



United States Department of Agriculture

Economic
Research
Service

Economic
Research
Report
Number 255

August 2018

Characteristics of School Districts Offering Free School Meals to All Students Through the Community Eligibility Provision of the National School Lunch Program

Stephanie Rogus, Joanne Guthrie, Katherine Ralston





United States Department of Agriculture

Economic Research Service www.ers.usda.gov

Recommended citation format for this publication:

Rogus, Stephanie, Joanne Guthrie, and Katherine Ralston. *Characteristics of School Districts Offering Free School Meals to All Students Through the Community Eligibility Provision of the National School Lunch Program*, ERR-255, U.S. Department of Agriculture, Economic Research Service, August 2018.

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Stephanie Rogus, Joanne Guthrie, Katherine Ralston

Abstract

The Community Eligibility Provision (CEP) of the National School Lunch Program allows high-poverty schools to provide USDA school meals at no charge to all of their students. USDA reimbursement for meals is simplified by making use of routinely collected administrative data, such as participation in the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) or Temporary Assistance for Needy Families (TANF), rather than collecting school meal applications. Schools and districts with at least 40 percent of enrolled students identified as participating in these assistance programs through the administrative data—also known as the Identified Student Percentage, or ISP—are eligible to participate in the CEP. This report examines the characteristics of school districts that participated in the CEP in school year 2015-16—with participation defined as CEP being implemented in at least one eligible school in the district—using administrative data from USDA’s Food and Nutrition Service, the National Center for Education Statistics, and State education agencies, where available. The highest school-level ISP in the district was found to be significantly associated with CEP participation, holding other factors constant, although the association varied for different sized districts. Participation also varied significantly by region and length of time since CEP became available.

Keywords: National School Lunch Program, Community Eligibility Provision, child nutrition, school meals, children, food assistance programs

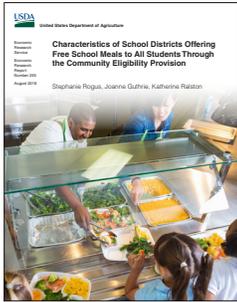
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Acknowledgments

The authors thank Heather Hopwood of USDA, Food and Nutrition Service for assistance in obtaining data necessary for completion of the study analyses. They thank technical peer reviewers Judi Bartfeld, University of Wisconsin; Lindsay Turner, Boise State University; Laura Tiehen, USDA, Economic Research Service (ERS); and Margaret Applebaum, John Endahl, and Heather Hopwood of USDA, Food and Nutrition Service; as well as David Smallwood, formerly of USDA, Economic Research Service, for many valuable comments. We also greatly appreciate the editorial and design support provided by Dale Simms and Curtia Taylor of ERS.

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Characteristics of School Districts Offering Free School Meals to All Students Through the Community Eligibility Provision of the National School Lunch Program

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What Is the Issue?

The Community Eligibility Provision (CEP) of the National School Lunch Program was established to increase access to school meals for children in low-income areas while reducing the burden associated with collecting household applications. The provision allows eligible schools to provide USDA school meals at no charge to all students in high-poverty schools. Eligibility to participate in the CEP is based on the percentage of students receiving benefits from the Supplemental Nutrition Assistance Program (formerly food stamps) or other specific means-tested assistance—this is known as the Identified Student Percentage, or ISP. Schools are eligible to participate in CEP if the ISP for the school, group of schools, or district is at least 40 percent.

In schools that adopt CEP, USDA reimburses meals according to a formula based on the ISP. Any costs for serving these meals in excess of the Federal reimbursement must be paid by the district from non-Federal sources. The decision as to whether an eligible school participates in CEP is made at the district level. The share of participating districts has increased steadily from the first year of national implementation in 2014-15, with 47 percent of eligible districts and 55 percent of eligible schools participating in 2016-17. Examining the characteristics of districts nationwide that have chosen to participate in CEP will inform policymakers regarding program acceptance.

What Did the Study Find?

This report examined the characteristics of school districts electing to implement the CEP option in the second year of nationwide availability, school year 2015-16, by estimating unadjusted participation rates by school district characteristic and a multivariate logit model. Characteristics included the highest school-level ISP in the district; whether the district was urban, rural, suburban, or in a town; district size; region; and the year that CEP became available in the State during the phase-in period before school year 2014-15.

After adjusting for other factors, school districts were more likely to adopt CEP in at least one school if at least one school in the district had an ISP between 60 and 90 percent. This is consistent with incentives faced by districts under the meal reimbursement formula, since all school meals served would be reimbursed at the free rate if the ISP were 62.5 percent or more.

- This pattern was reversed for smaller districts with at least one school at 90 percent ISP or above. Districts under 20,000 students were significantly less likely to adopt CEP at this highest ISP category after accounting for other factors. Smaller, high-ISP districts

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may have less incentive to adopt CEP since almost all students are already directly certified and the remainder could be easily certified via application.

- The year CEP became available in the State was also a significant factor. School districts in States where CEP was available in 2011-12 or 2012-13 were significantly more likely to adopt CEP in at least one school, compared to districts in States where CEP was available in 2014-15, other factors equal.
- Districts in the Southeast were more likely to adopt the CEP (compared to the Northeast reference region) while suburban districts were less likely (compared to the rural reference category), after accounting for other factors.

How Was the Study Conducted?

The study estimated unadjusted CEP participation rates and a multivariate logit model to identify characteristics associated with the probability that at least one school in the district participated in the CEP option. The multivariate model included interactions between district size and ISP category to explore differences in associations with ISP for districts of different sizes. The sample included 5,148 school districts comprising the universe of districts that were eligible to participate in CEP from 47 States for which data were available.

Participation at the district level was defined as participation by at least one school in the district. Data on the participation decision for each district were obtained from district election data for September 2015 from USDA's Food and Nutrition Service. Data on the highest school-level ISP for each school were obtained from reports posted (as required by law) by each State in May 2015. For seven States, ISP data were not available for 2015 and data for 2014 were used as an approximation for the 2015 value. Data on locale type and district size were matched from the Common Core of Data Public School Universe Survey for 2013 from the National Center for Education Statistics.

Characteristics of School Districts Offering Free School Meals to All Students Through the Community Eligibility Provision of the National School Lunch Program

Introduction

The Community Eligibility Provision (CEP) of the National School Lunch Program allows eligible schools to provide USDA school meals at no charge to all students in high-poverty schools, thus reducing administrative burden for school meal administrators. Districts may choose to participate in CEP if one or more of their schools are eligible. Schools participating in the CEP are reimbursed for meals served, based on a formula that makes use of routinely collected administrative data, such as participation in USDA's Supplemental Nutrition Assistance Program (SNAP) or other approved means-tested programs, rather than collecting school meal applications from student households. The share of enrolled students eligible for free meals because of their participation in these programs is referred to as the Identified Student Percentage (or ISP).

