion level*

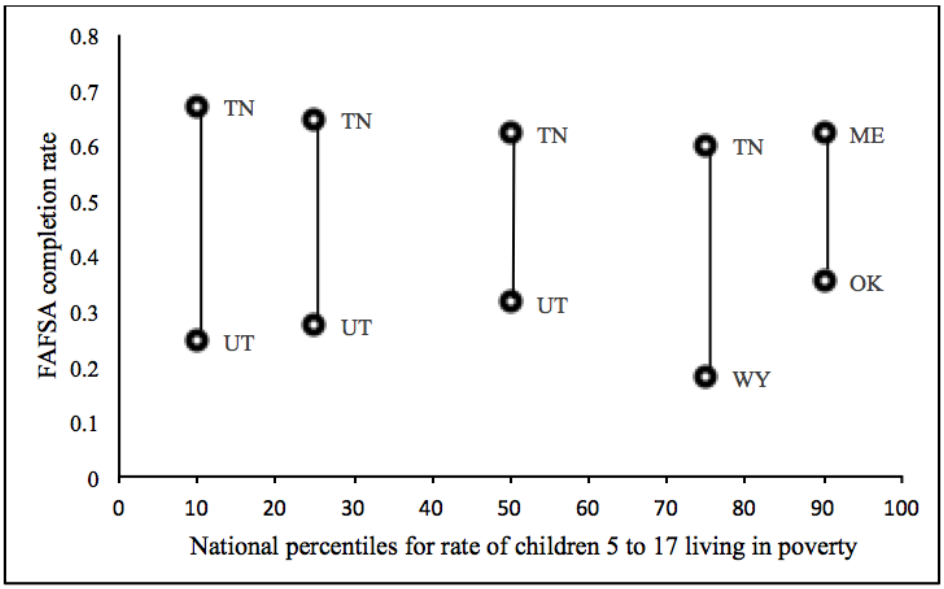


Figure 4. *States with the highest and lowest estimated FAFSA completion rates at differing percentiles of district poverty rate*

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.

Filing the FAFSA is a major step in accessing higher education. 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 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 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 FAFSA encountered by all students irrespective of the state in which they reside.

APPENDIX A: Data processing

We used three core datasets, all publicly available, for this report. The first is the 2015 Small Area Income & Poverty Estimates (SAIPE), a dataset that combines income and poverty data from several sources, including the decennial census and the American Community Survey. The second is the Free Application for Federal Student Aid (FAFSA) completion rate data for 2015 provided by the U.S. Department of Education. Finally, we obtained school district characteristics from the Common Core of Data for the 2015-2016 academic year.

We merged the three datasets using local education agency identification numbers. In Table A1, we report the results of merging the SAIPE, FAFSA, and Common Core of Data (CCD) files. The SAIPE and FAFSA data matched for the 9,922 school districts; 3,243 districts were available in the SAIPE file only, and 1,098 districts were available in the FAFSA file only. An additional 112 districts were present in the SAIPE or FAFSA files but not the CCD.

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 (see Table A2).

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 (n=3,061). 1,463 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 72 "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.

Table A1. *Results of merging SAIPE, FAFSA, and Common Core of Data files.*

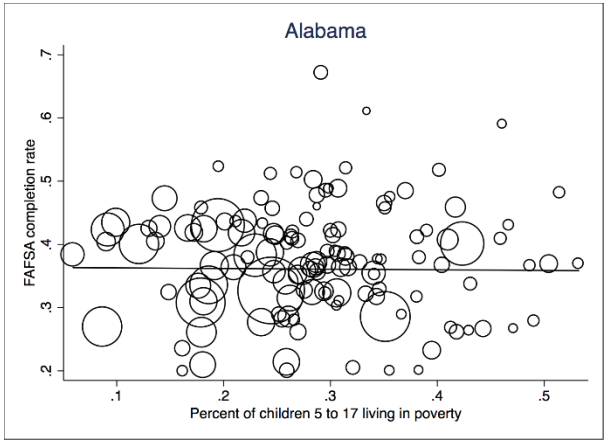
	Matched to CCD	Didn't match to CCD
SAIPE and FAFSA matches	9,922	-
SAIPE only	3,243	80
FAFSA only	1,098	32
Total	**14,263**	**112**

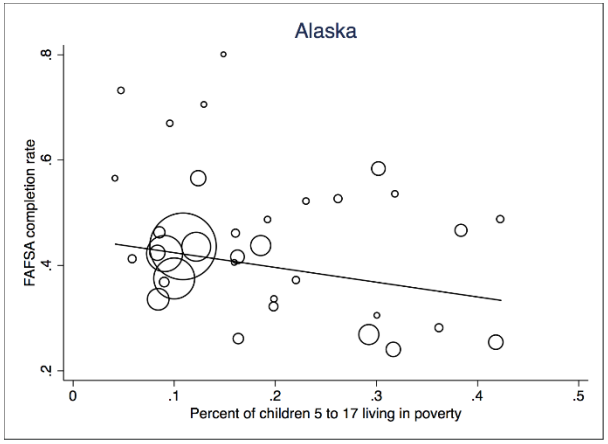
Table A2. *Types of school districts in SAIPE-FAFSA merged dataset*

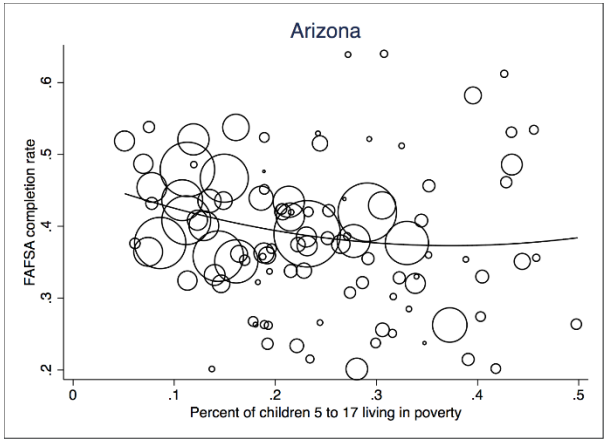
	SAIPE & FAFSA matches	SAIPE only	FAFSA only	**Total**
Regular local school district	9,761	3,060	72	**12,893**
Local school district that is a component of a supervisory union	91	112	77	**280**
Supervisory union	2	46	-	**48**
Regional education service agency	56	6	81	**143**
State-operated agency	3	2	27	**32**
Federal-operated agency	-	-	-	**-**
Charter agency	9	17	829	**855**
Other education agency	-	-	12	**12**
Total	**9,922**	**3,243**	**1,098**	**14,263**

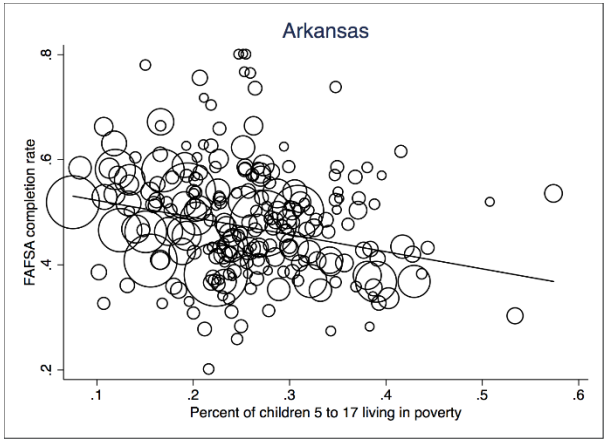
Notes. School district categories are based on Common Core of Data.

