Appendix A

Participation Models

Multivariate Models of Participation in the National School Breakfast and Lunch Programs

In this appendix, we present models of participation by eligible children in the National School Lunch Program (NSLP) and the School Breakfast Program (SBP), based on data collected by Mathematica Policy Research (MPR) as part of the School Nutrition Dietary Assessment study. These models primarily address two questions:

- What factors influence the decision of income-eligible households whether to apply for benefits?

- What factors influence the decision of children who have been approved for benefits whether to participate?

In addition, we examine a question of secondary interest:

- What factors influence the decision of children whether to participate, regardless of whether they were approved for benefits?

The data come from surveys conducted by MPR and NORC in a nationally representative sample of public and private schools. A three-stage sample design was used, in which 4000 students in grades 1 through 12 were drawn from 375 schools in 125 school districts. The survey instruments include:

- an in-person interview with students in grades 3 through 12;

- a mail questionnaire sent to their parents, with a followup by telephone; and

- an in-person interview conducted with students in grades 1 and 2 jointly with their parents.

Although the survey covered households whose children attended schools that did not participate in the NSLP, these households have been dropped from all of the analyses that follow.

Outcome Measures and Analysis Samples

The outcome measures analyzed, corresponding to the research questions cited above, are:

- whether a household applied for school meal benefits, given that it was income-eligible[1];

- whether a child participated in the meal programs (lunch and breakfast, if offered at the child's school) on the day of the interview, given that the child was approved for free or reduced-price meals; and

- whether a child participated in the meal programs conditional only on the programs being offered by the school.

Income eligibility of households cannot be determined with precision, for several reasons. First, a number of households did not report their total income or their household size. These households were dropped from the analysis of application behavior. Second, income was reported as a range rather than a single number. For purposes of this analysis, the center of the range was used. Third, both income and household size fluctuate over the course of the year. Households that were eligible based on their circumstances at the time of the survey may not have been eligible at the time of application for benefits, and *vice versa*. Finally, income reported on the survey may be inaccurate.

While the cut-off for eligibility for free or reduced-price meals is 185 percent of poverty, using this value to determine the sample for the application analysis would both include some households that were ineligible, and exclude others that were eligible. For the purposes of modelling behavior, it seemed desirable to err on the side of inclusiveness. A crosstabulation of application rates by reported household income yielded the following relationship:

Household income as percent of poverty	Percent of households applying for free or reduced price meals
Up to 100 percent	0.87
100 to 125 percent	0.71
125 to 150 percent	0.59
150 to 185 percent	0.41
185 to 200 percent	0.15
200 to 225 percent	0.17
225 to 250 percent	0.08

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[1]Income eligibility is determined based on household's reported total income and size.

Above 250 percent of poverty, the percent of households applying falls rapidly.

Although it is clear that application rates are much higher among those households that appear to be income-eligible, significant numbers of households near the cutoff apply as well. We have therefore included households with reported income **up to 225 percent of poverty** in the analysis of application behavior that follows.

Several options were available to measure whether a child participated in the SBP and NSLP on the day of the survey--e.g., based on whether the child reported having eaten the school meal, *versus* the food items that the child was offered or served. It was decided to use the following measures:

- HADSBP: Whether the student had a USDA SBP breakfast, a variable constructed by MPR based on whether the student ate any breakfast, what it contained, and where it was eaten; and

- ATENSLP3: Whether the student had a USDA NSLP lunch, which in non-OVS programs included at least 3 items.[2]

The sample for analyzing children's SBP participation naturally excludes children in schools which were not part of the SBP. One set of analyses uses children in families that were certified for free or reduced-price meals. Note that this includes some sample members that were excluded from the applications model--either because information on income or household size was missing, or because the certified household was reportedly above 225 percent of poverty by the time of the survey. The remaining set of analyses uses all children.

Covariates

The covariates used are of three types: descriptors of the individual child and family, descriptors of the school, and descriptors of the food program. Among the potential individual-level variables are the following:

- the child's gender;

- the child's grade;

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[2]This is a liberal measure of participation in the lunch program. More conservative measures are available based on provision of 4 or 5 items in non-OVS programs.

- the child's race and ethnicity;

- the child's primary language;

- family size;

- whether the child's mother or stepmother works outside the home;

- receipt of food stamps and AFDC;

- total household income; and

- parent's responses to a battery of opinion questions (agree strongly/agree somewhat/disagree somewhat/disagree strongly):

    - The school lunch provides nutritious meals

    - Children like the school lunches

    - School lunches are convenient

    - School lunches are economical.

The school descriptors include:

- FNS region;

- auspices (public *versus* Catholic *versus* other private);

- highest and lowest grades served;

- enrollment; and

- racial composition.

Among the descriptors of the breakfast and lunch programs are:

- whether the school ever serves hot breakfasts;

- number of times per week hot breakfasts are served;

- whether the school offers a cold breakfast;

- whether a la carte items are offered for breakfast;

- whether lunch is offer-*versus*-serve;

- whether a la carte items are offered for lunch;

- whether a cold meal is offered for lunch;

- whether pizza is offered for lunch;

- whether a salad bar is offered for lunch;

- whether the students can leave for lunch ("open campus");

- whether the students can go home for lunch;

- whether there is a school store or snack bar which is open for lunch;

- whether there are vending machines, either in or near the cafeteria or elsewhere; and

- whether there are other ways of obtaining food.

Exploratory analysis yielded some guidance as to which variables should be dropped and how others should be transformed. For example, it was obvious that the child's age could not be included along with the child's grade in the same model, because the two are virtually collinear, and it was decided that grade was the more appropriate measure. It turned out to be impossible to include child's grade and school grade range in the same model as well; while each of these was a very strong predictor of a child's application and participation behavior taken singly, when both were included in the model neither was statistically significant. School grade range (elementary *versus* middle *versus* high school) was therefore dropped.

Collinearity was also an issue for the cluster of variables relating to household income. AFDC and Food Stamp Program participation were combined into a single variable indicating receipt of either. While it might be defensible to delete income from the equations for application behavior, conditional on eligibility, doing so greatly alters the coefficients on welfare receipt and even on private school attendance. Furthermore, while the mother's employment status is a potentially interesting influence on children's participation, it turned out to be too closely related to household income to be of use. It was concluded that the best approach was to include household income relative to the poverty line and receipt of welfare as the sole measures of income in all models.

Several variables were dropped because their distributions appeared highly suspect. For example, an indicator of whether the student's mother was part of the household was never missing, and showed up negative (i.e., mother not present) for 12 percent of certified households. It seems likely that for many of these cases household composition was simply unknown. An indicator of metropolitan status seemed to have been constructed erroneously; it was missing in about a third of all cases and never took on the value of "rural". Two other variables purported to measure the number of entrees available that day for breakfast and lunch. These ranged as high as 17 and 21, respectively, and were therefore not used.

Some variables were transformed or combined based on consideration of the early analyses. As previously mentioned, receipt of AFDC and Food Stamps was made into a single variable. Likewise, indicators of the presence of vending machines in various locations were made into a single variable. Family size and school enrollment, continuous variables with wide ranges, were broken up as the analyses required. For the applications analysis, it appeared that both very small and very large families had higher probabilities of application, while the effect of school enrollment was discontinuous at around 1,000 students. There was no evidence of such nonlinear effects in the participation equations. It was also decided to redefine the indicators of students' alternative lunchtime options conditional on whether there was an open campus. Thus, the explanatory variables include whether there is an open campus; if no open campus, whether the students can go home for lunch, can get food at a school snackbar or store, etc.

A final issue pertaining to the covariates was how to handle missing data. Household income was deemed to be such a central variable that in several of the analyses, cases for which this variable was missing were dropped. In other analyses, a missing data indicator was used. Thus, a pair of variables were defined:

- X_1 = household income as percent of poverty when known, 0 otherwise;

- X_2 = 1 if household income is unknown, 0 otherwise.

