ATTACHMENT A:

TABLES AND FIGURES

Table B2.1. Overview of APEC- II Study Design

Research Questions/Key Outcomes	Samples (Completed Sample Sizes)	Data Collection	Analysis Methods
Objective 1: Generate National Estimates of Erroneous Payments Due to Certification Error			
(1) Estimate Erroneous Payments from Certification Error – Amount of overpayments, underpayments, sum of gross overpayments and underpayments – Erroneous-payment rate	Nationally representative cross-sectional sample of certified students (n=3,835) and denied applicants (n=585) drawn from 130 SFAs and 390 schools	In-person household surveys Record abstractions – Application data – Participation data – Change in certification and enrollment data	Descriptive tabular analysis. Separate estimates for NSLP and SBP 90% confidence interval of ±2.5% around the estimate of the percentage of erroneous payments Conduct comparisons with APEC Combine estimates of error due to certification and non-certification error
(2) Estimate Certification Error by Source of Error – Total certification error rate – Administrative error rate – Household reporting error rate	Nationally representative cross-sectional sample of certified students (n=3,835) and denied applicants (n=585) drawn from 130 SFAs and 390 schools	Record abstractions (see above)	Descriptive tabular analysis Separate estimates for NSLP and SBP Conduct comparisons with APEC
(3) Estimate Certification Error Rate for Directly Certified Students and How It Relates to Implementation Method	Nationally representative sample of directly certified students (subsample of certified-free students)	Record abstractions In-person household surveys	Descriptive tabular analysis Separate estimates for NSLP and SBP
Objective 2: Generate National Estimates of Erroneous Payments Due to Non- Certification Error			
Estimate Erroneous Payments from Non-certification Error – Dollar amounts and error payment rates – Gross and net error – Separately for cashier error and three types of aggregations error; total error	Nationally representative sample of school districts (n=130) and schools (n=390)	– Observe cashier transactions – Verify point-of-sale meal counts – Review of meal count records – Review of reimbursement claims	Descriptive tabular analysis Separate estimates for NSLP and SBP Conduct comparisons with APEC

Research Questions/Key Outcomes	Samples (Completed Sample Sizes)	Data Collection	Analysis Methods
Objective 3: Refine Existing Estimation Models for Updating Annual Estimates of Erroneous Payments Based on Extant Data			
Annual Estimates of Erroneous Payments (certification and non-certification error)	Nationally representative sample of students certified for free and reduced-price meals and denied applicants from study districts	Data collected from school districts and households in SY 2012-13	Regression modeling and estimation Separate models for NSLP and SBP
Amount of overpayments	District-level data on all districts in United States	Extant data on districts (from FNS-742 and other sources)	Model validation
Amount of underpayments			
Gross total sum of overpayments and underpayments			
Objective 4: Explore Alternatives for Generating State- Level Estimates of Erroneous Payments			
Create and Validate Models for Generating Annual Estimates of Erroneous Payments at the State Level	Not applicable	Extant data on districts (from FNS-742 and other sources)	Regression modeling and estimation Separate models for NSLP and SBP Model validation
Produce Separate Estimates of Erroneous Payments for LEAs Participating in the Community Eligibility Option			
Estimate Erroneous Payments Due to Certification and Non-certification Error	45 SFAs; 135 schools; 2,160 students (directly certified, certified by application, paid students)	State/local SNAP participation lists Collect non-certification error data	Descriptive tabular analysis Separate estimates NSLP and SBP