Schools are eligible to participate in the CEP if the ISP for the school, group of schools, or district is at least 40 percent. CEP-participating schools are required to participate in the School Breakfast Program (SBP) as well as the National School Lunch Program (NSLP), to count total breakfasts and lunches served daily, and to use non-Federal funds to cover any costs of providing free meals that exceed the Federal reimbursements.

The CEP was established to ensure access to school meals for low-income children, but not all eligible districts and schools participate. The share of participating districts has increased from 2014-15, the first year of nationwide implementation, with 32 percent of eligible districts participating that year, 37 percent in 2015-16, and 47 percent in 2016-17 (Segal et al., 2016; FRAC, 2017a).

Why do some eligible schools participate in the CEP and not others? The decision is made at the school district level. School districts must consider how the USDA meal reimbursement under the CEP formula compares with what they would receive under the typical formula, which reimburses based on the free, reduced-price, or paid status of each student.

The decision is complicated by the requirements of participation in CEP—for example, that schools must offer breakfast—and the likelihood that meals being provided at no cost to all students may change participation rates. Further, school districts must weigh the implications of discontinuing the collection of data on free and reduced-price meal eligibility that were historically used to allocate education funding such as Title I funding. School district characteristics may also play a role. For example, small districts may appreciate relief from the paperwork burden of certifying individual students; conversely, they may lack administrative staff with time to research the CEP and coordinate the switch to CEP.

This report uses State and Federal administrative data to examine the school district characteristics associated with CEP adoption by eligible districts. We define districts as eligible or participating

if they have at least one eligible or participating school. The characteristics we assess include the Identified Student Percentage (ISP), specifically the highest ISP for any school in the district; locale type (urban, suburban, rural, and town); district size; region; and the year that CEP became available in the State. Our analysis addresses the following questions:

1. How does the highest school-level ISP in a district influence its likelihood to adopt the CEP for at least one school?
2. Is CEP adoption associated with being located in a rural, urban, suburban, or township district?
3. Is district size associated with the likelihood of CEP adoption?
4. Does adoption vary by region?
5. Are districts more likely to adopt CEP in States where the option was phased in earlier?

Background: Community Eligibility Provision Enables Schools To Provide Meals at No Cost to All Students

Under the National School Lunch Program, students may be certified as eligible for free or reduced-price meals either by paper application or “direct certification” through their participation in the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) or other approved means-tested Federal assistance.¹ Before introduction of the Community Eligibility Provision, previously established options for providing meals at no charge in school districts, referred to as Provisions 2 and 3², reimbursed school districts for free meals based on the percentage of students certified as eligible either through direct certification or paper applications collected only once every 4 years instead of once every year. Forgoing the collection of individual applications for free or reduced-price meals from students, the CEP makes use of direct certification data. Schools and districts implementing CEP are reimbursed for meals based on routinely collected administrative data on the percentage of students directly certified. The percentage of students identified (as eligible for free meals) through direct certification is called the Identified Student Percentage, or ISP.

All school districts have been required, since the 2008-09 school year under the Child Nutrition and WIC Reauthorization Act of 2004, to establish a system of direct certification for children from households receiving SNAP (Moore et al., 2016). Direct certification requires that administrative data on SNAP participation or other assistance be matched to student enrollment records. A recent evaluation reported that 91 percent of children in SNAP households were directly certified for free school meals in school year 2014-15, though certification rates varied by State (Moore et al., 2016). Twenty-four States certified 95 percent of children in SNAP households, and no States had a certification rate below 60 percent (see Moore et al. for a more detailed description of direct certification effectiveness). Of the districts that did not directly certify any children, small and single-school districts were overrepresented (Moore et al., 2016). Potential barriers to CEP participation, therefore, include low rates of direct certification due to (1) inefficiencies in the process, (2) a large share of free and reduced-price eligible students whose households make use of paper applications, or (3) a large share of students living in households that do not participate in SNAP or other means-tested programs used for direct certification.

Within a district, schools can participate in the CEP as a single school, as a group of schools, or an entire district as long as the 40-percent ISP requirement is met for the participating school(s) or group(s) of schools. For this report, we define districts as eligible to participate if the ISP for the district is at least 40 percent, or if the ISP of any school in the district is at least 40 percent.³

¹ Other routes to direct certification include participation in Temporary Assistance for Needy Families, the Food Distribution Program on Indian Reservations, and Medicaid in a select number of States (for districts participating in the Direct Certification with Medicaid demonstration projects). Students enrolled in Head Start, students in foster care, and students identified as homeless, runaway, or migrant are also categorically eligible for free meals.

² The National School Lunch Act incorporated Provisions 2 and 3 in 1980 and 1995 for alternative determinations of free and reduced-price school meal eligibility. Both provisions reduce the administrative burden of processing applications, meal counting, and claiming methods, and require participating schools to serve all meals at no charge to all students. Provision 2 allows schools to make eligibility determinations based on applications in the first year and apply that number to meal counts to determine reimbursement for the next 3 years. Provision 3 allows schools to receive the same level of Federal assistance (cash and commodity) as the last year that they made eligibility determinations and meal counts (USDA FNS, 2017a) for the next 4 years.

³ There could be a school district with a single school currently participating in CEP without an ISP above 40 percent because the school had an ISP of over 40 percent in a prior year and falls within a grace period for participation.

Under CEP, the Federal reimbursement for school meals is based on the ISP of the participating entity (district, school, or group of schools). A multiplier is applied to the ISP to determine the share of meals reimbursed at the free rate. All remaining meals are reimbursed at the paid rate (USDA FNS, 2016a; see box, “Calculating Federal Reimbursements Under the Community Eligibility Provision” for details). The purpose of the multiplier is to account for the share of children eligible for free and reduced-price (FRP) meals that is not captured through direct certification (Segal and Neuberger, 2014). Through the National School Lunch Act [42 U.S.C. 1759(a)(1)(F)], the U.S. Secretary of Agriculture has the authority to set the multiplier between 1.3 and 1.6.

Calculating Federal Reimbursements Under the Community Eligibility Provision

Under the CEP, meals served are reimbursed at a free or paid rate, with the reduced-price category eliminated. The percentage of meals reimbursed at the free rate, called the free claiming percentage, is calculated as the Identified Student Percentage (ISP) multiplied by 1.6. Reimbursements for lunches and breakfasts are computed separately and then added.