Similar indicators were constructed for other variables with a substantial amount of missing data, such as student's race, student's primary language, receipt of welfare, parents' opinions of NSLP lunches, school ethnic composition, and whether students could go home for lunch. For other instances of missing data, cases were simply dropped from the analysis.

Statistical Technique

The outcomes of interest are all dichotomous variables, hence logistic regression was used to estimate effects. For ease of interpretation, logistic coefficients have been converted to impacts at the mean.

Unweighted regression was used, for two reasons. First, standard statistical software packages such as SAS do not estimate standard errors correctly in weighted regressions.[3] More important, the models are intended to describe a relationship between the outcome and the explanatory variables which is equally true for each observation in the sample. Hence, unweighted regression is appropriate.

Determinants of Application

A logistic model of application behavior among households with reported income under 225 percent of poverty is shown in Exhibit A.1. The logistic coefficients and their standard errors appear in the first column; the impacts at the mean in the second column. In this sample, the overall probability of application was 62 percent.

The following characteristics of students and their families were found to affect significantly the likelihood of applying for certification:

- **Student's grade.** Other things equal, the likelihood of application fell by 2.5 percentage points per grade.

- **Race.** Black students were 30 percentage points more likely to apply than white students (the excluded category). Hispanic students fell somewhere in between.

- **Family size.** Students from very large families (7 or greater) were 32 percentage points more likely to apply than students from medium sized families (4 to 6). Students from small families (2 or 3) fell somewhere in between.

- **Poverty.** Even among this poor population, an increase of 10 percentage points in the household's income as a percent of poverty reduced the likelihood of applying for certification by 5 percentage points.

- **Receipt of welfare.** Students from households that were receiving AFDC and/or Food Stamps were 24 percentage points more likely to apply than other equally poor students.

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[3]SAS interprets weights as representing heteroskedasticity rather than differential rates of sampling.

The likelihood of applying was not significantly affected by the student's sex or primary language, or by the parents' attitudes about the school lunch program as measured by their responses to the four opinion questions.

School characteristics also had marked effects. Great regional variation was seen, with the highest application rates, other things equal, occurring in the New England and Mid-Atlantic regions, followed by the West and East North Central regions. Students attending schools in the West (the excluded category) were least likely to apply. In addition, students in very large schools (enrollment over 1000) were 12 percentage points less likely to apply than other students, while those in schools with a greater concentration of Hispanics were more likely to apply. School auspices (public *versus* private) did not have significant effects.

Finally, several characteristics of the school lunch program were also important determinants. Students attending schools with an open campus policy were 15 percentage points less likely to apply for certification. Students in schools with salad bars were 11 percent more likely to apply, while those in schools which offered a la carte items were 14 percent *less* likely to apply. Presumably a la carte offerings are correlated with other undesirable characteristics of the school lunch program (such as the perceived quality of the pattern meal).

Determinants of Participation Among Students Certified for Free or Reduced-Price Meals

Given the self-selection that occurs in the application process, major systematic variations in participation in the SBP and NSLP would not necessarily be expected among those certified for free or reduced-price meals. Nonetheless, some substantial and highly interesting variations are seen, as shown in Exhibits A.2 and A.3, and Exhibits A.4 and A.5.

While 77 percent of certified students in the sample participated in the National School Lunch Program on the day of observation, only 36 percent of certified students participated in the School Breakfast Program in schools which offered the SBP. Besides the different overall rates of participation, several striking differences in patterns emerge in the participation models. In general, student characteristics are much more important in explaining breakfast than lunch participation. Among certified students in schools which offer the SBP:

- Boys are significantly more likely to participate than girls, by 9 percentage points.

- Children in lower grades are significantly more likely to participate, by 6 percentage points per grade.

- Blacks are much more likely to participate than whites, by 15 percentage points.

- Income also has a significant effect: even in this very poor population, a 10 percentage point increase in household income relative to the poverty line decreases the child's likelihood of participating on that day by about 2 percentage points.

In addition, certified children in schools with a high proportion of Hispanic students are significantly less likely to participate in the SBP, other things equal. Other characteristics of students, their families, the school, and the breakfast program do not contribute significantly to the model. Thus, within the certified population, participation in the SBP is not affected by family size, receipt of AFDC or food stamps, region of the country, size of school, or school breakfast offerings.

The likelihood of NSLP participation, on the other hand, seems to depend more on the availability of other options than on student characteristics. The certified student's grade does significantly affect the likelihood of NSLP participation, although by only half as much as it affects the likelihood of SBP participation (3 percentage points per grade). Students whose families think the school lunches are nutritious are significantly more likely to participate than those who do not. (The opinion indicators are measured on a four-point scale.) Also, participation is substantially higher among certified students in the East North Central and East South Central regions than in the rest of the country. The existence of alternative options for lunch is, however, the major factor: certified children who are permitted to go home for lunch are 11 percentage points less likely to participate in the NSLP, and those in schools with vending machines are 12 percentage points less likely to participate. Other than that, no systematic patterns are seen: neither the child's sex, race, primary language, family size, family income, or welfare status has any significant effect; and school size, school composition, characteristics of the lunch program are likewise not important factors.

Determinants of Participation Among All Students

Children who are not certified for free or reduced price meals may still participate in the SBP and NSLP, all though in fact they do so at substantially lower rates. In the unweighted sample, participation rates

for all children on the day of observation were 18 percent and 55 percent, respectively. The child's grade, primary language, receipt of welfare, and alternative opportunities (for lunch) were the primary explanatory factors.

For the student body as a whole, the model of SBP participation indicated the following:

- Children in higher grades were significantly less likely to participate, by 3 percentage points per grade.

- Black students were 14 percentage points more likely to participate than whites.

- Children whose primary language was not English were 11 percentage points more likely to participate.

- Receipt of AFDC or Food Stamps increased the likelihood of participation by 8 percentage points.

- Beyond this, the effect of income, though significant, was small: a 10 percentage point increase in family income relative to the poverty line decreased the likelihood of participation by less than 0.1 percentage points.

- Students whose parents felt that students liked the school lunches were more likely to participate in the SBP.

Other factors, such as the child's sex or family size, the region of the country the school was in, the size and ethnic composition of the school, and the breakfast offerings, did not significantly affect the likelihood of participation.

In the school lunch program, many student and family characteristics correlated significantly with student participation. In particular:

- Girls were significantly less likely to participate than boys, by 9 percentage points.

- Older students were less likely to participate, although the effect was only 1 percentage point per grade.

- Black students were 11 percentage points more likely to participate than whites.

- Those whose primary language was not English were dramatically more likely to participate--by 41 percentage points.

- Receipt of AFDC or Food Stamps increased the likelihood of participation by 16 percentage points, but household income in general had no other effect.

- Students whose parents thought that students like school lunches and that school lunches are economical were significantly more likely to participate.

Participation also varied markedly with school characteristics. Participation was substantially higher in the East North Central, South Atlantic, and East South Central regions than in the West, the West North Central, and New England states; and was significantly higher in large schools (enrollment over 1000).

Finally, characteristics of the school lunch program, and in particular, the option to leave the school campus for lunch, significantly affected the likelihood of participation. Students in schools which offered salad bars and pizza for lunch had higher rates of participation, while those in schools that offered a la carte items had lower participation rates. The option to leave for lunch reduced the likelihood of participation in the NSLP by 10 percentage points.