APEC = Access, Participation, Eligibility, and Certification study of 2007
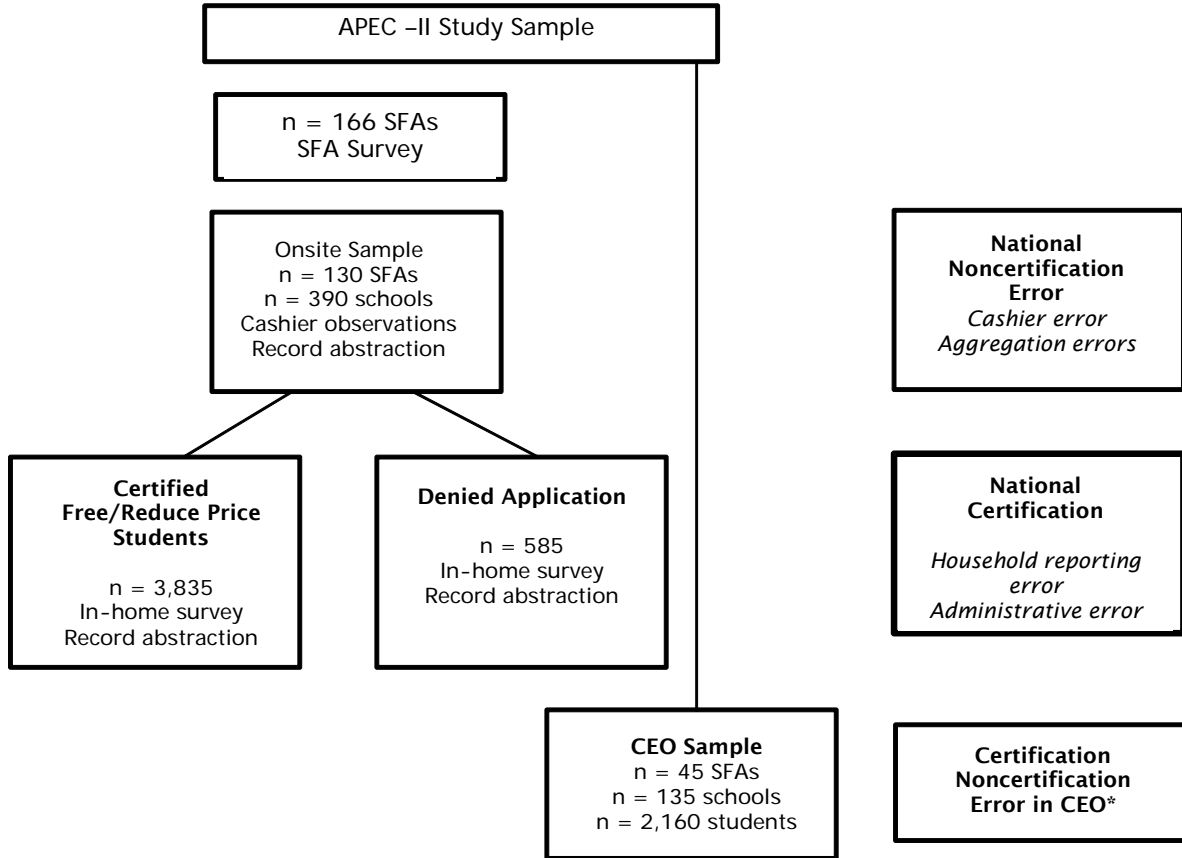
LEAs = local education agencies

NSLP = national school lunch program

SBP = school breakfast program

SFA = school food authorities

SNAP = supplemental nutrition assistance program.

Figure B2.1. Summary of APEC- II Study Samples (National and CEO Completed Sample Sizes)

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│           APEC –II Study Sample          │
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    ┌─────────────────────────────┐
    │       n = 166 SFAs          │
    │        SFA Survey           │
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    │        Onsite Sample         │      │      National            │
    │        n = 130 SFAs          │      │  Noncertification        │
    │        n = 390 schools       │      │      Error               │
    │     Cashier observations     │      │   Cashier error          │
    │      Record abstraction      │      │  Aggregation errors      │
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│     Certified       │   │  Denied Application │   │      National            │
│  Free/Reduce Price  │   │                     │   │    Certification         │
│     Students        │   │     n = 585         │   │                          │
│                     │   │   In-home survey    │   │  Household reporting     │
│     n = 3,835       │   │  Record abstraction │   │      error               │
│   In-home survey    │   │                     │   │  Administrative error    │
│  Record abstraction │   │                     │   │                          │
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                │      CEO Sample       │   │    Certification         │
                │      n = 45 SFAs      │   │  Noncertification        │
                │      n = 135 schools  │   │   Error in CEO*          │
                │      n = 2,160 students│  │                          │
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*Data collection related to noncertification error will be limited to a subset of 15 SFAs and 45 schools in the CEO sample.

CEO = Community Eligibility Option; SFA = school food authorities.