Determining the Federal reimbursement for school meals:

- Number of meals served per month x free claiming percentage (defined above) = Number of meals reimbursed at the free rate (FRM)
- FRM x free rate reimbursement = Dollar reimbursement for free meals (\$ free)
- (Total number of meals served per month – FRM) x paid rate reimbursement = Dollar reimbursement for paid meals (\$ paid)
- Total Federal reimbursement = \$ free + \$ paid.

Annual reimbursement rates (school year 2017-2018)

Lunch			Breakfast		
Share of free and reduced price lunches served	Free ^{1,2}	Paid		Free	Paid
Less than 60%	\$3.23	\$0.31	Non-severe need	\$1.75	\$0.30
60% or more	\$3.25	\$0.33	Severe need	\$2.09	\$0.30
Maximum rate	\$3.40	\$0.39			

¹Reimbursement rates are higher in Alaska, Hawaii, and Puerto Rico to account for higher food costs.

² Districts in compliance with the updated meal pattern and nutrition standard requirements receive additional cash assistance of \$0.06 per lunch.

When the CEP was initiated, the default initial multiplier during the phase-in period was set to 1.6 (USDA FNS, 2016a), based on research showing that for every 10 students directly certified for free meals, about 6 more come from families that would be approved for subsidized meals if they had completed an application (Segal and Neuberger, 2014). The multiplier remained the same when CEP became available nationally. Under CEP, once schools, groups of schools, or districts determine their ISP, they do not need to update this number for 4 years if the student population is stable, although they may do so if a recalculated ISP increases their reimbursement (Riddle, 2015). An evaluation of the CEP’s rollout among early adopting States (through the program’s phase-in)

(Logan et al., 2014) and a report on CEP adoption among eligible schools and districts (Segal et al., 2016) provide additional explanation of the provision, including justification for the multiplier and barriers to adoption.

The CEP was phased in over a period of 3 school years, with three early adopting States (Michigan, Illinois, and Kentucky) in 2011, three additional States (Ohio, New York, West Virginia) and the District of Columbia in 2012, and four more States (Massachusetts, Maryland, Georgia, and Florida) in 2013. The 2014-15 school year was the first year that the CEP became available to school districts in all States (Logan et al., 2014).

The number of participating schools nearly doubled between the first and second year of CEP implementation for States that first offered CEP in 2011-12 (Year One). Schools choosing to participate had high percentages of students who were eligible for free or reduced-price meals (Levin and Neuberger, 2013). Evaluation of these early implementers found that barriers to CEP adoption included limited time for school districts to evaluate CEP before implementation or to assess its implications for educational programs such as Title I funding and E-Rate internet discounts (see box, “Title I, E-Rate, and CEP Participation”) for low-income communities that rely on individual student FRP meal certification data to establish school-level need. Other barriers to CEP participation included financial concerns and uncertainty about the impacts on students’ school lunch and breakfast participation. The program evaluation of early adopters also found that CEP implementation was associated with increased participation in school breakfast and lunch programs. The average daily breakfast and lunch participation rates were 9.4 percent and 5.2 percent higher, respectively, for participating districts compared to a matched group of nonparticipating districts (Logan et al., 2014).

Title I, E-Rate, and CEP Participation

For many years, the income determinations obtained from students to establish eligibility for free and reduced-price meals (FRP) have enabled school districts and programs to identify schools serving large proportions of low-income students. During the early stages of Community Eligibility Provision (CEP) implementation, some school districts were concerned that switching to CEP, while removing the paperwork burden of collecting household applications, would leave them without a means of allocating funds intended for high-poverty schools or students within their district (Logan et al., 2014).

Title I and E-rate programs are two large funding streams for which school districts have made use of the free and reduced-price determinations to allocate funds to schools. Title I of the Elementary and Secondary Education Act provides Federal funds to improve the achievement of the most educationally disadvantaged students (U.S. Department of Education, 2015). E-Rate, or the Universal Service Program for Schools and Libraries, provides discounts to schools for telecommunications and information services such as Internet access, internal connections, maintenance of internal connections, and broadband services (U.S. Federal Communications Commission, 2016). Both programs use school reports on the number of low-income students to determine the level of benefits to provide to schools and/or to track the progress of disadvantaged students. Most schools use FRP certification percentages to determine the number of low-income students they serve (Neuberger and Riddle, 2015).

—continued

Title I, E-Rate, and CEP Participation—continued

Federal agencies have developed policies to address concerns related to these programs. For *Title I*, the U.S. Department of Education has provided policy guidance for States and districts with lists of alternative sources of data for use in selecting Title I schools and allocating funds among CEP schools. These data include (1) Identified Student Percentage (ISP) times the 1.6 multiplier, (2) State/local income surveys, (3) FRP data from the school year before CEP adoption, and (4) Medicaid, Temporary Assistance to Needy Families (TANF), or census data authorized under Title I. Options for Title I accountability include (1) considering all students from CEP schools to be from economically disadvantaged families or (2) including only those directly certified (Neuberger and Riddle, 2015).

The Federal Communications Commission updated rules for calculating E-Rate discounts in 2014 and now requires school district determination of the E-Rate discount at the district level by dividing the total number of FRP-identified students in the district by the total district enrollment. Schools adopting CEP will use their ISP multiplied by 1.6 to determine the number of FRP-eligible students. This number is used for the entire 4-year CEP cycle unless a school's ISP increases or USDA changes the 1.6 multiplier. In that case, the new ISP would be used for discount determination (Segal and Neuberger, 2014).

In some districts, the ISP is not the best proxy for poverty, however. If SNAP participation is lower than average out of those eligible—because of stigma, for example—the ISP could underrepresent the rate of eligibility for FRP meals.

Multiple Factors May Influence the School District Decision To Participate in the CEP

The decision to have a school participate in the CEP is made at the district level. In deciding whether to have one or more eligible schools participate in the CEP, school districts must weigh the benefits of participation against the costs. CEP provides benefits to schools and students. Schools benefit because school meal administrators no longer have to spend time collecting and verifying school meal applications from students not directly certified, or collecting payments for meals and tracking down payment for unpaid meal costs. In any school or district with an ISP above 40 percent, the percent of students eligible for free or reduced-price meals is likely to be at least 64 percent, based on the estimated ratio of 1.6 between eligibility and ISP. Thus, via CEP, schools are primarily offering free meals to children who would have been eligible for free or reduced-price meals through an application process, but the schools are relieved of the burden of processing applications from the majority of students. Reduction of this burden means school foodservice managers can instead focus on preparing and serving healthy, appealing meals. Further, with no need to collect individual payments, lunch lines may move faster, allowing students additional time to eat.