Exhibit A.1

Logistic Model of Application for Certification for Free or Reduced Price Meals by Households Under 225 percent of Poverty

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS		
Female	-0.1010 (0.1572)	-0.0239
Grade	-0.1073** (0.0342)	-0.0254**
Race: black	1.2800** (0.2741)	0.3030**
Race: Hispanic	0.5060 (0.3752)	0.1198
Race: missing	0.0877 (1.035)	0.0208
Primary language not English	0.6517 (0.5997)	0.1543
Primary language missing	-0.3932 (0.3096)	-0.0931
Family size 2 or 3	0.2597 (0.1865)	0.0615
Family size 7 or greater	1.3653** (0.3433)	0.3232**
Household income/poverty	-2.2218** (0.1823)	-0.5260**
Family receives AFDC or Food Stamps	1.0041** (0.2613)	0.2377**
Welfare information missing	-1.2155 (1.4205)	-0.2878
"Students like school lunches"	-0.0265 (0.1049)	-0.0063
"School lunches are convenient"	0.0126 0.1584	0.0030

Exhibit A.1
(continued)

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS - continued		
"School lunches are economical"	0.1205 (0.1137)	0.0285
"School lunches are nutritious"	-0.0192 (0.1342)	-0.0045
Opinion information missing	-0.7431 (0.6424)	-0.1759
SCHOOL CHARACTERISTICS		
Region: New England	1.0761** (0.4096)	0.2548**
Region: Mid-Atlantic	1.0236** (0.3993)	0.2423**
Region: West North Central	0.7676** (0.3137)	0.1817**
Region: East North Central	0.6815** (0.3166)	0.1613**
Region: South Atlantic	0.5168* (0.3066)	0.1224*
Region: East South Central	0.3692 (0.3407)	0.0874
School type: Catholic	-0.0859 (0.5849)	-0.0203
School type: Other private	0.0827 (1.1061)	0.0196
School enrollment greater than 1000	-0.5234* (0.2704)	-0.1239*
Percent of school black	0.0005 (0.0044)	0.0001

Exhibit A.1
(continued)

	Coefficient (Standard Error)	Impact at Mean
SCHOOL CHARACTERISTICS - continued		
Percent of school Hispanic	0.0163** (0.0051)	0.0039**
Racial composition missing	-0.0613 (0.2061)	-0.0145
Offer versus serve	0.0936 (0.2274)	0.0222
A la carte items offered at lunch	-0.5780* (0.1977)	-0.1368**
Offer cold meals for lunch	0.1196 (0.1801)	0.0283
Offer pizza for lunch	0.1037 (0.2024)	0.0246
Offer salad bar for lunch	0.4639** (0.2198)	0.1098**
Open Campus	-0.6483** (0.2606)	-0.1535*
No open campus, but:		
Students can go home for lunch	-0.4298 (0.3435)	-0.1017
Whether students can go home missing	1.3458* (0.7359)	0.3186*
Student store or snack bar	0.2831 (0.2575)	0.0670
Vending machines in school	-0.2537 (0.2226)	-0.0601
Other ways to obtain food	0.4784 (0.3714)	0.1132

**Exhibit A.1
(continued)**

	Coefficient (Standard Error)	Impact at Mean
INTERCEPT	2.75 (0.7759)	
Mean of dependent variable	0.6155	
Fraction of Concordant Pairs	88.9	
Sample size	1322	

** Statistically significant at 5 percent level
* Statistically significant at 10 percent level

Exhibit A.2

LOGISTIC MODEL OF CERTIFIED STUDENTS PARTICIPATION IN SCHOOL BREAKFAST PROGRAM ON DAY OF OBSERVATION

	Coefficient Standard Error	Impact at Mean
STUDENT CHARACTERISTICS		
Female	-0.3718** (0.1773)	-0.0857**
Grade	-0.2631** (0.0409)	-0.0607**
Race: black	0.6533** (0.2363)	0.1506**
Race: Hispanic	0.3283 (0.4105)	0.0757
Race: missing	-0.8782 (0.9168)	-0.2025
Primary language not English	1.2495 (0.4805)	0.2880
Primary language missing	0.4248 (0.3486)	0.0979
Family size	-0.0070 (0.0530)	-0.0016
Family size information missing	1.4672 (1.0192)	0.3382
Household income/poverty	-0.7144** (0.2434)	-0.1647**
Household income/poverty missing	-0.0450 (0.5159)	-0.0104
Family received AFDC or Food Stamps	0.1052 (0.2249)	0.0243
Welfare information missing	0.0830 (0.5626)	0.0191

**Exhibit A.2
(continued)**

	Coefficient Standard Error	Impact at Mean
STUDENT CHARACTERISTICS - continued		
"Students like school lunches"	0.3484 (0.1394)	0.0803
"School lunches are convenient"	0.2842 (0.2356)	0.0655
"School lunches are economical"	-0.1472 (0.1685)	-0.0339
"School lunches are nutritious"	-0.2463 (0.1616)	-0.0568
Opinion information missing	0.5677 (0.9099)	0.1309
SCHOOL CHARACTERISTICS		
Region: New England	-0.3607 (0.5778)	-0.0831
Region: Mid-Atlantic	-0.7982 (0.4893)	-0.1840
Region: West North Central	-0.5321 (0.5154)	-0.1227
Region: East North Central	0.1845 (0.4211)	0.0425
Region: South Atlantic	0.0370 (0.4208)	0.0085
Region: East South Central	-0.0096 (0.5249)	-0.0022
School enrollment (100's)	-0.0761 (0.0281)	-0.0175
Percent of school black	-0.0052 (0.0038)	-0.0012
Percent of school Hispanic	-0.0098** (0.0051)	-0.0023**

Exhibit A.2
(continued)

	Coefficient Standard Error	Impact at Mean
SCHOOL CHARACTERISTICS - continued		
Racial composition missing	-0.4660 (0.2813)	-0.1074
Offer hot breakfast	0.0277 (0.4475)	0.0064
Time per week offer hot breakfast	0.0048 (0.1035)	0.0011
Offer cold breakfast	-0.1896 (0.3185)	-0.0437
A la carte items offered at breakfast	0.5542 (0.3352)	0.1278
INTERCEPT	1.3456 (1.1968)	
Mean of dependent variable	.3605	
Fraction of Concordant Pairs	77.8%	
Sample size	749	

** Statistically significant at 5 percent level
* Statistically significant at 10 percent level

Exhibit A.3

**LOGISTIC MODEL OF CERTIFIED STUDENTS PARTICIPATION IN
SCHOOL LUNCH PROGRAM ON DAY OF OBSERVATION**

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS		
Female	-0.0677 (0.1711)	-0.0122
Grade	-0.1913** (0.0393)	-0.0344**
Race: black	-0.0344 (0.2448)	-0.0062
Race: Hispanic	0.2484 (0.3560)	0.0446
Race: missing	-0.8847* (0.5429)	-0.1590*
Primary language not English	0.6626 (0.4317)	0.1191
Primary language missing	-0.2075 (0.3391)	-0.0373
Family size	0.0836 (0.0521)	0.0150
Family size missing	-1.9542 (1.5199)	-0.3512
Household income/poverty	-0.0412 (0.0973)	-0.0074
Poverty missing	0.4192 (0.4359)	0.0753
Family receives AFDC or Food Stamps	0.2256 (0.2104)	0.0405
Welfare information missing	-0.0110 (0.5047)	-0.0020

Exhibit A.3
(continued)

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS - continued		
"Students like school lunches"	0.1479 (0.1209)	0.0266
"School lunches are convenient"	-0.0230 (0.1934)	-0.0041
"School lunches are economical"	0.1231 (0.1386)	0.0221
"School lunches are nutritious"	0.2364* (0.1439)	0.0425*
Opinion information missing	1.3842* (0.7375)	0.2488*
SCHOOL CHARACTERISTICS		
Region: New England	0.4678 (0.4441)	0.0841
Region: Mid-Atlantic	-0.0588 (0.3914)	-0.0106
Region: West North Central	-0.0331 (0.3581)	-0.0059
Region: East North Central	1.2114** (0.3630)	0.2177**
Region: South Atlantic	0.4960 (0.3221)	0.0891
Region: East South Central	1.0984** (0.4399)	0.1974**
School enrollment (100's)	-0.0116 (0.0204)	-0.0021
Percent of school black	0.0016 (0.0037)	0.0003
Percent of school Hispanic	-0.0037 (0.0048)	-0.0007