Table B2.2. Overview of Data Collection

Instrument and Team Conducting the Data Collection	Respondent/Data Source (Mode)	Sample, Response Rate, Expected Completes	Instrument Components	Key Data Elements
School Food Service Authority Survey (SFA Director Survey) (Westat)	SFA director (self-administered questionnaire)	Main sample: 130 CEO sample: 45 Response rate: 95% Completes: 166	For SFA and sampled schools: district and school characteristics, student enrollment, certification status and method certified, meals served, direct certification procedures, and other relevant information	For SFA and sampled schools: number of enrolled students, number of applicants, number of certified students by certification status and method certified, number of meals by reimbursement type, characteristics of certification and verification procedures
Student Sampling—non-CEO Schools (Mathematica)	SFA director (in person)	n.a.	Lists of free, reduced-price, and denied applicant students and directly certified students in up to 390 schools	Student name, contact information, certification status, method certified, date certified, school attending
Student Sampling—CEO Schools (Mathematica)	LEA/SFA director (Telephone)	n.a.	Lists of enrolled students; lists of free, reduced-price, and paid students and directly certified students in 45 districts and 135 schools	Student name, certification status, method certified, date certified, school attending
Household Survey (Mathematica)	Parent/guardian (in person)	Free/Reduced: Main sample: 4,794 Denied Applicant: Main sample: 731 Response rate: 80% Completes: 4,420	Household size and composition; student participation in SBP and NSLP; income sources and amounts received for each household member aged 16 or older (from visual verification of pay stubs or other documentation); and participation in SNAP, TANF, and FDPIR; participation in homeless, runaway, or migrant programs	Household income; family size; NSLP and SBP participation; perceptions of meal programs; participation in SNAP, TANF, and FDPIR
Record Abstraction (Westat)	No respondent (obtain copies of records or in-person abstraction from applications and direct certification documents onto abstraction forms)	Free/Reduced: Main sample: 3,835 Denied Applicant: Main sample: 585 Response rate: 100% Completes: 4,420	Student's identifying information, household composition and income, qualifying program participation, and certification decision and reason for approval or denial	Student and household identification information, number in household, income of household members, household program participation, verification information

Instrument and Team Conducting the Data Collection	Respondent/Data Source (Mode)	Sample, Response Rate, Expected Completes	Instrument Components	Key Data Elements
Meal Claiming/Counting (a) Records and Other Reviews (Westat)	SFA director; school food service manager (in person)	Records for a target day, week, or month, as appropriate Main Sample: 390 CEO sample: 45 Response rate: 100% Completes: 435 Schools	Meal counts by reimbursable meal category for sampled schools and SFAs by target day, week, or month	Errors in transcribing and totaling data from individual cash registers, errors in reporting meal counts to SFAs, errors in reporting claims to state agencies for meal reimbursement
Meal Claiming/Counting (b) Cashier Transactions Observation (Westat)	Cashier (in person)	Main Sample: 19,500 lunch transactions; 19,500 breakfast transactions CEO Sample: 2,250 lunch transactions; 2,250 breakfast transactions Response rate: 100% Completes: same as sample[a]	For sampled "trays/transactions," foods and amounts selected; recipient (student or nonstudent); how cashier classified meal (reimbursable or nonreimbursable)	Cashier error: incorrectly classify meal as reimbursable when it is not; incorrectly classify meal as nonreimbursable when it is
Extant Data (Mathematica)	(1) CCD (not applicable) (2) Census data (not applicable) (3) Administrative data from FNS and other agencies (not applicable)	n.a.		Locale, enrollment, percent certified for FRP lunch, grade span of district, Title I status of schools, poverty rates, income levels, verification results, eligibility determinations made, NSLP /SBP certification rates, NSLP /SBP participation rates

[a] 50 lunch transactions and 50 breakfast transactions per school covering target day during week from each sampled school.

n.a. = not applicable.

CCD = Common Core of Data; CEO = Community Eligibility Option; FDPIR = Food Distribution Program on Indian Reservations; FNS = Food and Nutrition Service; LEA = local education agency; NSLP = National School Lunch Program; SBP = School Breakfast Program; SFA = school food authorities; SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance to Needy Families program.