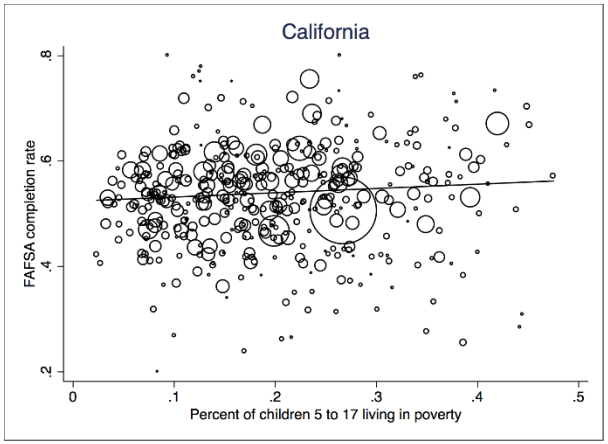
APPENDIX B: Relationship between district-level FAFSA completion rates and the share of children living in poverty, state-by-state

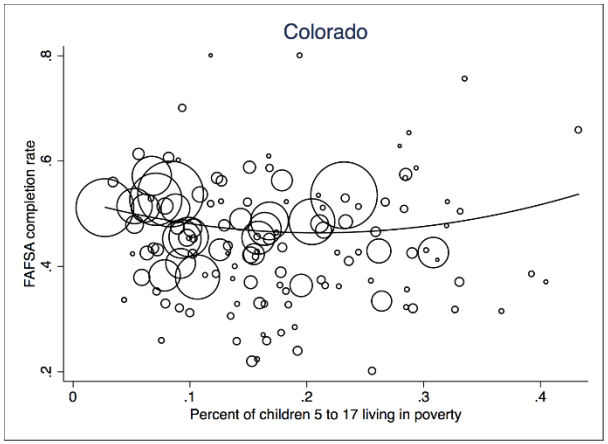


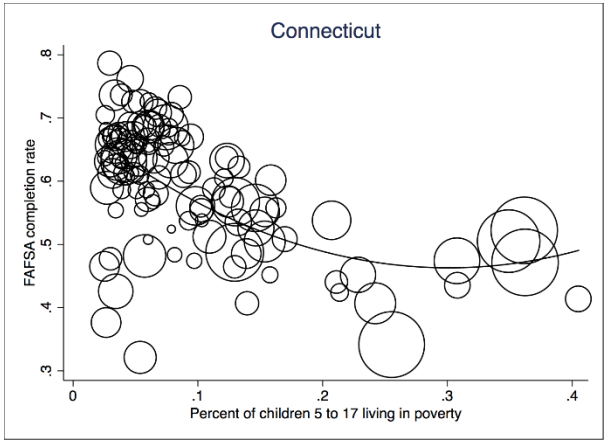


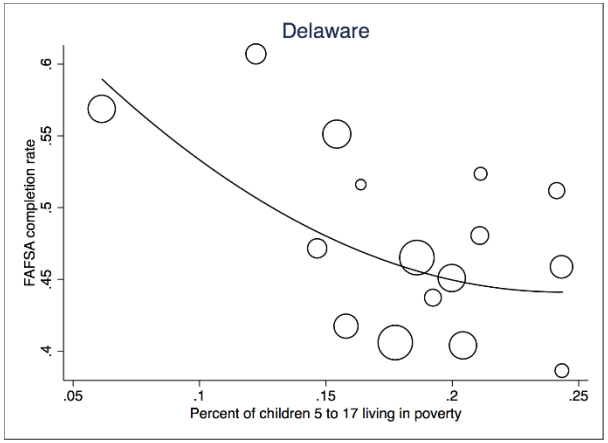


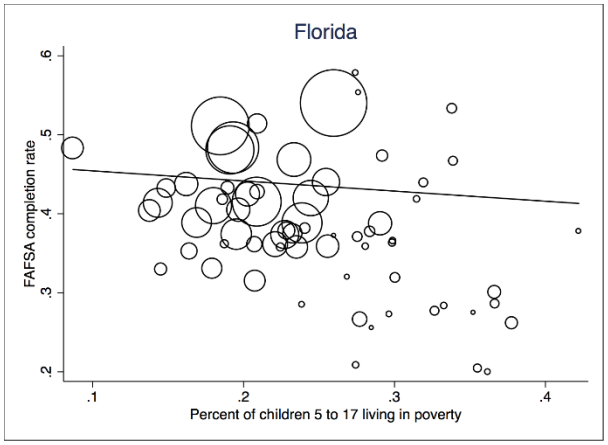


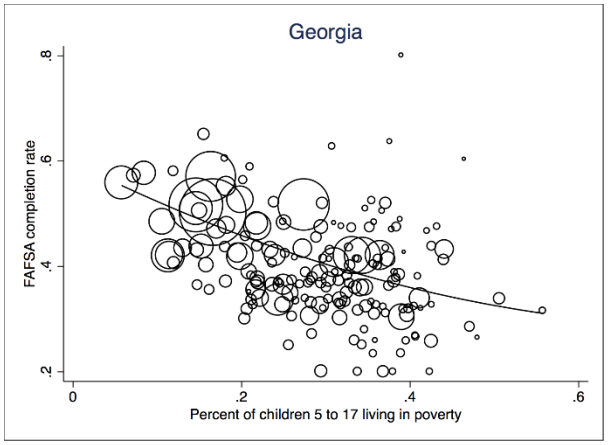

California
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

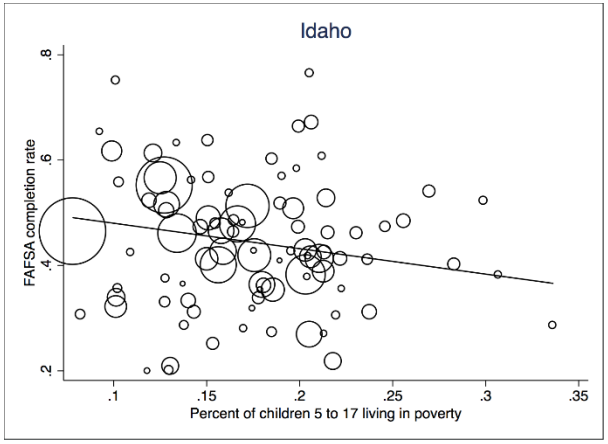

Colorado
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

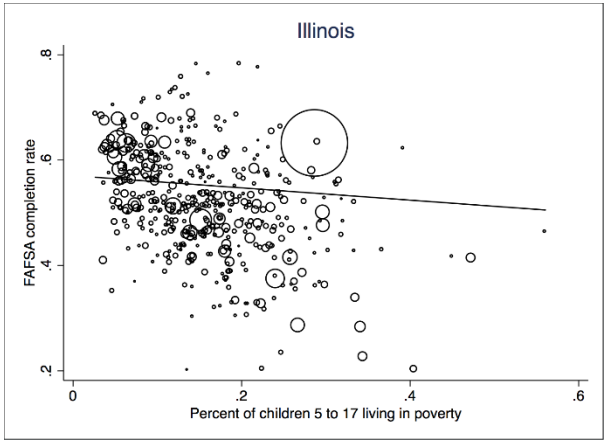

Connecticut
FAFSA completion rate
.3
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