Exhibit A.3
(continued)

	Coefficient (Standard Error)	Impact at Mean
SCHOOL CHARACTERISTICS - continued		
Racial composition missing	0.0598 (0.2664)	0.0107
Offer versus serve	-0.0573 (0.2392)	-0.0103
A la carte items offered at lunch	0.2494 (0.2188)	0.0448
Offer cold meals for lunch	-0.2383 (0.1984)	-0.0428
Offer pizza for lunch	-0.2392 (0.2268)	-0.0430
Offer salad bar for lunch	0.1578 (0.2506)	0.0284
Open campus	-0.1695 (0.3030)	-0.0305
No open campus, but:		
Students can go home for lunch	-0.6251** (0.3074)	0.1124**
Whether students can go home missing	-1.2990 (0.7266)	-0.2335
Other ways to obtain food	0.5376 (0.4233)	0.0966
Student store or snack bar	-0.0827 (0.2690)	-0.0149
Vending machines in school	-0.6839** (0.2410)	-0.1229**

Exhibit A.3
(continued)

	Coefficient (Standard Error)	Impact at Mean
INTERCEPT		
Mean of dependent variable	0.7651	
Fraction of Concordant Pairs	76.1	
Sample size	1006	

** Statistically significant at 5 percent level
* Statistically significant at 10 percent level

Exhibit A.4

LOGISTIC MODEL OF STUDENTS PARTICIPATION IN
SCHOOL BREAKFAST PROGRAM ON DAY OF OBSERVATION

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS		
Female	-0.2041 (0.1648)	-0.0295
Grade	-0.2162** (0.0349)	-0.0312**
Race: black	0.9874** (0.2346)	0.1427**
Race: Hispanic	0.4963 (0.4027)	0.0717
Primary language not English	0.7940* (0.4779)	0.1147*
Primary language missing	0.1661 (0.3036)	0.0240
Family size	-0.0421 (0.0546)	-0.0061
Household income/poverty	-0.4448** (0.0852)	-0.0643**
Family receives AFDC or Food Stamps	0.5628** (0.1974)	0.0813**
"Students like school lunches"	0.3668** (0.1155)	0.0530**
"School lunches are convenient"	0.1305 (0.1903)	0.0189
"School lunches are economical"	-0.0103 (0.1358)	0.0015
"School lunches are nutritious"	-0.1366 (0.1336)	-0.0197
Opinion information missing	0.7539 (0.7684)	0.1089

Exhibit A.4
(continued)

	Coefficient (Standard Error)	Impact at Mean
SCHOOL CHARACTERISTICS		
Region: New England	0.1720 (0.5148)	0.0249
Region: Mid-Atlantic	-0.2979 (0.4958)	-0.0430
Region: West North Central	-0.1428 (0.4858)	-0.0206
Region: East North Central	0.6376 (0.4103)	0.0921
Region: South Atlantic	0.1427 (0.4106)	0.0206
Region: East South Central	0.4424 (0.4898)	0.0639
School enrollment (100's)	-0.0387 (0.0249)	-0.0056
Percent of school black	-0.0033 (0.0039)	-0.0005
Percent of school Hispanic	-0.0002 (0.0048)	-0.0000
Racial composition missing	-0.1439 (0.2422)	-0.0208
Offer hot breakfast	0.3524 (0.4542)	0.0509
Time per week offer hot breakfast	-0.0325 (0.0935)	-0.0047
Offer cold breakfast	-0.1061 (0.3029)	-0.0153
A la carte items offered at breakfast	-0.0594 (0.2977)	-0.0086

**Exhibit A.4
(continued)**

	Coefficient (Standard Error)	Impact at Mean
INTERCEPT	-0.9213 (1.0137)	
Mean of dependent variable	0.1752	
Fraction of Concordant Pairs	83.6	
Sample size	1398	

** Statistically significant at 5 percent level
* Statistically significant at 10 percent level

Exhibit A.5

LOGISTIC MODEL OF CERTIFIED STUDENTS PARTICIPATION IN SCHOOL BREAKFAST PROGRAM ON DAY OF OBSERVATION

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS		
Female	-0.3591** (0.0905)	-0.0887**
Grade	-0.0549* (0.0201)	-0.0136*
Race: black	0.4344** (0.1728)	0.1074**
Race: Hispanic	0.3310 (0.2573)	0.0818
Race: missing	0.9443 (0.7986)	0.2334
Primary language not English	1.6686** (0.3916)	0.4123**
Primary language missing	0.0361 (0.1904)	0.0089
Family size	0.0522 (0.0351)	0.0129
Household income/poverty	-0.0628 (0.0210)	-0.0155
Family receives AFDC or Food Stamps	0.6420** (0.1553)	0.1587**
"Students like school lunches"	0.2721** (0.0603)	0.0673**
"School lunches are convenient"	0.1403 (0.0973)	0.0347
"School lunches are economical"	0.1420** (0.0681)	0.0351**

Exhibit A.5
(continued)

	Coefficient (Standard Error)	Impact at Mean
STUDENT CHARACTERISTICS - continued		
"School lunches are nutritious"	-0.0104 (0.0740)	-0.0026
Opinion information missing	0.9035** (0.3827)	0.2233**
SCHOOL CHARACTERISTICS		
Region: New England	0.1537 (0.2091)	0.0380
Region: Mid-Atlantic	0.3785* (0.2140)	0.0936*
Region: West North Central	0.1410 (0.1703)	0.0348
Region: East North Central	0.8967** (0.1821)	0.2216**
Region: South Atlantic	0.8415** (0.1696)	0.2080**
Region: East South Central	0.6752** (0.1952)	0.1669**
School enrollment (100's)	-0.0860** (0.0120)	-0.0213*
Percent of school black	-0.0041 (0.0027)	-0.0010
Percent of school Hispanic	0.0035 (0.0033)	0.0009
Racial composition missing	-0.1773 (0.1148)	-0.0438
Offer versus serve	0.1023 (0.1369)	0.0253
A la carte items offered at lunch	-0.2607** (0.1116)	-0.0644**

Exhibit A.5
(continued)

	Coefficient (Standard Error)	Impact at Mean
SCHOOL CHARACTERISTICS - continued		
Offer cold meals for lunch	0.0646 (0.1043)*	0.0160
Offer pizza for lunch	0.1988* (0.1176)	0.0491*
Offer salad bar for lunch	0.2493** (0.1244)	0.0616**
Open campus	-0.3920** (0.1551)	-0.0969
No open campus, but:		
Students can go home for lunch	-0.2978 (0.1700)	-0.0736
Whether students can go home missing	0.1908 (0.5089)	0.0271
Student store or snack bar	0.0414 (0.1531)	0.0102
Vending machines in school	-0.0138 (0.1310)	0.0034
Other ways to obtain food	-0.1475 (0.2121)	0.0364
INTERCEPT	-0.8120	
Mean of dependent variable	0.5537	
Fraction of Concordant Pairs	74.9%	
Sample size	2502	