For breakfast, not having to collect payment facilitates alternative models such as breakfast in the classroom, grab-and-go breakfast, and “second chance” breakfast (or breakfast after the bell) that may increase participation, as is evident among early adopting States (Logan et al., 2014). Increased meal participation can reduce per-meal costs through economies of scale (Ollinger and Guthrie, 2015). The CEP may be particularly valuable in schools serving students from families with low or volatile incomes who may not qualify for free or reduced-price meals at application time but nevertheless face periods of low income over the course of the school year (Newman, 2006). The CEP may also counteract any stigma students might feel if meals are served for free to only a subset of students.

While there are many benefits to CEP participation, offering free school meals to all students may also create challenges for school foodservice staff. First, schools must consider current levels of school meal participation and determine whether they can cost-effectively accommodate the increased participation that will likely result from adopting CEP. If schools are already participating in the SBP, as most now do (Oliveira, 2015), they must assess current levels of breakfast participation and their ability to accommodate an increase. If schools are not participating in the SBP, they must weigh the startup costs of serving breakfast in terms of capacity, equipment, and staff against the projected Federal reimbursement they will receive. Depending on the school’s ISP, the reimbursement received may or may not offset the costs of producing more meals. Schools must evaluate the tradeoffs between the revenue lost from student payments for paid and reduced-price meals and the revenue gained from increased participation and reimbursement, potential economies of scale, and savings from simplified procedures.

CEP allows high-poverty districts to group schools in such a way that qualifies otherwise ineligible schools to participate. For example, a district could group a school with an ISP of 90 percent with another school with an ISP of 30 percent. In that case, the ISP would be calculated by dividing the total number of directly certified students for both schools by the total number of enrolled students at both schools (USDA FNS, 2016b). If the school with 90 percent ISP is sufficiently larger than the other school, the ISP for the schools as a pair could be 62.5 percent or above, resulting in reimbursement of all meals at the free rate. Even if the reimbursement is lower, the district may prefer this

option, perhaps because it recognizes the value of ensuring students are well-nourished and wishes to reach more vulnerable children, or to deflect criticism for offering a benefit in one school that is not available in another. For a variety of reasons, the blended per-meal reimbursement, although lower, may still be regarded as sufficient.

In making their CEP decision, district officials must attempt to predict changes in school meal participation in order to analyze the costs and benefits of adoption. Officials must also consider the potential impact of CEP on a school's ability to access other Federal, State, or local funding for high-poverty schools for which determination of need has historically been based on rates of eligibility for free and reduced-price meals as determined by school-level applications and/or direct certification. Chief among these, when CEP began, were the Federal programs Title 1 and E-Rate. USDA's Food and Nutrition Service has worked with the U.S. Department of Education to address issues related to Federal programs (see box, "Title I, E-Rate, and CEP Participation" for details); however, issues with State and local funding may remain.

Besides ISP, a district's size and locale type (urban, rural, suburban, town) may also influence its finances and ability to offer school meals while covering costs, which could influence CEP participation. Foodservice costs (food and labor) vary by the volume of meals served and district location (Ollinger et al., 2011). Other factors being equal, rural areas, in particular, have higher per-meal costs than urban areas, possibly due to higher food transportation costs or limited access to suppliers; also, rural districts typically serve fewer students, and smaller districts can have higher per-meal costs due to their lower school meal volume (Ollinger et al., 2011; Ollinger and Guthrie, 2015). Limited staffing to handle food purchasing, reimbursement, meal planning, and preparation tasks, as well as training limitations, may also increase the difficulty of serving nutritious, appealing meals within the budget constraints of small schools (May et al., 2014). The potential increase in school meal participation associated with adopting CEP, along with the reduced administrative burden associated with certifying students and claiming reimbursements, could encourage schools in rural areas to implement the provision. Or rural districts might find the switch to CEP too demanding of administrative time that is in short supply (Standing et al., 2016).

Data on CEP Participation and School District Characteristics

Of the 19,409 school districts participating in the National School Lunch Program,⁴ nearly half (8,051) were eligible to participate in the CEP for the 2015-16 school year (Segal et al., 2016). Our analysis includes 5,148 eligible public school districts from 47 States with sufficient data, for a sample representing over 60 percent of eligible U.S. school districts. The administrative data used to examine nationwide CEP adoption were compiled from a variety of sources (see box, “Data Sources”). We merged CEP participation data from USDA’s Food and Nutrition Service (FNS) for the 2015-16 school year and State CEP eligibility data from the 2015-16 school year (or where not available, from the 2014-15 school year⁵) with data on school district enrollment and locale type from the Common Core of Data (CCD) for the 2013-14 school year. To account for early adopting States where CEP was phased in before others,⁶ we included an explanatory variable indicating the year CEP became available in the State. While districts may not have been eligible when CEP became available, the State’s experience with the option and associated issues, such as how it affected Title 1 and other funding allocations, may have affected its ability to assist districts with the participation decision in 2015-16.

To generate our size and locality variables, we first merged FNS school district CEP participation data with CCD data on enrollment and locale type. We created size categories from CCD school district enrollment data: very small (1,000 students or less), small (1,001–5,000), medium (5,001–20,000), and large (more than 20,000 students). While data on CEP participation and eligibility from FNS also included enrollment data for most school districts, enrollment data were not complete for all States. Although CCD data are from school year 2013-14, size categories based on 2013-14 school year data are unlikely to have changed.

School-level data on CEP eligibility and participation were obtained from State agency websites. We define district-level participation as CEP adoption by at least one school within the district and use this as our dependent variable for examining participation within eligible districts. This is consistent with FNS’s definition of participation and is used because the decision to adopt CEP is made at the district level.

To examine CEP participation by the highest school-level ISP, we used school-level data on ISPs from State websites to create the following categories for highest school-level ISP: 40-50 percent, 51-60 percent, 61-70 percent, 71-80 percent, 81-90 percent, and 91-100 percent. We used these categories to generate variables indicating if the *highest* school-level ISP in a given district fell within a certain category. The highest school-level ISP partially determines whether the school district chooses to participate in CEP as a school, group of schools, or district because of its importance in establishing how much Federal reimbursement the district will receive. If the ISP in the district is 62.5 percent or more, for example, then the school food authority (SFA) will receive reimburse-

⁴ Data for total districts are from FNS-742 reports by school districts and other entities—including charter schools and private schools—participating in NSLP in 2015.

⁵ Eligibility data were not available for the 2015-16 school year for Alabama, California, Connecticut, Delaware, Maryland, South Carolina, and Wyoming; data from 2014-15 were used for these States.