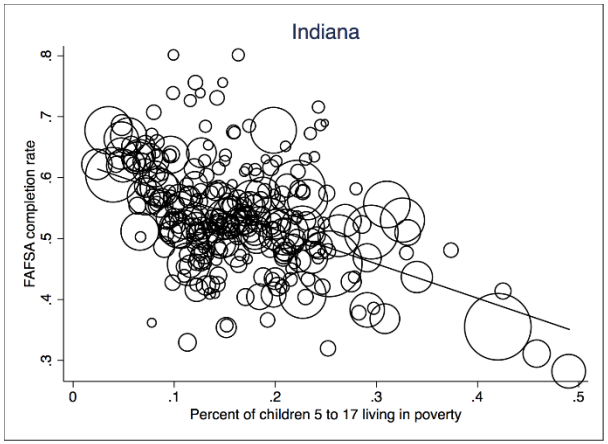

Delaware
FAFSA completion rate
.4
.45
.5
.55
.6
.05
.1
.15
.2
.25
Percent of children 5 to 17 living in poverty

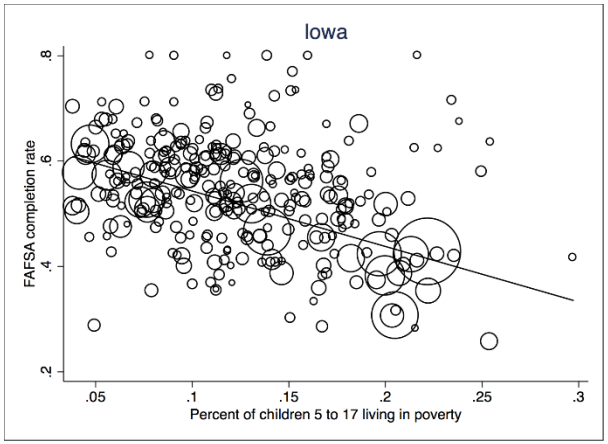

Florida
FAFSA completion rate
.2
.3
.4
.5
.6
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

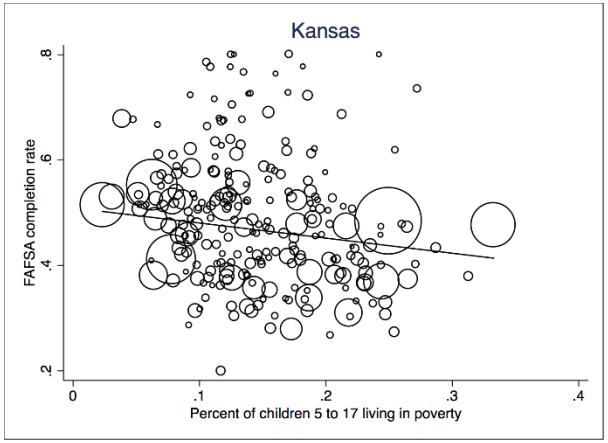

Georgia
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

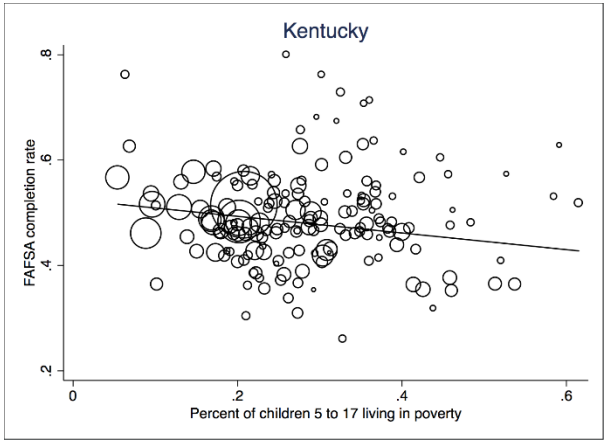

Idaho
FAFSA completion rate
.2
.4
.6
.8
.1
.15
.2
.25
.3
.35
Percent of children 5 to 17 living in poverty

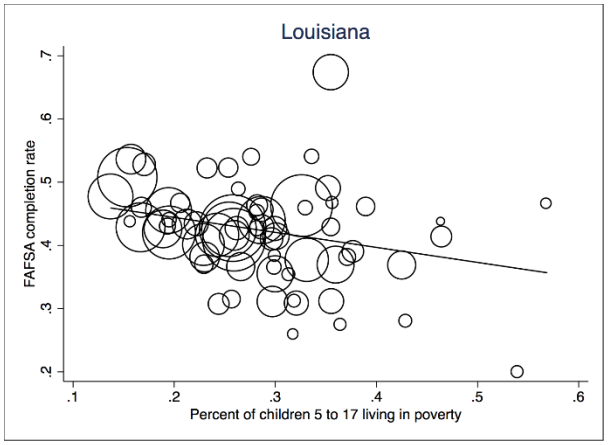

Illinois
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

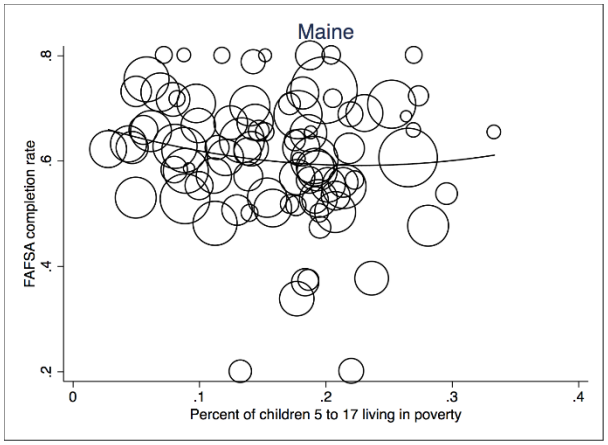

Indiana
FAFSA completion rate
.3
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