** Statistically significant at 5 percent level
* Statistically significant at 10 percent level

Appendix B

Focus Group Participant Profiles

Exhibit B.1

Selected Characteristics of Non-Applicant Families

Characteristic	Study Site				All Sites
	A	**B**	**C**	**D**	
Race:					
White	92%	0%	100%	0%	50%
African-American	0	0	0	96	23
Hispanic	0	100	0	5	26
Other	8	0	0	0	2
	(N=24)	(N=23)	(N=24)	(N=22)	(N=93)
Household Size:					
2	4%	0%	13%	8%	6%
3	17	4	17	17	14
4	54	13	29	29	32
5	17	17	17	38	22
6	8	26	17	0	13
7	0	9	8	4	5
≥ 8	0	30	0	4	8
	(N=24)	(N=23)	(N=24)	(N=24)	(N=95)
Mother's Educational Attainment:					
≤ 8th Grade	0%	65%	8%	0%	18%
Some High School	13	9	8	8	10
High School/GED	21	13	38	25	24
Some College	54	13	42	58	42
≥ 4 Years College	13	0	4	8	6
	(N=24)	(N=23)	(N=24)	(N=24)	(N=95)
Mother's Employment Status:					
≥ 35 Hours per Week	67%	17%	50%	63%	50%
< 35 Hours per Week	8	22	29	13	18
No employment Outside of Home	25	61	21	25	33
	(N=24)	(N-23)	N-24	(N-24)	(N=95)
Primary Language:					
English	100%	4%	100%	100%	77%
Spanish	0	83	0	0	20
Other	0	13	0	0	3
	(N=24)	(N=23)	(N=24)	(N=24)	(N=95)

Exhibit B.1
(continued)

Characteristic	Study Site				All Sites
	A	B	C	D	
Participated in School-Related Activities:					
PTA	67%	20%	40%	8%	34%
Open School Night	92	20	80	25	55
Other	75	10	40	58	48
	(N=12)	(N=10)	(N=10)	(N=12)	(N=44)
Other Assistance Programs:					
WIC	0%	0%	0%	0%	0%
Food Stamps	17	0	0	8	7
AFDC	0	0	0	8	2
Other	0	10	0	17	9
None	83	90	100	67	84
	(N=12)	(N=10)	(N=10)	(N=12)	(N=44)

Detail may not sum due to rounding.

Exhibit B.2

Selected Characteristics of Non-Applicant Students[1]

Characteristic	Study Site				All Sites
	A	**B**	**C**	**D**	
Age:					
15 years old	0%	14%	43%	33%	23%
16	83	57	43	33	54
17	17	29	14	17	19
18	0	0	0	17	4
	(N=6)	(N=7)	(N=7)	(N=6)	(N=26)
Grade:					
10	17%	14%	57%	50%	35%
11	67	86	43	50	62
12	17	0	0	0	4
	(N=6)	(N=7)	(N=7)	(N=6)	(N=26)
Gender:					
Male	67%	57%	71%	67%	65%
Female	33	43	29	33	35
	(N=6)	(N=7)	(N=7)	(N=6)	(N=26)
Previous Regular Participation in NSLP:					
Yes	83%	100%	71%	67%	81%
No	17%	0	29	33	19
	(N=6)	(N=7)	(N=7)	(N=6)	(N=26)
Previous Regular Participation in SBP:					
Yes	17%	29%	14%	83%	35%
No	83	71	86	17	65
	(N=6)	(N=7)	(N=7)	(N=6)	(N=26)

[1]Non-applicant student focus groups were conducted only at the high school level. Grades 10 and 11 were the target grades.

Detail may not sum due to rounding.

Exhibit B.3

Selected Characteristics of Non-Participant Students[1]

Characteristic	Study Site A	B	C	D	All Sites
Age:					
9 years old	10%	30%	10%	27%	20%
10	20	19	20	9	17
11	5	0	5	14	6
12	10	7	15	0	8
13	10	7	10	9	9
14	15	11	10	9	11
15	10	7	10	5	8
16	20	15	15	14	16
17	0	0	5	14	5
18	0	4	0	0	1
	(N=20)	(N=27)	(N=20)	(N=22)	(N=89)
Grade:					
4	25%	37%	20%	41%	32%
5	10	8	15	14	12
7	25	7	20	5	14
8	10	19	15	9	14
10	10	4	15	5	8
11	20	22	15	27	21
	(N=20)	(N=27)	(N=20)	(N=22)	(N=89)
Gender:					
Male	20%	48%	40%	59%	43%
Female	80	52	60	41	57
	(N=20)	(N=27)	(N=20)	(N=22)	(N=89)
Previous Regular Participation in NSLP					
Yes	90%	85%	84%	68%	81%
No	10	15	16	32	19
	(N=19)	(N=26)	(N=19)	(N=22)	(N=86)
Previous Regular Participation in SBP					
Yes	26%	48%	50%	57%	46%
No	74	52	50	43	54
	(N=19)	(N=27)	(N=20)	(N=21)	(N=87)

[1]Non-applicant student focus groups were conducted only at the high school level. Grades 10 and 11 were the target grades.

Detail may not sum due to rounding.

Exhibit B.4

**Frequency That Non-Participant Students Choose
Various Lunch Alternatives**

Lunch Alternatives	Study Site				All Sites
	A	B	C	D	
Bring Lunch From Home:					
Every day	0%	12%	5%	0%	5%
3-4 days/week	13	0	5	0	4
1-2	25	15	0	21	15
0	63	73	90	79	77
	(N=16)	(N=26)	(N=20)	(N=19)	(N=81)
Purchase A La Carte Items:					
Every day	6%	43%	6%	11%	15%
3-4 days/week	11	14	39	22	22
1-2	11	29	6	56	25
0	72	14	50	11	38
	(N=18)	(N=14)	(N=18)	(N=18)	(N=68)
Purchase Items from Vending Machines:					
Every day	25%	8%	0%	0%	8%
3-4 days/week	6	8	12	6	8
1-2	19	42	47	11	29
0	50	42	41	83	56
	(N=16)	(N=12)	(N=17)	(N=18)	(N=63)
Go Home for Lunch:					
Every day	0%	5%	0%	5%	3%
3-4 days/week	0	0	0	0	0
1-2	0	5	0	5	3
0	100	90	100	91	95
	(N=17)	(N=20)	(N=20)	(N=21)	(N=78)
Leave School Grounds:					
Every day	21%	22%	0%	0%	9%
3-4 days/week	0	0	0	0	0
1-2	11	11	0	5	6
0	68	67	100	95	85
	(N=19)	(N=9)	(N=20)	(N=19)	(N=67)
Skip Lunch:					
Every day	0%	19%	0%	10%	9%
3-4 days/week	0	4	6	15	6
1-2	29	33	25	10	25
0	71	44	69	65	60
	(N=17)	(N=27)	(N=16)	(N=20)	(N=80)

Detail may not sum due to rounding.

Appendix C

Study Instruments

In-Class Student Questionnaire/

Teacher Instructions for In-Class Student Questionnaire

IN-CLASS STUDENT QUESTIONNAIRE

NAME: _____   9-38/

ADDRESS:_____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE:_____ 39-50/   DATE: _____

1.   What grade are you in? [WRITE YOUR GRADE BELOW]

_____ GRADE   51-52/

2.   Are you a boy or a girl? [CIRCLE ONE ANSWER ONLY]

BOY   GIRL   53/

3.   Thinking back to last week, please circle all of the days you were in school for the whole day.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
54/	55/	56/	57/	58/

In your school, students can get a complete lunch (and breakfast) in the cafeteria. The next questions ask about these **complete** meals served in the cafeteria. The complete meal is the meal with the same price every day. We are **not** talking about any individual food items, any meals you may have brought from home, or any meals you may have bought outside of school.

4. Now, again thinking back to **last week**, please circle **all of the days** on which **you took the school** *breakfast*. You did not have to actually eat all the food on your tray each day. To help you remember, a copy of each day's menu for last week is on the last page.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
59/	60/	61/	62/	63/

4a. If you did not take the school breakfast on any of these days, what was the reason? Write your answer below.