⁶ Availability of CEP in a State does not establish district-level eligibility. Districts may not have been eligible to participate in CEP the first year it became available in the State.

ments equivalent to all meals being at the free rate, whereas at the lower end of the eligibility range (40 percent), the Federal reimbursement will be less generous (only 64 percent of meals served are reimbursed at the free rate; the remainder of meals served are reimbursed at the lower paid rate) and any remaining costs must be covered with other non-Federal funds. Further, the highest school-level ISP is influenced by the income distribution of the school district, and this will influence the tradeoffs of CEP participation. For example, if a district's overall ISP is 50 percent, but the highest school's ISP is 90 percent, such a district might be more likely to have at least one school participate in CEP than a district where every school had an ISP of 50 percent.

For each district, we merged the resulting district-level participation indicator with data on school district characteristics from FNS and CCD, and that became our final dataset for analysis. We generated district variables placing each State within the correct FNS-defined region (USDA FNS, 2017b) as well as variables indicating the State within which the district was located.

Data Sources

Food and Nutrition Service (FNS) CEP Election Data (2015-16)

FNS obtains Community Eligibility Provision (CEP) participation information from States to track the number of students in CEP schools across the country. The dataset includes information at the district, school, and State level. States report enrollment and ISP in May and September for districts and schools participating in CEP.

Districts with at least one participating school report the total number of schools, total enrollment, total number of schools participating in CEP, total number of students in participating schools, and the school year in which the district first began participation. For districts participating districtwide, States must report the district-level ISP. Schools provide data on their ISP, CEP participation status, total enrollment, and the school year in which they began implementation. Schools participating as a group must indicate this and report the ISP for the group as a whole.

State CEP eligibility data (2014-15 and 2015-16)

FNS requires States to share data on CEP eligibility and participation of schools and districts. The data are posted to the State and FNS websites annually.

Common Core of Data Public School District Universe Survey (CCD) (2013)

The CCD is a dataset of the U.S. Department of Education's National Center for Education Statistics and collects data annually from public schools and school districts to provide basic information on schools/districts, students and staff, and fiscal status. We used data on enrollment and locale type (rural, suburban, urban, town).

The dataset generated allows us to examine the association between the highest school-level ISP in a district—along with other district- and State-level characteristics—and the likelihood that any school in the district participated in CEP. We use the highest school-level ISP for two reasons. First, as discussed above, the highest school-level ISP determines the upper bound of the share of meals that will be reimbursed at the free rate. Second, ISP data for districts that were not participating

were not consistently available from States. Likewise, school enrollment data, which could have been used to calculate district-level ISP from school-level data, were not available.

Future research should include the district-wide-level ISP and examine how school- and district-level ISP influences the share of schools that participate in CEP within a district, as well as decisions to participate as a single school, group of schools, or district. District-level ISP may be important because even if one school in a district has a very high ISP and the rest have moderate ISPs, the district may opt out of CEP implementation in order to avoid having two different reimbursement processes. Serving all meals free in only one school in the district may be confusing to households.

Another potential metric for participation, the share of eligible schools participating, is not feasible given the available data because schools with ISP below 40 percent would not be considered “eligible” on their own, but could be grouped with higher ISP schools to participate in CEP. Theoretically, one could calculate the number of “eligible groups” using school-level ISP data and school enrollment, but enrollment data were not complete.

There are several limitations of our data. Although these administrative data should in theory capture the universe of schools and districts, some districts and schools are missing. Data from three States—Illinois, Ohio, and North Dakota—were not included because data were either entirely or partly missing. Data for eligibility were taken from 2014-15 for nine States where data were not available for 2015-16. Nevertheless, our final data set of 5,148 school districts, with representation across all U.S. regions, can provide useful insights into the school district characteristics associated with CEP adoption (table 1). Another limitation is that data on characteristics of school districts are available from the CCD for public school districts only, so our analysis excludes private schools. Finally, data from State agencies were collected and analyzed as reported, so data accuracy is dependent upon the accuracy of State reporting.

Table 1
Key variable definitions and frequencies of all eligible school districts (N = 5,148) included in the analysis

Variable	Definition	Percent of eligible districts
Dependent variable		
CEP participation	Participation by at least one school in the district	35
Independent variables		
<i>Highest school-level ISP category</i>		
40-50%	Dummy = 1 if the district's highest ISP is 40-50%	30
51-60%	Dummy = 1 if the district's highest ISP is 51-60%	24
61-70%	Dummy = 1 if the district's highest ISP is 61-70%	21
71-80%	Dummy = 1 if the district's highest ISP is 71-80%	12
81-90%	Dummy = 1 if the district's highest ISP is 81-90%	7
91-100%	Dummy = 1 if the district's highest ISP is 91-100%	6
<i>Locale Type</i>		
Rural	Territory outside urbanized area, outside urban cluster	45

—continued

Table 1.

Key variable definitions and frequencies of all eligible school districts (N = 5,148) included in the analysis—continued

Variable	Definition	Percent of eligible districts
Urban	Territory inside principal city, inside urbanized area with population 100,000 or more	19
Suburban	Territory outside principal city, inside urbanized area with population 50,000 or more	18
Town	Territory inside urban cluster, at least 10 miles from urbanized area	18
<i>District size</i>		
Very Small	School district with <1,000 enrolled students	6
Small	School district with 1,000 – 5,000 enrolled students	15
Medium	School district with 5,001 – 20,000 enrolled students	36
Large	School district with >20,000 enrolled students	43
Region		
Northeast	NY, CT, RI, MA, VT, NH, ME	7
Southeast	KY, TN, NC, MS, AL, GA, SC, FL	17
Southwest	TX, NM, OK, AR, LA	21
Mid-Atlantic	PA, NJ, DE, MD, WV, VA, DC	11
Midwest	MN, WI, MI, OH, IN, IL	15
Mountain Plains	MT, ND, SD, WY, NE, IA, MO, KS, CO, UT	14
West	AK, WA, OR, ID, NV, CA, AZ	15
Years CEP became available in State		
School year 2014-15	Dummy = 1 if CEP became available in the State in school year 2014-15	80
School year 2013-14	Dummy = 1 if CEP became available in the State in school year 2013-14	6
School year 2012-13	Dummy = 1 if CEP became available in the State in school year 2012-13	3
School year 2011-12	Dummy = 1 if CEP became available in the State in school year 2011-12	11

CEP = Community Eligibility Provision; ISP = Identified Student Percentage.