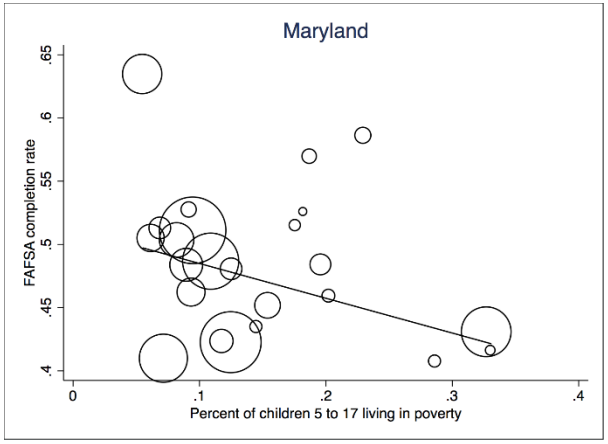

Iowa
FAFSA completion rate
.2
.4
.6
.8
.05
.1
.15
.2
.25
.3
Percent of children 5 to 17 living in poverty

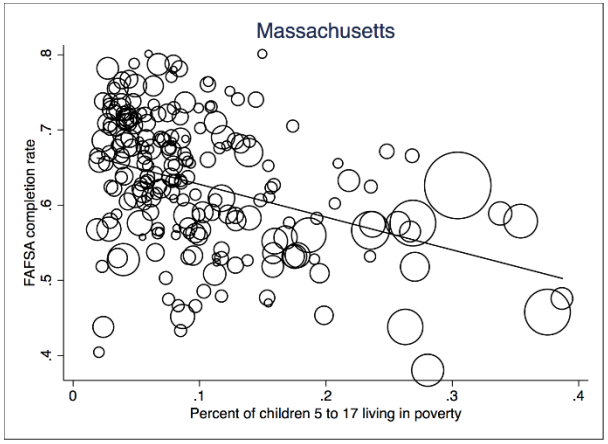

Kansas
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

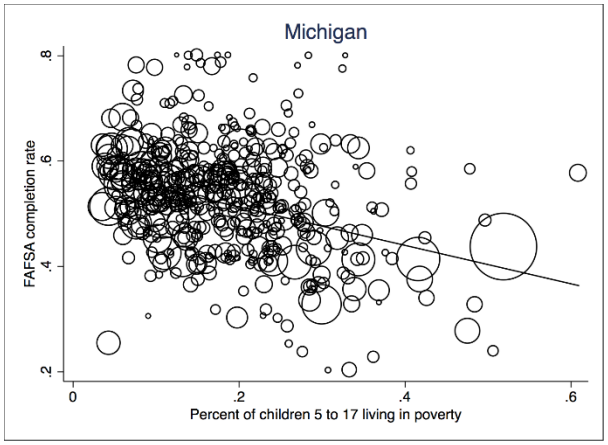

Kentucky
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

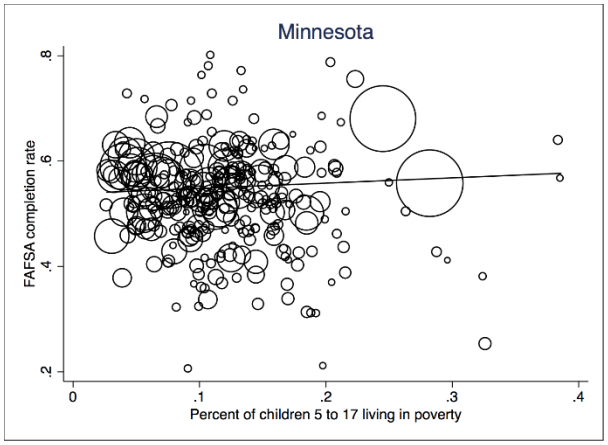

Louisiana
FAFSA completion rate
.2
.3
.4
.5
.6
.7
.1
.2
.3
.4
.5
.6
Percent of children 5 to 17 living in poverty

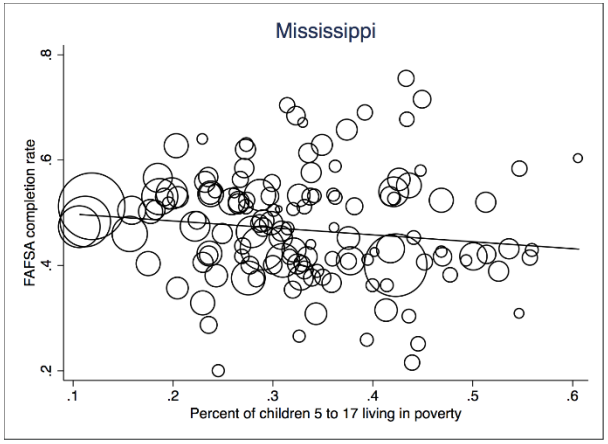

Maine
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

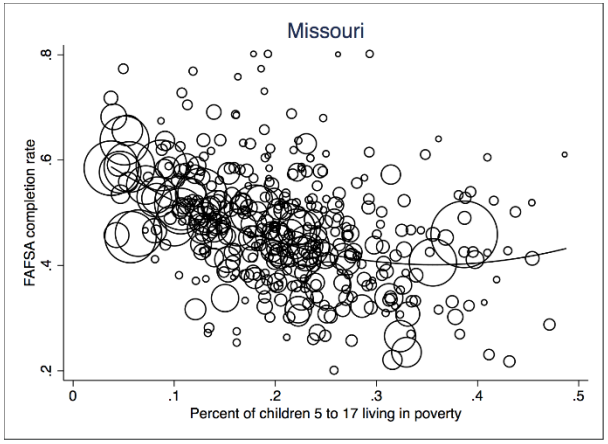

Maryland
FAFSA completion rate
.4
.45
.5
.55
.6
.65
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

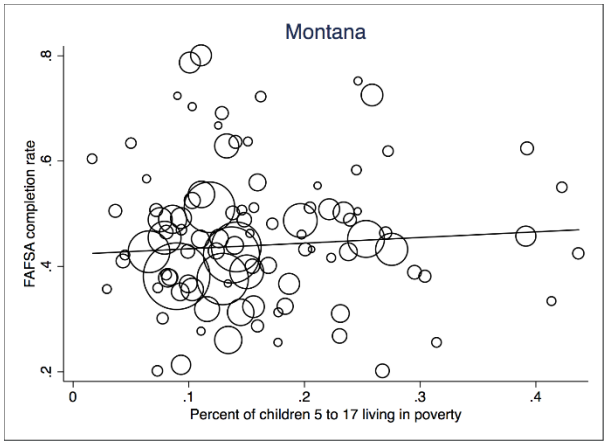

Massachusetts
FAFSA completion rate
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