_____

_____

_____

5. Also thinking back to **last week**, please circle **all of the days** on which **you took the school** *lunch*. You did not have to actually eat all the food on your tray each day. To help you remember, a copy of each day's menu for last week is on the next page.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
64/	65/	66/	67/	68/

5a. If you did not take the school lunch on any of these days, what was the reason? Write your answer below.

_____

_____

_____

6.   Finally, think back to last week, were there any days you didn't eat breakfast or lunch because you lost your meal ticket? [CIRCLE ONE ANSWER ONLY]

YES   [ANSWER QUESTION 7]   69/

NO   [STOP]

7.   If you answered "yes" to question 6, please circle all of the days which you lost your meal ticket *last week*.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
70/	71/	72/	73/	74/

Thank you very much for completing this survey.

ELEMENTARY SCHOOLS MENUS

BREAKFAST

Monday	Tuesday	Wednesday	Thursday	Friday
Orange-Pineapple juice English Muffin w/Ham and Cheese Milk	Pineapple Cup w/Cherry Hot Biscuit w/Jelly Kix Cereal Milk	Grape Juice French Toast w/Syrup Trail Mix Milk	Chilled Orange Juice Pancakes w/Syrup Rice Krispies Milk	Applesauce Belgian Waffle Sticks Golden Grahams Cereal Milk

LUNCH

Monday	Tuesday	Wednesday	Thursday	Friday
Hamburger on Multigrain Bun Tater Tots Lime Fruited Gelatin Milk	Hearty Vegetable Soup Rib-B-Que w/Sauce on Bun Potato Triangles Orange Wedge Milk	Fried Chicken Cajun Rice Blackeyed Peas Collard Greens Corn Bread Square Sweet Potato Pie Milk	Turkey Noodle Soup Pepperoni Pizza Seasoned Green Beans Fresh Tangerine Milk	Beef-A-Roni Spinach Salad w/Dressing Peach Cup w/Cherry Milk

IN-CLASS STUDENT QUESTIONNAIRE

NAME: _____

ADDRESS:_____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE:_____ DATE: _____

1.   What grade are you in? [WRITE YOUR GRADE BELOW]

_____ GRADE

2.   Are you male or female? [CIRCLE ONE ANSWER ONLY]

MALE   FEMALE

3.   Thinking back to last week, please circle all of the days you were in school for the whole day.

MONDAY   TUESDAY   WEDNESDAY   THURSDAY   FRIDAY

Shawnee Middle School

In your school, students can get a complete lunch (and breakfast) in the cafeteria. The next questions ask about these **complete** meals served in the cafeteria. The complete meal is the meal with the same price every day. We are **not** talking about any individual food items, any meals you may have brought from home, or any meals you may have bought outside of school.

4.   Now, again thinking back to **last week**, please circle **all of the days** on which **you took the school** *breakfast*. You did not have to actually eat all the food on your tray each day. To help you remember, a copy of each day's menu for last week is on the last page.

MONDAY   TUESDAY   WEDNESDAY   THURSDAY   FRIDAY

59/   60/   61/   62/   63/

4a.   If you did not take the school breakfast on any of these days, what was the reason? Write your answer below.

_____

_____

_____

5.   Also thinking back to **last week**, please circle **all of the days** on which **you took the school** *lunch*. You did not have to actually eat all the food on your tray each day. To help you remember, a copy of each day's menu for last week is on the next page.

MONDAY   TUESDAY   WEDNESDAY   THURSDAY   FRIDAY

64/   65/   66/   67/   68/

5a.   If you did not take the school lunch on any of these days, what was the reason? Write your answer below.

_____

_____

_____

Shawnee Middle School

6. Finally, think back to **last week**, were there any days you didn't eat breakfast or lunch because you lost your meal ticket? [CIRCLE ONE ANSWER ONLY]

    YES   [ANSWER QUESTION 7]   69/

    NO   [STOP]

7. If you answered "yes" to question 6, please circle **all of the days** which you lost your meal ticket *last week*.

    MONDAY   TUESDAY   WEDNESDAY   THURSDAY   FRIDAY

    70/   71/   72/   73/   74/

Thank you very much for completing this survey.

SECONDARY SCHOOLS MENUS

BREAKFAST

Monday	Tuesday	Wednesday	Thursday	Friday
Chilled Grape Juice Turkey Ham & Mozzarella Cheese Buttermilk Biscuit Milk	Chilled Orange Juice Apple-Cinnamon Muffin Golden Graham Cereal Milk	Assorted Cold Cereals • Raisins • Bananas Orange Pineapple Juice • Trail Mix Milk	Pancakes w/Toppings French Toast w/Toppings • Spiced Peaches • Honey Banana • Cinnamon Apples Orange Juice Milk	Apple Nut Muffin Blueberry Muffin Banana Nut Muffin Fruit Cocktail Milk

LUNCH

Monday	Tuesday	Wednesday	Thursday	Friday
Pepperoni Pizza Pork Egg Roll w/Sweet-N-Sour Sauce Chili Con Carne over Rice Fried Rice Seasoned Broccoli French Fries Lemon Fruited Gelatin Salad Bar A Milk	Cheese Pizza Spaghetti w/Meat Sauce Hot Roll Fish Nugget Platter w/Tartar Sauce Chicken Patty on Bun w/Lettuce & Tomato Macaroni Salad Corn Muffin Tater Tots Chilled Pear Cup w/Cherry Salad Bar B Milk	Sausage Pizza Salisbury Steak w/Gravy & Hot Roll Tangy Orange Chicken Steamed Rice w/Gravy Baked Sweet Potato Fresh Apple Trail Mix Salad Bar C Milk	Chicken Noodle Soup Pepperoni Pizza Chicken Fajita in Pita Pocket Beef Burrito Platter Onion Rings Mexicali Corn Assorted Fresh Fruit Salad Bar D Milk	Cheese Pizza Hamburger on Bun w/Lettuce & Tomato Peanut Butter & Jelly Sandwich Carrot & Celery Sticks w/Creamy Cucumber Dressing Apple Raisin Cobbler Salad Bar E Milk

TEACHER INSTRUCTIONS FOR

IN-CLASS STUDENT QUESTIONNAIRE

Your school has been selected to participate in a survey of School Lunch Eligible Non-Participants for the U.S. Department of Agriculture's Food and Nutrition Service. This study is being conducted by Abt Associates Inc. of Cambridge, Massachusetts and the Shawnee, Oklahoma School District. As a part of this study, students in selected grades are being asked to complete a very brief questionnaire to identify the number of days in the last full school week that they participated in the lunch and breakfast programs.

The questionnaires are being sent to you to administer to students in your classroom **on or before September 30th**.

Your packet contains enough questionnaires for you to distribute one to each of the students in your class. After you have distributed, administered, and collected the questionnaires, please place them back in the original packet. Then return the packet the same day to your principal.

On behalf of USDA's Food and Nutrition Service, thank you for your assistance in this important data collection effort.

Instructions for Administration

1. Students may use either pen or pencil to complete the questionnaire.

2. Students should complete the top section of the questionnaire.

    - Tell them to PRINT their **full first and last name, not nicknames.**

    - Have them PRINT their address, including city, state, and zip code.

    - Tell them to enter their home telephone number beginning with area code.

    - Remind them to enter today's date on the line provided.

3. On *Question 1*, have them fill in their current grade level.

4. On *Question 2*, have them circle their gender.

5. On *Question 3*, have them circle **all** of the days of the week that they were in school for the **whole day last week.** If students were in school for less than a whole school day (i.e., from the official beginning to the official end of the school day), they should not circle that day or days.

6. Please read the introduction before Question 4 aloud to the students. Point out the menu that is attached to the questionnaire and explain that these are the complete meals that the next four questions ask about. The questions do not refer to any individual food items purchased in the cafeteria, any meals brought from home, or any meals purchased outside of the school. (For your information, "complete meals" refers to meals that are reimbursable as part of the School Lunch and Breakfast Programs.)