Bivariate Analysis: Participation Rate by District Characteristics

Identified Student Percentage (ISP) Category

The ISP determines a district or school's eligibility to adopt CEP, and it also forms the basis of the claiming percentage for Federal reimbursement. Schools and districts with higher ISPs are reimbursed at the free rate for more meals served than those with lower ISPs. Table 2 shows the nation-wide share of eligible districts that are participating in CEP by highest school-level ISP category and calculates the differences in frequency of district participation in each category compared to those in the 40-50 percent ISP category. Districts where the highest school-level ISP fell between 51 percent and 100 percent had a higher participation rate than districts where the highest school-level ISP fell between 40 percent and 50 percent. Also, the highest CEP participation rates were among districts where the highest school-level ISP fell between 61 and 70 percent (58 percent), 71 and 80 percent (60 percent), and 81 and 90 percent (62 percent). Further, the participation rates among these three categories were not significantly different from each other, but they were all significantly higher than districts where the highest ISP fell between 51 and 60 percent and between 91 and 100 percent. This is consistent with the expectation that participation is more likely if almost all meals are reimbursed at the free rate. Lower participation among districts where the highest school-level ISP was between 91 and 100 cannot be fully attributed to participation in Provisions 2 or 3 by schools within these districts, as only 15 percent of non-CEP districts in this category were participating in Provisions 2 or 3. Many of these districts are single-school districts, however. In this case, the school may have less incentive to adopt CEP since almost all students are already directly certified and the remainder could be easily certified via application. Further, in single-school districts there is no lower ISP school to form an eligible group of schools. In other very small districts, the same conditions may apply. We investigate this further in our multivariate analysis.

Locale Type

Rural districts face several challenges when it comes to implementing school meal programs. Rural districts tend to have smaller enrollments and to be more dispersed than districts in suburban and urban areas, and their distance from urban centers and other districts likely hinders access to food distributors, labor, equipment, and technology. Previous research suggests that rural districts struggle financially compared to urban districts (Ralston and Newman, 2015).

Following the update of school meal standards in 2012, schools in rural areas were more likely than other schools to report increases in student complaints, decreases in meal participation, and higher costs due to lower meal volume (Ralston and Newman, 2015; Turner and Chaloupka, 2014). Rural schools also reported larger increases in the paid meal price due to the Paid Lunch Equity provision of the Healthy, Hunger-Free Kids Act (Ralston and Newman, 2015). Higher prices for paid meals could reduce student participation, which in turn could reduce economies of scale (Fox et al., 2012); thus, rural districts may stand to benefit from the increase in school meal participation that often accompanies CEP adoption. Or, they may be less likely to participate in the CEP due to a lack of outreach or concerns related to the financial viability of the CEP given their meal costs.

Table 2

Share of eligible districts (N = 5,148) participating in the Community Eligibility Provision (CEP) by school and district characteristics, 2015-2016 school year

ISP category (highest school-level ISP in district)	Percent
40-50% (reference category)	13
51-60%	26+
61-70%	58+
71-80%	60+
81-90%	62+
91-100%	24+
Locale type	
Rural (reference category)	33
Urban	46+
Suburban	32-
Town	34
District size	
Large (> 20,000 enrolled students, reference category)	42
Medium (5,001 – 20,000 enrolled students)	38
Small (1,000 – 5,000 enrolled students)	34-
Very small (<1,000 enrolled students)	34-
Region	
Northeast (reference category)	36
Southeast	56+
Southwest	20-
Mid-Atlantic	41
Midwest	39
Mountain Plains	27-
West	31
Year CEP became available in State	
School Year 2014-15 (reference category)	30
School year 2013-14	51+
School year 2012-13	74+
School year 2011-12	56+

Notes: A "+" indicates that the share is significantly greater than the reference category with $p < 0.05$ and a "-" indicates that the share is significantly less than the reference category with $p < 0.05$. ISP categories indicate that the school with the highest ISP in the district had an ISP falling within the category. District category sizes are defined as large (>20,000 enrolled students), medium (5,001-20,000 students), small (1,000-5,000 students), and very small (<1,000 enrolled students). The variable year CEP became available reflects the number of years the State had experience with CEP due to the phase-in; individual districts were not necessarily eligible to participate in that year. ISP = Identified Student Percentage.

Source: USDA, Economic Research Service calculations based on USDA, Food and Nutrition Service CEP election data, State CEP eligibility data, and Common Core of Data (CCD) files.

Table 2 shows the participation rate for districts located in four locale types: urban, rural, towns, and suburbs. Compared to rural districts (33 percent), urban districts (46 percent) had higher participation and suburban districts (32 percent) had lower participation.

District Size

The effect of district size on CEP is uncertain a priori because of two factors that could work in opposite directions. First, foodservice costs vary depending on the volume of meals served, which is determined both by school and/or district size and the level of school meal program participation. An ERS study found that school districts that served more meals had lower per-meal costs (Ollinger et al., 2011). This suggests that larger districts serving more students can take advantage of economies of scale, thereby reducing costs by large volume purchasing and efficient use of labor, food, and other resources. Meal service requirements under the CEP, including required breakfast service, may encourage participation by medium and large districts that are more likely to benefit from serving more meals. On the other hand, smaller schools with lower school meal volume and less staffing may benefit from both a boost in participation and decreased administrative burden as a result of adopting CEP.

We define very small districts as those with less than 1,000 enrolled students, small districts as those with 1,000-5,000 students, medium districts as those with 5,001-20,000 students, and large districts as those with more than 20,000 enrolled students (table 2). The CEP participation rates for very small and small districts (34 percent) were lower than for large districts (42 percent), perhaps due to economies of scale that accrue to larger districts serving more students.

Region

Regional differences in CEP participation may reflect variation in numerous factors, including attitudes toward government assistance programs, relations between school food authorities and school districts, the number of FRP-eligible students, or levels of outreach by regional FNS offices and/or State agency staff. Also, some FNS regions included more States that were included in the CEP's phase-in. Compared to Northeast participation in CEP (36 percent), rates were significantly higher in the Southeast (56 percent), which included a number of States that were able to participate during the phase-in period, and significantly lower in the Southwest (20 percent) and Mountain Plains (27 percent, table 2). Variation in participation may also be due to unobserved characteristics that influence decisions to participate and that differ by region.

Year of CEP Availability in the State

CEP implementation included 3 years of phased-in State availability followed by nationwide availability in the 2014-15 school year. We include a variable for the year CEP became available in the State. While individual districts may not have been eligible when the CEP became available, longer experience with CEP in the State could affect participation (for example, through technical assistance provided by experienced State staff and/or peer-to-peer word-of-mouth marketing between superintendents or foodservice directors). Participation rates were significantly higher for districts in early-adopting States (table 2). Participation rates were 51 percent, 74 percent, and 56 percent for districts in States where CEP was available in 2013-14, 2012-13, and 2011-12, respectively, compared to the rate for districts in States where CEP became available in 2014-15, 30 percent.