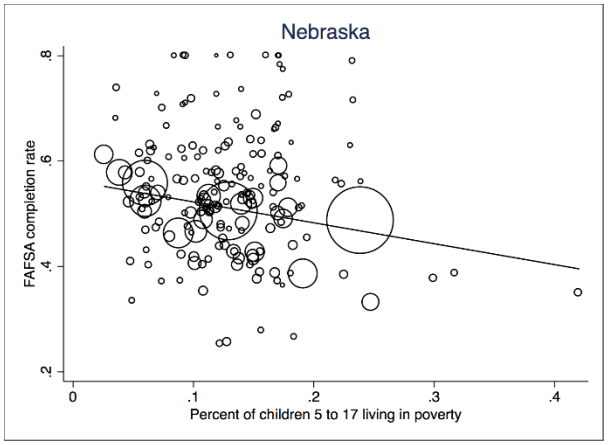

Michigan
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

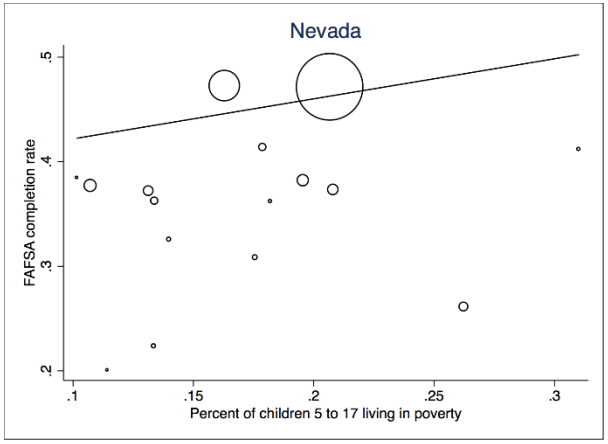

Minnesota
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

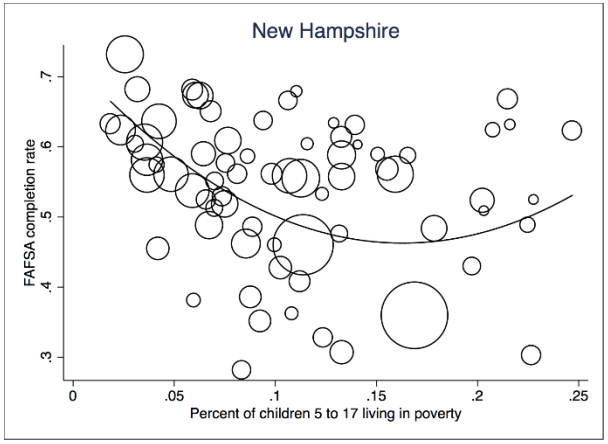

Mississippi
FAFSA completion rate
.2
.4
.6
.8
.1
.2
.3
.4
.5
.6
Percent of children 5 to 17 living in poverty

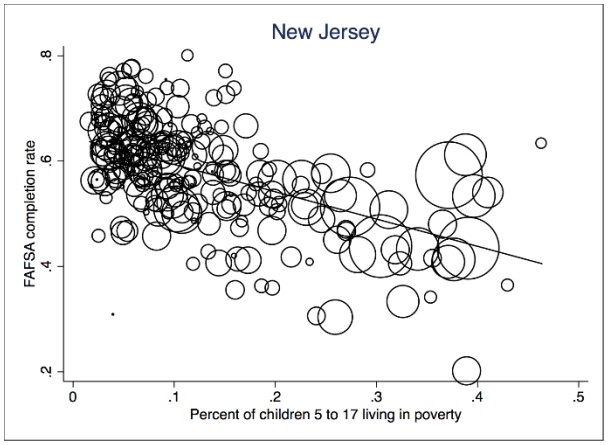

Missouri
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

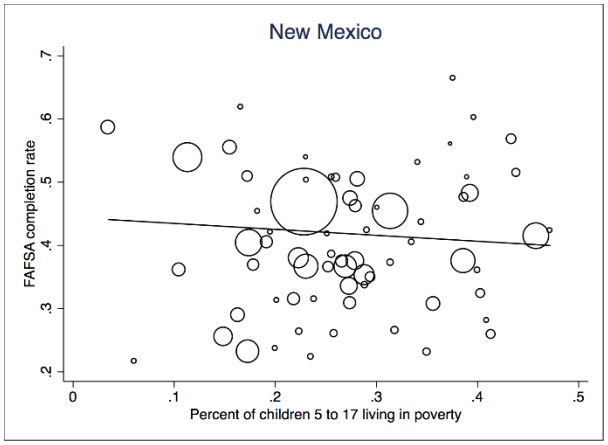

Montana
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

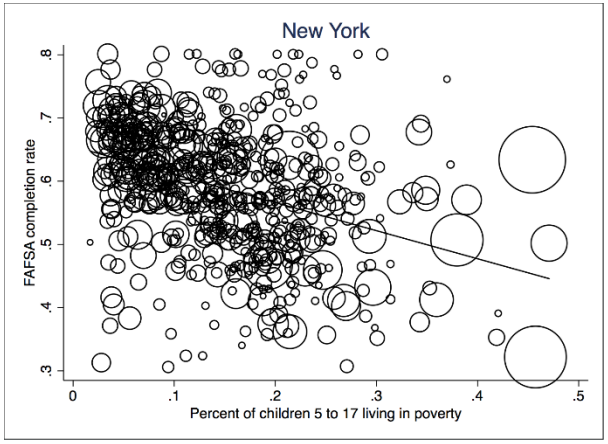

Nebraska
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

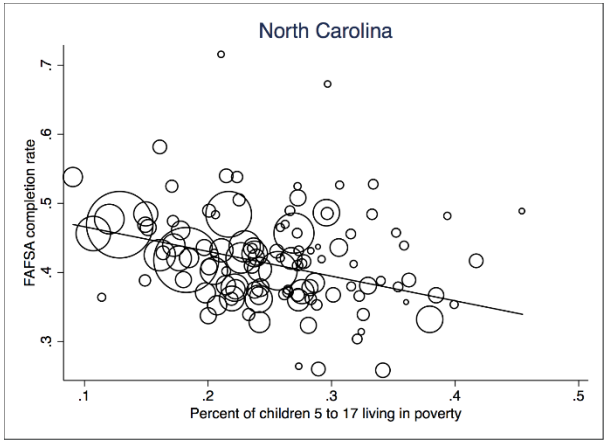

Nevada
FAFSA completion rate
.2
.3
.4
.5
.1
.15
.2
.25
.3
Percent of children 5 to 17 living in poverty

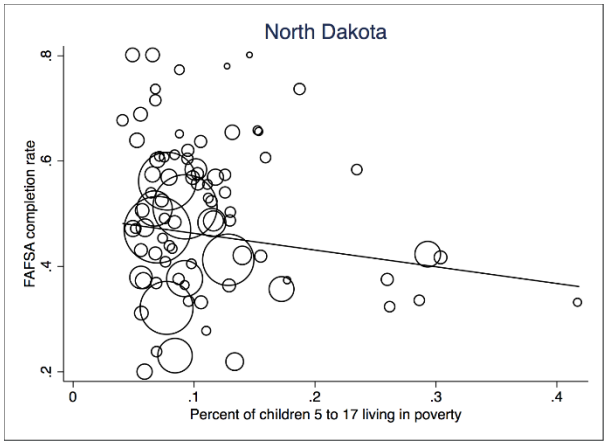

New Hampshire
FAFSA completion rate
.3
.4
.5
.6
.7
0
.05
.1
.15
.2
.25
Percent of children 5 to 17 living in poverty