7. On *Question 4*, have students circle **all** of the days they took the **school breakfast last week**, regardless of whether they ate all of it. Some students will leave this question entirely blank if they did not eat breakfast at school.

8. *Question 4a* should be answered only if one or more of the days in Question 4 is NOT circled. Students do not need to have a separate reason for each day. Elementary students may need assistance writing their answers.

9. On *Question 5*, have students circle **all** of the days that they took the **complete school lunch last week**, regardless of whether they ate all of it.

10. *Question 5a* should be answered only if one or more of the days in Question 4 is NOT circled. Students do not need to have a separate reason for each day. Elementary students may need assistance writing their answers.

11. On *Question 6*, students should circle either "yes" or "no" to indicate whether there **were any days last week** when they couldn't eat the school breakfast or lunch because they **lost their meal ticket**. IF YOUR SCHOOL DOES NOT USE MEAL TICKETS, EVERYONE SHOULD CIRCLE "NO."

12. *Question 7* should be answered only if "yes" is circled in Question 6. Students should circle **all** of the days last week when their meal ticket **was lost**.

13. Have students return completed questionnaires to you.

Focus Group Screening Guide for

Non-Applicant Parents and Students

SCHOOL DISTRICT_____

SCHOOL_____

DATE_____

TIME_____

☐ PARENT   ☐   STUDENT

☐   10th/11th

SCREENER FOR NON-APPLICANT PARENTS AND STUDENTS
SCHOOL BREAKFAST/LUNCH PROGRAM FOCUS GROUPS

[ASK TO SPEAK TO THE PARENT OF (INSERT NAME OF STUDENT ON LIST).

Hello, my name is _____, and I'm calling from Abt Associates,
a national marketing research firm in Cambridge, Massachusetts.
Ms./Mr. **(PRINCIPAL)**, principal of **(SCHOOL)** recently wrote to you to
tell you that I would be calling. Did you receive that letter?

$$\text{YES} \quad . . . . 1$$
$$\text{NO} \quad . . . . 2$$

In that letter, **Ms./Mr. (PRINCIPAL)** told you that we are helping
the Federal Government conduct a very important study in **(SCHOOL)**
on the school lunch and breakfast program. Specifically, this
study is about application for and participation in the free and
reduced-price school meal program. As part of that study, we are
inviting a few select parents and children to participate in small,
informal group discussions at the school. Parents attending the
discussion groups at the school will be paid a cash gift to thank
them for participating. In order to make sure we are speaking to
the appropriate people, I would like to ask you a few questions
which will only take a few minutes of your time.

1.   Are you the parent or adult in the family who is most
     knowledgeable about **(CHILD ON FACESHEET)**'s eating and food
     habits, both at home and at school?

                    YES (CONTINUE WITH Q.2) 1
                    NO (ASK TO SPEAK WITH APPROPRIATE PERSON) . 2

2.   How many people, including yourself and any children,
     currently live in your household? **RECORD HERE AND ON
     DROPSHEET**

                    NUMBER OF HOUSEHOLD MEMBERS _____

1

3. Was your total *gross* household income for 1992 more than $_____? [FROM **NUMBER** OF HOUSEHOLD MEMBERS IN Q.2, FIND CORRESPONDING HOUSEHOLD **INCOME** IN CHART BELOW]

Household Size	Annual Income	Monthly Income	Weekly Income
1	$12,900	$1,075	$250
2	$17,450	$1,450	$335
3	$22,000	$1,825	$425
4	$26,550	$2,225	$510
5	$31,100	$2,600	$600
6	$35,650	$2,975	$685
7	$40,200	$3,350	$775
8	$44,750	$3,725	$860
9	$49,300	$4,100	$950
10	$53,850	$4,500	$1,035
11	$58,400	$4,875	$1,125
12	$62,950	$5,250	$1,215

YES (**RECORD HERE AND ON DROPSHEET**) 1

NO (**RECORD HERE AND ON DROPSHEET**) 2

4. Of the [**NUMBER IN Q.2**] people in your household, how many are children currently enrolled in either elementary or secondary school, that is grades K through 12 in the (**DISTRICT**) school district?

OF SCHOOL-AGED CHILDREN _____

NO SCHOOL-AGED CHILDREN IN HOUSEHOLD [**TERMINATE**] 00

2

IF MORE THAN ONE CHILD, READ: Now, I have some questions about the [NUMBER IN Q.4] school-aged children. Let's start with [CHILD ON FACESHEET], and then the others from oldest to youngest.

Q.5 Is [CHILD/the oldest/the next oldest] a boy or a girl?	A. How old is (s)he?	B. What grade is (s)he in?	C. Is (s)he currently approved for free or reduced price school meals?	IF NO TO C, ASK: D. Has (s)he been approved for free or reduced price school meals in the past?
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2

FOR PARENT:

- IF Q.5C IS "YES" FOR ALL CHILDREN, TERMINATE.
- IF ANY "NO" IN Q.5C AND Q.3 IS "NO", CHECK QUOTA FOR NONAPPLICANT PARENTS.

FOR SAMPLED CHILD (IN FIRST ROW)

- IF Q.5C IS "NO" AND Q.3 IS NO, CHECK QUOTA FOR NONAPPLICANT STUDENTS.
- IF Q.5C IS "YES", TERMINATE.
- IF Q.3 IS "YES", TERMINATE.

3

6. Which statement best describes your current employment situation? Are you . . .

employed full-time, that is, working 35 hours a week or more outside of the house, 1

employed part-time, that is, working less than 35 hours a week outside of the house, 2

or are you not employed outside of the house? 3

7. What was the highest level of education you completed?

EIGHTH GRADE OR LESS 1
SOME HIGH SCHOOL 2
HIGH SCHOOL/GED 3
SOME COLLEGE 4
UNDERGRADUATE COLLEGE (4 YEAR) 5
GRADUATE SCHOOL 6

8. With which ethnic group do you identify?

WHITE 1
BLACK 2
AMERICAN INDIAN/ALASKAN NATIVE 3
ASIAN/PACIFIC ISLANDER 4
HISPANIC 5

OTHER (SPECIFY_____) . . 6

9. What is the primary language spoken in your household?

ENGLISH 1
SPANISH 2

OTHER (SPECIFY_____) 3

10. As I mentioned at the start, we are conducting a study on the school lunch and breakfast program. As part of this study, we are inviting a select group of ...

      [RECRUITING PARENT ONLY] parents like yourself

      [RECRUITING CHILD ONLY] [insert grade] students

      [RECRUITING PARENT AND CHILD] parents like yourself and **[insert grade]** students

...to participate in an informal discussion about this topic. We frequently invite people to discussions like this so we can understand attitudes and opinions about a topic. We find these sessions are not only helpful to us, but are interesting for the people who participate.

[RECRUITING PARENT]

The parent discussion is being held on

_____.

It lasts about an hour and a half and is being scheduled from _____ to _____. A light dinner will be served and child care will be provided if you need it.

To thank participants, parents will receive a cash gift of $15.

Would you be interested in participating?

      YES **(COLLECT NAME AND ADDRESS INFO BELOW)** . 1
      NO **(TERMINATE)** 2

Will you need childcare at the school while you are attending this meeting?

      YES (ASK A) 1
      NO 2

What are the ages of the children who require childcare?

_____

[RECRUITING CHILD]

11. The student discussion is being held on

_____.

It lasts about 60 minutes and is being scheduled from _____ to _____.

Would you be willing to give (**CHILD ON FACESHEET**) permission
to participate? IF YES, PLEASE REMIND PARENT TO TELL CHILD.
[**INSERT FOR BIRMINGHAM, AL**: We will be sending you a
permission form to sign for your child to participate.
Please sign the form as soon as you receive it and return it
to us in the pre-stamped and addressed envelope. Your child
cannot participate unless you give your signed written
permission.]