Multivariate Modeling: Which School District Characteristics Are Associated With CEP Participation?

Examining district participation rates provides descriptive information about participation by districts with different characteristics. Multivariate estimation of the likelihood of CEP participation, on the other hand, helps to identify which characteristics are independently associated with decisions to participate. Because we are able to include interactions between highest school-level ISP and district size, multivariate estimation also allows us to explore the low participation by districts with schools in the 91- to 100-percent ISP category that was found in the unadjusted results. Doing this enables us to examine the hypothesis that high-ISP schools in districts of different sizes may differ in their likelihood of participation. We estimated a multivariate logistic regression, including cluster-robust standard errors, to assess the determinants of CEP participation as described below:

$$P = \beta_0 + \beta_1 ISPcategory + \beta_2 LocaleType + \beta_3 DistrictSize + \beta_4 Region + \beta_5 YearCEPAvailable + \beta_6 DistrictSize * ISP + \varepsilon \quad (1)$$

In this equation, P represents district CEP participation, defined as participation by at least one school in a given school district. The explanatory variables are ISP category (defined as highest school-level ISP), locale type (urban, rural, suburban, or town), district size, FNS region, and year CEP became available (see table 1 for variable definitions). We expect each of these variables to influence participation decisions made at the district level.

The interaction term between highest school-level ISP category and district size revealed that the highest ISP category was most strongly associated with CEP participation (odds ratios up to 23) (table 3), although the association with ISP differed by size of school district. The pattern of odds ratios for interactions between size and ISP (figure 1) and likelihood ratio tests for differences among estimated odds ratios provide more detailed insights into the associations with ISP and size, especially the drop in participation for districts in the highest ISP category found in the unadjusted results.

Odds ratios of participating in CEP compared to the reference group (large school districts with ISP of 40-50 percent) increased as expected for districts with progressively higher school-level ISPs until the 91-100 percent category. The odds of participation in CEP increased markedly in going from districts with the highest school-level ISP between 51 and 60 percent to districts with ISP of 61-70 percent, and the increases are statistically significant for all district sizes (figure 1). This result aligns with our expectation that districts comprised of schools with ISP at or above 62.5 percent are more likely to find CEP financially appealing, as all meals are reimbursed at the free rate for ISP at that level, given the current 1.6 multiplier in the CEP reimbursement formula. This finding mirrors Logan et al. (2014) and suggests that CEP is likely reaching higher-needs districts.

Moving from the 81-90 percent ISP category to 91-100 percent, the odds ratio drops from 21 to 1 for very small districts, from 20 to 4 for small districts, and from 17 to 7 for medium districts (all statistically significant, figure 1). For large districts, the odds ratio increased from 17 to 23 as ISP increased from the 81-90 category to the 91-100 category, but this difference was not statistically significant (figure 1).

Table 3

Logistic regression modeling the association between school district characteristics and Community Eligibility Provision participation (N = 5,148)

Odds ratios (95-percent confidence intervals in parentheses)

Highest school-level ISP category and size interaction (compared to large districts with the highest school-level ISP between 40% and 50%)

40-50%	Very small	3.26 (1.19, 8.95)**
	Small	1.25 (0.51, 3.10)
	Medium	1.03 (0.41, 2.61)
51-60%	Very small	6.45 (2.30, 18.06)***
	Small	4.11 (1.50, 11.24)***
	Medium	3.72 (1.39, 9.92)***
	Large	4.15 (1.27, 13.50)**
61-70%	Very small	22.40 (7.93, 63.24)***
	Small	15.77 (5.49, 45.34)***
	Medium	11.18 (4.54, 27.56)***
	Large	12.61 (5.25, 30.25)***
71-80%	Very small	21.10 (6.73, 66.12)***
	Small	21.75 (7.65, 61.83)***
	Medium	18.59 (6.91, 49.97)***
	Large	15.81 (5.54, 45.08)***
81-90%	Very small	21.03 (5.72, 77.32)***
	Small	20.33 (6.63, 62.32)***
	Medium	17.32 (6.27, 47.83)***
	Large	17.94 (5.49, 58.67)***
91-100%	Very small	1.38 (0.27, 6.95)
	Small	4.06 (1.11, 14.86)**
	Medium	7.75 (2.13, 28.13)***
	Large	23.37 (5.38, 101.60)***
Locale type (compared to rural)		
Urban	1.07 (0.75, 1.54)	
Suburban	0.70 (0.47, 1.03)*	
Town	0.90 (0.68, 1.19)	
Region (compared to Northeast)		
Southeast	2.35 (1.22, 4.55)**	
Southwest	0.70 (0.24, 2.04)	
Mid-Atlantic	1.81 (0.83, 3.95)	
Midwest	0.95 (0.40, 2.25)	
Mountain Plains	1.35 (0.61, 3.01)	
West	1.52 (0.52, 4.39)	
Years CEP became available in State (compared to 2014-15)		
School year 2013-14	1.47 (0.82, 2.66)	
School year 2012-13	3.87 (1.29, 11.61)**	

—continued

Table 3

Logistic regression modeling the association between school district characteristics and Community Eligibility Provision participation (N = 5,148)—continued

Odds ratios (95-percent confidence intervals in parentheses)	
School year 2011-12	2.91 (1.49, 5.68)***
Constant	0.05 (0.02, 0.16)***

Odds ratios significantly different from 1 (suggesting no difference in probability of participation) are indicated by * for p < 0.10, ** for p < 0.05, and *** for p < 0.01.

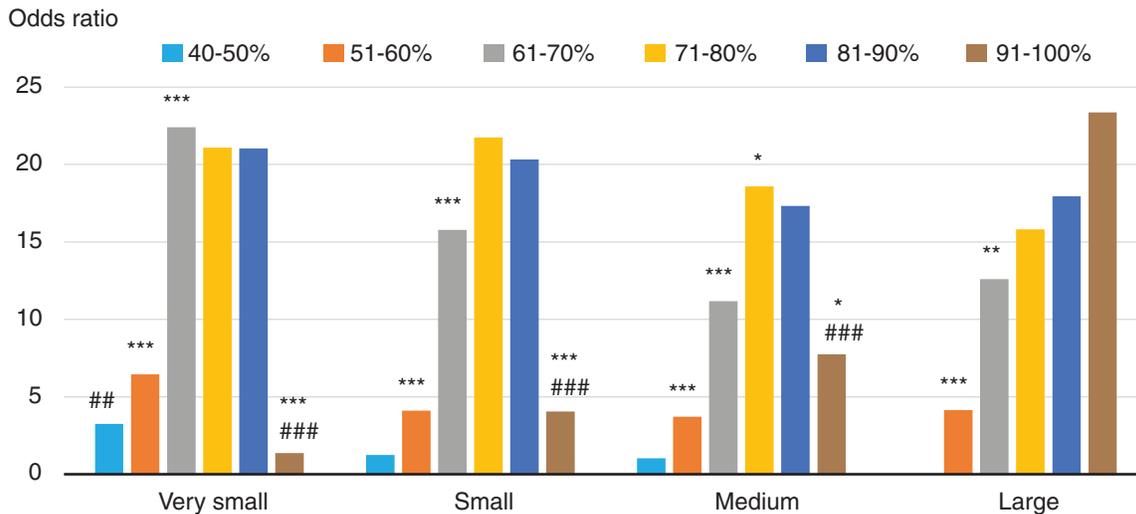
Likelihood ratio test of significance for inclusion of interaction variables for size and ISP: Chi-squared test statistic, 23 degrees of freedom = 376.41, p < 0.001.