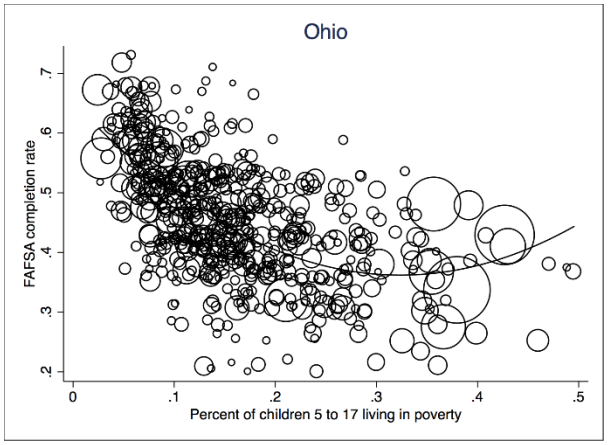

New Jersey
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

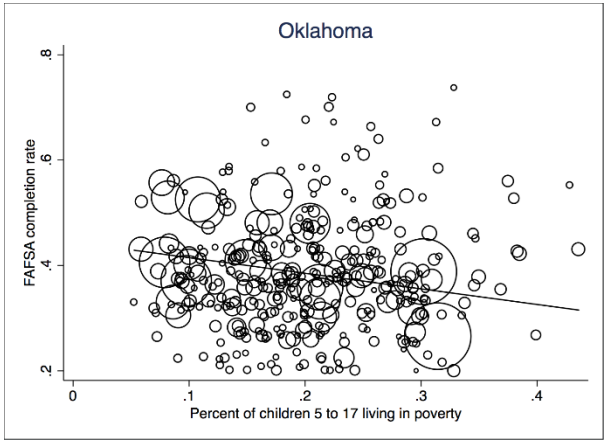

New Mexico
FAFSA completion rate
.2
.3
.4
.5
.6
.7
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

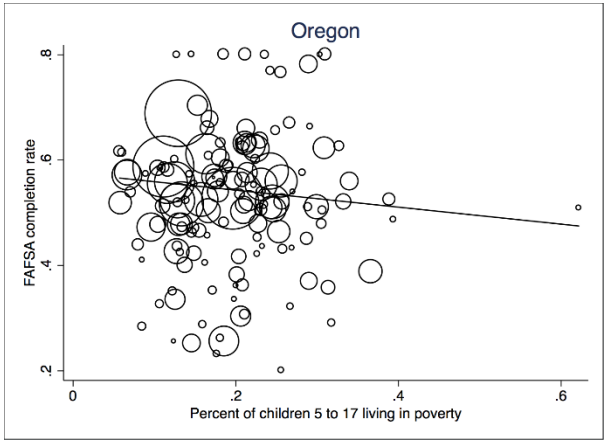

New York
FAFSA completion rate
.3
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

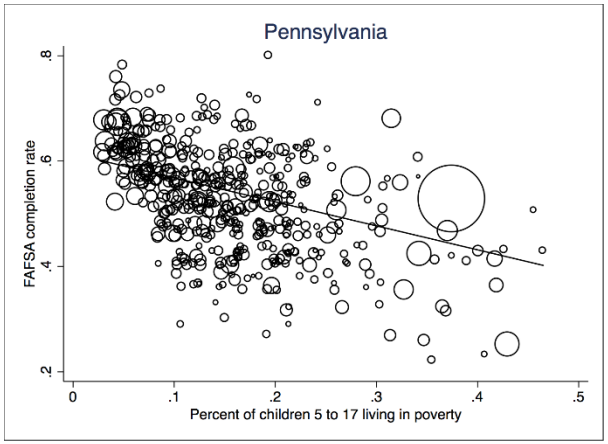

North Carolina
FAFSA completion rate
.3
.4
.5
.6
.7
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

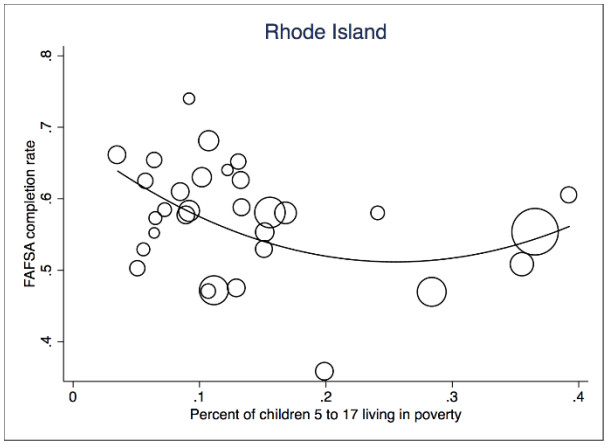

North Dakota
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

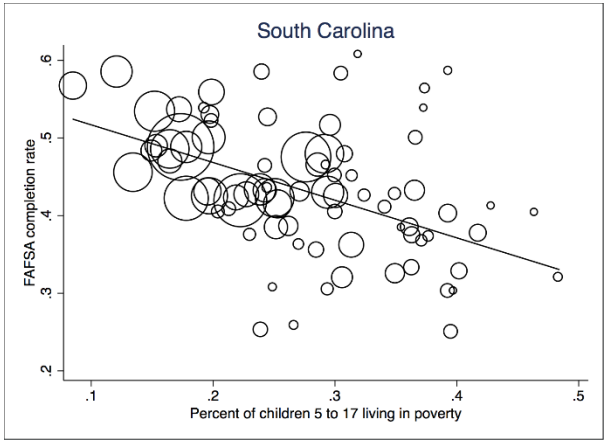

Ohio
FAFSA completion rate
.2
.3
.4
.5
.6
.7
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