      YES (**COLLECT NAME AND ADDRESS INFO BELOW**) 1
      NO (**TERMINATE**) 2

NAME:_____

ADDRESS:_____

CITY:_____ STATE:_____ ZIP:_____

PHONE DAY:_____ EVENING:_____

[**IF PARTICIPATING**: You will be receiving a letter in a few days
with all of the details about the discussion group meeting and a
reminder call a couple of days before the meeting. If (you/your
child) cannot attend this important meeting, please let us know.]

That is all the questions that I have. Thank you very much for
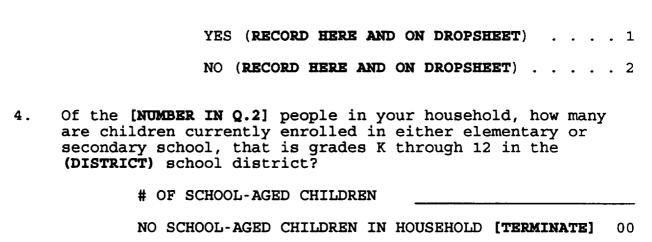your time.

Focus Group Screening Guide for

Non-Participant Students

ABT ASSOCIATES
55 Wheeler Street
Cambridge, MA 02138
617/492-7100
PROJ #FOCUS
FNS3/FNS8NP.SCR
10/20/93

SCHOOL DISTRICT_____

SCHOOL_____

DATE_____

TIME_____

☐ 4th/5th   ☐ 7th/8th   ☐ 10th/11th
☐ M ☐ F

SCREENER FOR NON-PARTICIPANT STUDENTS
SCHOOL BREAKFAST/LUNCH PROGRAM FOCUS GROUPS

[ASK TO SPEAK TO THE PARENT OF (NAME ON FACESHEET).

Hello, my name is _____, and I'm calling from Abt Associates, a national marketing research firm in Cambridge, Massachusetts. Ms./Mr. **(PRINCIPAL)**, principal of **(SCHOOL)** recently wrote to you to tell you that I would be calling. Did you receive that letter?

YES 1

NO 2

In that letter, Ms./Mr. **(PRINCIPAL)** told you that we are helping the Federal Government conduct a very important study in **(SCHOOL)** on the school lunch and breakfast program. Specifically, this study is about application for and participation in the school meal programs. As part of that study, we are inviting a few select children to participate in small, informal group discussions at the school. In order to make sure we are speaking to the appropriate people, I would like to ask you a few questions which will only take a few minutes of your time.

1. Are you the parent or adult in the family who is most knowledgeable about **(CHILD ON FACESHEET)**'s eating and food habits, both at home and at school?

        YES (CONTINUE WITH Q.2) 1
        NO (ASK TO SPEAK WITH APPROPRIATE PERSON) . 2

2. How many people, including yourself and any children, currently live in your household? **RECORD HERE AND ON DROPSHEET**

        NUMBER OF HOUSEHOLD MEMBERS _____

1

3. Was your total *gross* household income for 1992 more than $_____? **[FROM NUMBER OF HOUSEHOLD MEMBERS IN Q.2, FIND CORRESPONDING HOUSEHOLD INCOME IN CHART BELOW]**

Household Size	Annual Income	Monthly Income	Weekly Income
1	$12,900	$1,075	$250
2	$17,450	$1,450	$335
3	$22,000	$1,825	$425
4	$26,550	$2,225	$510
5	$31,100	$2,600	$600
6	$35,650	$2,975	$685
7	$40,200	$3,350	$775
8	$44,750	$3,725	$860
9	$49,300	$4,100	$950
10	$53,850	$4,500	$1,035
11	$58,400	$4,875	$1,125
12	$62,950	$5,250	$1,215

YES **(RECORD HERE AND ON DROPSHEET)** 1

NO **(RECORD HERE AND ON DROPSHEET)** 2

4. Of the **[NUMBER IN Q.2]** people in your household, how many are children currently enrolled in either elementary or secondary school, that is grades K through 12 in the **(DISTRICT)** school district?

\# OF SCHOOL-AGED CHILDREN _____

NO SCHOOL-AGED CHILDREN IN HOUSEHOLD **[TERMINATE]** 00

IF MORE THAN ONE CHILD, READ: Now, I have some questions about the [NUMBER IN Q.4] school-aged children. Let's start with [CHILD ON FACESHEET], and then the others from oldest to youngest.

Q.5 Is [CHILD/the oldest/the next oldest] a boy or a girl?	A. How old is (s)he?	B. What grade is (s)he in?	C. Is (s)he currently approved for free or reduced price school meals?	IF NO TO C, ASK: D. Has (s)he been approved for free or reduced price school meals in the past?
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2
BOY . . . . . 1 GIRL 2			YES . . . . 1 NO 2	YES . . . 1 NO . . . 2

FOR SAMPLED CHILD (IN FIRST ROW)

- IF Q.5C IS "YES" AND Q.3 IS "NO", CHECK QUOTA FOR APPROVED NONPARTICIPANTS.
- IF Q.5C IS "NO" AND Q.3 IS "YES", CHECK QUOTA FOR NON-APPROVED, NONPARTICIPANTS.
- IF Q.5C IS "NO" AND Q.3 IS "NO" AND SAMPLE IS HIGH SCHOOL, SWITCH TO NON-APPLICANT SCREENER (Q.5) AND CHECK APPROPRIATE QUOTAS.
- IF NO CHILD IDENTIFIED FOR RECRUITMENT, TERMINATE.

6. Which statement best describes your current employment situation? Are you . . .

    employed full-time, that is, working 35
    hours a week or more outside of the house, ... 1

    employed part-time, that is, working less
    than 35 hours a week outside of the house, ... 2

    or are you not employed outside of the
    house? 3

7. What was the highest level of education you completed?

    EIGHTH GRADE OR LESS 1
    SOME HIGH SCHOOL 2
    HIGH SCHOOL/GED 3
    SOME COLLEGE 4
    UNDERGRADUATE COLLEGE (4 YEAR) 5
    GRADUATE SCHOOL 6

8. With which ethnic group do you identify?

    WHITE 1
    BLACK 2
    AMERICAN INDIAN/ALASKAN NATIVE 3
    ASIAN/PACIFIC ISLANDER 4
    HISPANIC 5

    OTHER (SPECIFY_____) 6

9. What is the primary language spoken in your household?

    ENGLISH 1
    SPANISH 2

    OTHER (SPECIFY_____) 3

10. OMITTED FROM THIS VERSION

11.   As I mentioned at the start, we are conducting a study on the school lunch and breakfast program. As part of this study, we are inviting a select group of students like (CHILD ON FACESHEET) to participate in an informal discussion about this topic. We frequently invite people to discussions like this so we can understand attitudes and opinions about a topic. We find these sessions are not only helpful to us, but are interesting for the people who participate.

The discussion is being held on _____.

It lasts about 60 minutes and is being scheduled from _____ to _____.

11a.   Would you be willing to give (CHILD ON FACESHEET) permission to participate? [INSERT FOR BIRMINGHAM, AL: We will be sending you a permission form to sign for your child to participate. Please sign the form as soon as you receive it and return it to us in the pre-stamped and addressed envelope. Your child cannot participate unless you give your signed written permission.]

        YES (COLLECT NAME AND ADDRESS INFO BELOW) 1
        NO (TERMINATE) 2

NAME:_____

ADDRESS:_____

CITY:_____ STATE:_____ ZIP:_____

PHONE DAY:_____ EVENING:_____

[IF PARTICIPATING: You will be receiving a letter in a few days with all of the details about the discussion group meeting and a reminder call a couple of days before the meeting. If (you/your child) cannot attend this important meeting, please let us know.]

That is all the questions that I have. Thank you very much for your time.