Note: District category sizes are defined as large (>20,000 enrolled students), medium (5,001-20,000 students), small (1,000-5,000 students), and very small (<1,000 enrolled students). CEP = Community Eligibility Provision; ISP = Identified Student Percentage.

Source: USDA, Economic Research Service calculations based on CEP election data from USDA, Food and Nutrition Service, CEP eligibility data from individual States, and Common Core of Data (CCD) files.

Figure 1

Probability of participation, relative to large districts with highest school-level Identified Student Percentage (ISP) of 40 – 50 percent



Source: ERS estimates based on Community Eligibility Provision (CEP) election data for September 2016 compiled by USDA's Food and Nutrition Service and CEP eligibility data for May 2015 reported by States. At each size level, the odds ratio at a given highest school-level ISP is tested against the next lower ISP with a likelihood ratio test; significance at 0.10 level is indicated by *, at 0.05 level is indicated by **, and at 0.01 level is indicated by ***. At each category of highest school level ISP, the odds ratio at a given size is tested against large school districts; significance at 0.05 is indicated by ##, and at 0.01 is indicated by ###.

The drop in the odds ratio at the highest ISP category was most pronounced for very small school districts, with enrollment of less than 1,000. Most of the districts in that very small category were single-school districts or districts with schools participating in Provisions 2 or 3, which are other options for providing meals at no charge to all students. Single-school and other small districts may be less likely to adopt CEP because nearly all the students within these schools are directly certified, requiring just a few paper applications to be processed. These schools may not find it worth the extra effort to adopt CEP if the burden of certification is already low and virtually all students are already covered. Further, if there is no other lower ISP school to group a high-ISP school with, the incentive to participate in CEP may be lower.

Logan and colleagues (2014) also noted some lack of CEP adoption due to concerns about fairness. If districts are worried about fairness—one school offering free meals to all students while the others do not—this may discourage schools from participating if they are the only school in the district that is eligible and interested, especially where creating an eligible group of schools is not feasible. The lower likelihood of CEP adoption among small districts where the highest school-level ISP is above 90 percent warrants further research.

After accounting for other factors, only two ISP categories showed differences in participation among district sizes that were statistically significant (figure 1). Very small districts with a school at 40-50 percent ISP were significantly more likely to participate than large districts in the same ISP category. In the 91-100 percent ISP category, districts in all size categories were significantly less likely to participate than large districts in that ISP category. For all districts with highest-school level ISPs between 51 and 90 percent, however, no size differences were significant.

Urban districts were not significantly more likely to participate in CEP than rural districts after accounting for other factors, contrary to the findings of the initial CEP evaluation from early-adopting States (Logan et al., 2014). That study postulated that large urban districts have likely spent time refining direct certification, which would increase their ISPs and the relative appeal of the CEP. Suburban districts were less likely to participate than rural districts, which should be explored in future research.

Districts in the Southeast were significantly more likely to participate in CEP than those in the Northeast. This may be driven by unobserved local and State-level differences, as well as regional differences in the relationship between the FRP rate and the ISP. Logan and colleagues (2014) reported significant differences in participation among early adopting States, suggesting idiosyncratic State differences may be influencing the decision to participate; further research to identify such factors could be valuable. Although we include the highest school-level ISP per district in our analysis, that tactic does not completely account for differences in district FRP eligibility rates, which may be reflected in the region variable.

The year CEP became available in States was related significantly to participation. While a given district may not have been eligible the year CEP became available, longer experience in the State may have influenced participation in 2015-16. This result was consistent with previously reported barriers to participation during the phase-in that included not having enough time to understand CEP before implementation (Logan et al., 2014). The odds of districts implementing CEP in States that offered CEP in 2011-12 and 2012-13 were roughly 3 to 4 times the odds of implementing CEP for districts in States that began to offer the option in 2014-15. This suggests that barriers to participation may lessen in subsequent years as States and districts gain (and share) experience with the option.

Conclusion

The Community Eligibility Provision is an option for high-poverty schools that allows them to serve free meals to all students, while also potentially reducing school meal administration costs and eliminating any stigma sometimes associated with receiving free or reduced-price meals. To better understand which school districts are choosing to participate, we estimated unadjusted CEP participation rates by school district characteristic and estimated a multivariate logit model of CEP participation, with district participation defined as at least one school within the district participating in CEP.

Not surprisingly, the strongest association with CEP participation appears to be the ISP (which is directly correlated with the amount of Federal reimbursement). The highest school-level ISP strongly predicts whether the district participates, but the school-level ISP and participation differed by district size. Other district characteristics were also associated with participation after accounting for other factors. School districts in the Southeast were more likely to participate than those in the Northeast, and those in suburban areas were less likely to participate than those in rural areas. Districts in States where CEP has been an option for at least 3 years were more likely to participate than those where CEP was available for 1 year. Barriers to participation among districts of varying sizes at different ISP levels need to be the subject of future research.

Variability in participation by region, locale type, and size suggests that there may be other unobserved factors driving differences in the likelihood of participation by eligible districts. Some areas of future exploration include differences in the level of outreach and interest in the CEP among district leadership, differences in administrative costs related to CEP implementation, and concerns over the risk of losing education funds allocated to low-income schools if free and reduced-price eligibility is not collected from individual students (Logan et al., 2014).

Our findings can contribute to policy considerations of the impacts of the CEP and help school educators and foodservice program managers better understand school district participation decisions and barriers to adoption. We focused on the decision of the school district to participate in the CEP; future analyses may examine the number of schools participating in CEP and their enrollment size to further gauge the reach of the CEP. Future research could also investigate the impact of the CEP on school finances, as well as its impact on child academic outcomes, health, and well-being.

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