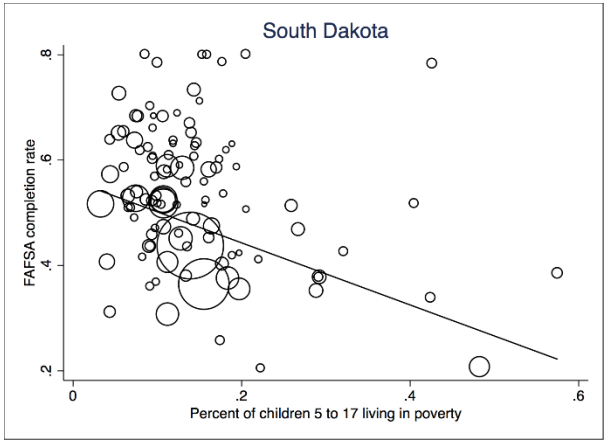

Oklahoma
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

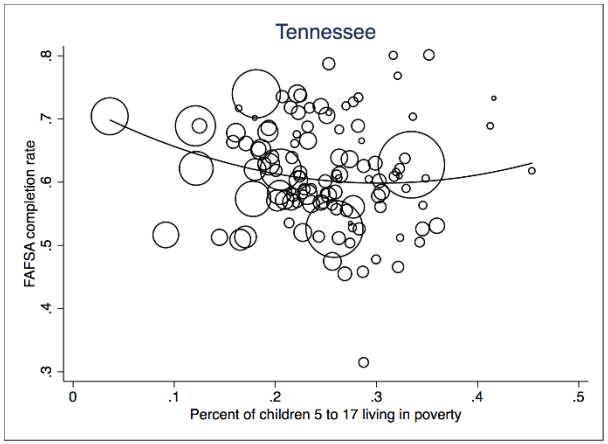

Oregon
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

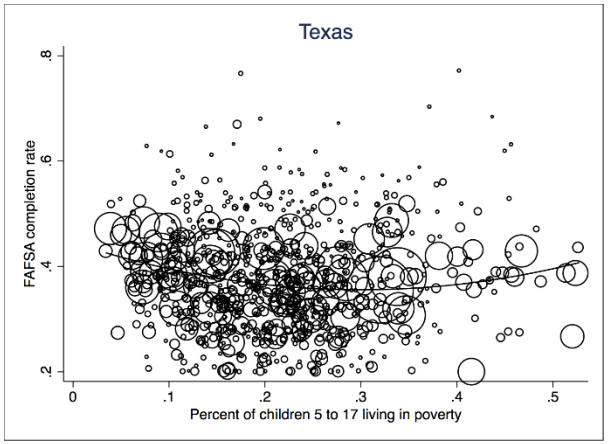

Pennsylvania
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

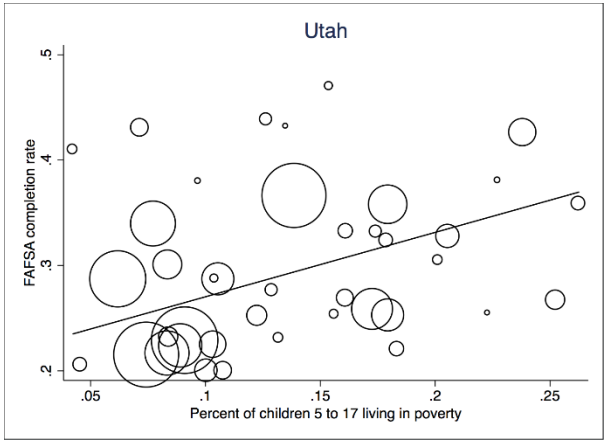

Rhode Island
FAFSA completion rate
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty

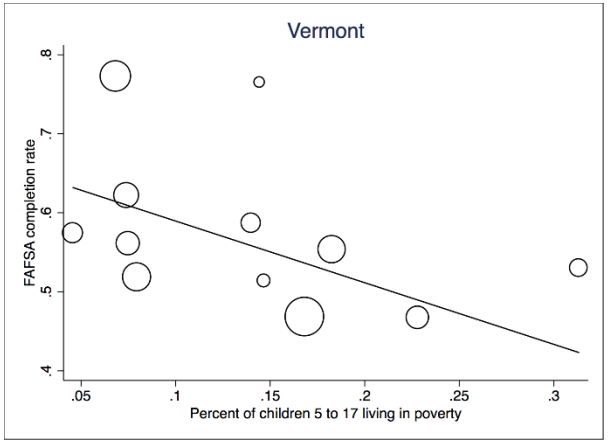

South Carolina
FAFSA completion rate
.2
.3
.4
.5
.6
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

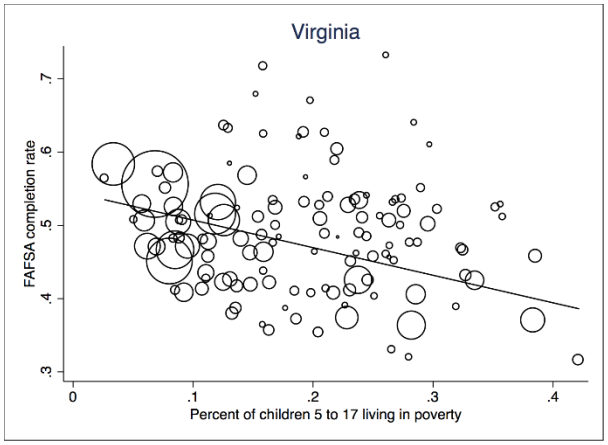

South Dakota
FAFSA completion rate
.2
.4
.6
.8
0
.2
.4
.6
Percent of children 5 to 17 living in poverty

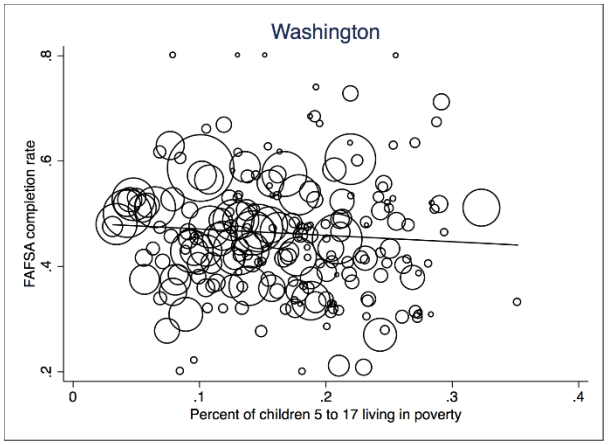

Tennessee
FAFSA completion rate
.3
.4
.5
.6
.7
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

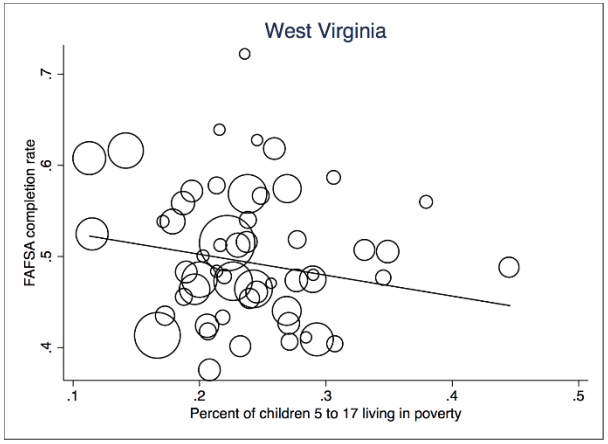

Texas
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty

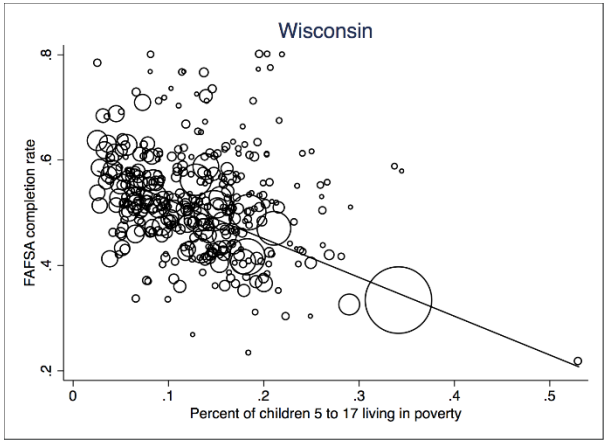

Utah
FAFSA completion rate
.2
.3
.4
.5
.05
.1
.15
.2
.25
Percent of children 5 to 17 living in poverty

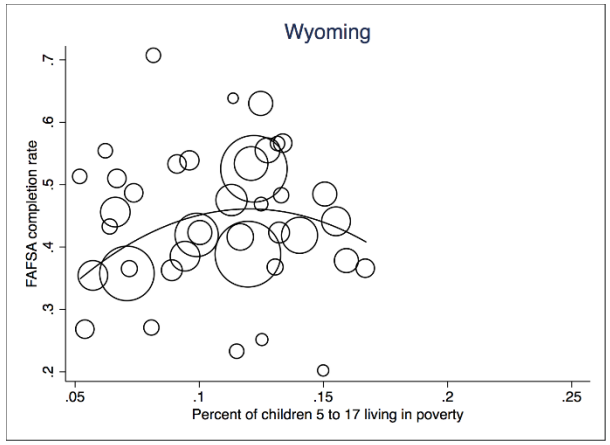

Vermont
FAFSA completion rate
.4
.5
.6
.7
.8
.05
.1
.15
.2
.25
.3
Percent of children 5 to 17 living in poverty


Virginia
FAFSA completion rate
.3
.4
.5
.6
.7
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty


Washington
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
Percent of children 5 to 17 living in poverty


West Virginia
FAFSA completion rate
.4
.5
.6
.7
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty


Wisconsin
FAFSA completion rate
.2
.4
.6
.8
0
.1
.2
.3
.4
.5
Percent of children 5 to 17 living in poverty


Wyoming
FAFSA completion rate
.2
.3
.4
.5
.6
.7
.05
.1
.15
.2
.25
Percent of children 5 to 17 living in poverty

APPENDIX C: Regressions results of district-level FAFSA completion rates on district-level child poverty, by state

Table C1. *Regression coefficients of FAFSA completion rate on child poverty rate: linear fit*

State	Percent living in poverty	n	R^2
AK	-0.249***	35	0.080
	(0.002)		
AR	-0.340***	234	0.118
	(0.001)		
AL	0.023***	134	0.001
	(0.001)		
CA	0.102***	414	0.014
	0.000		
FL	-0.187***	67	0.016
	(0.001)		
IA	-1.027***	302	0.360
	(0.002)		
ID	-0.502***	92	0.075
	(0.003)		
IL	-0.102***	459	0.010
	(0.001)		
IN	-0.528***	288	0.355
	(0.001)		
KS	-0.376***	250	0.111
	(0.002)		
KY	-0.152***	167	0.047
	(0.001)		
LA	-0.210***	68	0.058
	(0.001)		
MA	-0.441***	220	0.257
	(0.001)		
MD	-0.372***	24	0.250
	(0.001)		
MI	-0.387***	497	0.232
	(0.001)		
MN	0.146***	302	0.019
	(0.001)		
MS	-0.164***	137	0.049
	(0.001)		
MT	0.144***	98	0.009
	(0.007)		
NC	-0.381***	115	0.235

	(0.001)		

Table C1 (continued)

State	Percent living in poverty	n	R^2
ND	-0.402***	86	0.027
	(0.008)		
NE	-0.532***	187	0.209
	(0.002)		
NJ	-0.537***	258	0.409
	(0.001)		
NM	-0.054***	68	0.003
	(0.002)		
NV	0.416***	16	0.075
	(0.002)		
NY	-0.455***	623	0.238
	(0.001)		
OK	-0.291***	354	0.075
	(0.001)		
OR	-0.079***	146	0.003
	(0.002)		
PA	-0.456***	489	0.277
	(0.001)		
SC	-0.488***	81	0.319
	(0.001)		
SD	-0.584***	108	0.159
	(0.004)		
UT	0.712***	40	0.252
	(0.002)		
VA	-0.406***	131	0.261
	(0.001)		
VT	-0.784***	12	0.297
	(0.009)		
WA	-0.103***	215	0.006
	(0.001)		
WI	-0.799***	362	0.487
	(0.001)		
WV	-0.253***	55	0.059
	(0.002)		
Average	-0.274***	7,283	0.440
	(0.000)		

*p<0.05, **p<0.01, ***p<0.001

Notes: FAFSA completion rates are from the U.S. Department of Education for June 2015. Poverty rates are from the 2015 Small Area Income and Poverty Estimates. Coefficients and standard errors are presented in columns 2-3. Estimations are weighted by school district size based on the Common Core of Data for 2015-2016 academic year. Hawaii and D.C. are not included.

Table C2. *Regression coefficients of FAFSA completion rate on child poverty rate: quadratic fit*

State	Percent living in poverty	Percent living in poverty-squared	n	R^2
AZ	-0.778***	0.012***	103	0.150
	(0.004)	(0.000)		
CO	-0.833***	0.019***	132	0.095
	(0.004)	(0.000)		
CT	-1.487***	0.025***	120	0.378
	(0.005)	(0.00)		
DE	-2.560***	0.056***	16	0.420
	(0.016)	(0.001)		
GA	-0.799***	0.004***	178	0.394
	(0.003)	(0.000)		
ME	-0.962***	0.024***	89	0.030
	(0.019)	(0.001)		
MO	-1.265***	0.018***	391	0.371
	(0.003)	(0.000)		
NH	-2.994***	0.091***	73	0.304
	(0.017)	(0.001)		
OH	-1.784***	0.027***	598	0.478
	(0.002)	(0.000)		
RI	-1.356***	0.028***	31	0.167
	(0.009)	(0.000)		
TN	-0.795***	0.012***	118	0.099
	(0.004)	(0.000)		
TX	-0.499***	0.008	829	0.054
	(0.001)	(0.000)		
WY	4.361***	-0.185***	40	0.064
	(0.065)	(0.003)		

*p<0.05, **p<0.01, ***p<0.001

Notes: FAFSA completion rates are from the U.S. Department of Education for June 2015. Poverty rates are from the 2015 Small Area Income and Poverty Estimates. Coefficients and standard errors are presented in columns 2-3. Estimations are weighted by school district size based on the Common Core of Data for 2015-2016 academic year. DC and Hawaii are not included.