STUDY OF INCOME VERIFICATION IN THE NATIONAL SCHOOL LUNCH PROGRAM

EXECUTIVE SUMMARY

STUDY BACKGROUND

Under contract to the Food and Nutrition Service of the U.S. Department of Agriculture, Abt Associates Inc. of Cambridge, MA and its subcontractor, Westat of Rockville, MD conducted a study of income verification in the National School Lunch Program.

THE NATIONAL SCHOOL LUNCH PROGRAM

Through the National School Lunch Program the U.S. Department of Agriculture provides about $3.5 billion of support to school districts annually. Some of the support is provided in the form of cash reimbursements to school districts for every school lunch served. Additional support is provided for lunches served free or at reduced-price to children from qualifying households.

APPLYING FOR FREE OR REDUCED-PRICE LUNCHES

Households can apply for Federally-supported free or reduced-price school lunches (meal benefits) if they think they qualify on the basis of having a relatively low income. Currently, the income eligibility cutoff for free lunches is set at 130 percent of the poverty level and the income cutoff for reduced-price lunches is set at 185 percent of the poverty level. The poverty level is determined by a combination of two factors, household size and household income.

Households apply for free or reduced-price meals by completing an application provided by school districts at the start of each school year. The application calls for households to list the number of persons in the household and the household income. School districts receive the completed applications and use Federal guidelines to decide whether households qualify for meal benefits.

INCOME VERIFICATION

Prior to 1982, school districts were not required to verify the income or household size declared by households that applied for meal benefits. It was assumed that households were correctly reporting their income, and children from households that applied and declared a sufficiently low income were given free or reduced-price meals. From 1982 to the present, the verification of household income for at least some of the approved applications for meal benefits has been part of each school district's responsibilities.

School districts are permitted to verify all approved applications. However, the Department has designed two alternative sampling methods—"random" and "focused". "Random" requires the selection of a random sample of 3 percent of the approved applications on file as of October 31st of each school year. "Focused" is an error-prone strategy which entails the random selection of 1 percent of approved applications from non-food stamp households with reported monthly incomes within $100 of the income eligibility limits, and ½ percent of approved applications that submitted evidence of food stamp participation in lieu of income information.

PURPOSE OF THIS STUDY

Although income verification has been part of the school lunch program since 1982, the Department of Agriculture has not had systematic information on the implementation or effectiveness of verification activities. This study was designed to provide information to the Department in several areas: (1) a description of verification procedures; (2) a description of the characteristics of households that did and did not apply for meal benefits; (3) a determination of the magnitude of misreporting detected through school verification activities, reasons for errors, and the Federal cost savings achieved through verification; (4) a determination of the amount of misreporting that is deterred by verification and the extent to which verification provides a barrier to program participation by eligible households; and (5) a determination of the costs and benefit-cost ratio of verification activities.

RESEARCH APPROACH

Income verification was started in the 1981-82
school year, following passage of the 1981 Omnibus
Budget Reconciliation Act, and verification require-
ments have been changed in subsequent school
years. Because little was known about the status of
income verification in school districts, the
procedures that school districts use to verify
income, and the costs and effects of verification,
the design for this study called for a series of
cross-sectional surveys to collect descriptive data
from school districts as well as from program
participants and nonparticipants. Several one-time
surveys were conducted during the spring of 1987:

- A mail survey was conducted in 1,156 public
  school districts and 160 private schools to
  obtain basic information on the verification
  procedures used by school districts and the
  outcomes of those procedures.

- A telephone survey was conducted in 424 public
  school districts (a subsample of the 1,156
  that participated in the mail survey). This
  survey was used to collect more detailed in-
  formation on verification procedures as well
  as data on the costs of conducting income
  verification.

- In-home audits were conducted in 2,791 house-
  holds that were approved to receive free or
  reduced-price meals, selected from a further
  subsample of 98 of the 424 school districts
  that participated in the telephone survey.
  These face-to-face interviews were used to
  collect descriptive information on applicants
  for meal benefits, on applicant misreporting,
  and on reasons for not responding to school
  district verification requests. Three groups
  of households had their income verified
  through in-home audits in the spring of
  1987: (1) a sample of households already
  verified by school districts with no resulting
  benefit change; (2) a sample of households
  that did not respond to the school districts'
  verification requests; and (3) a sample of
  households never verified by school districts.

- A telephone survey of 796 households that did
  not apply for meal benefits was conducted in
  the same subsample of 98 public school dis-
  tricts. Two groups of nonapplicant households
  were interviewed to provide information on

deterrence and barrier effects: (1) those who
were ineligible for meal benefits; and (2)
those who were eligible but chose not to
apply.

- Existing data files maintained by the subsam-
  ple of 98 public school districts were ab-
  stracted for each applicant household that
  received an in-home audit, as well as for
  selected other households. These 5,045 record
  abstractions were used to obtain the income
  data declared on free and reduced-price lunch
  applications as well as income data from
  documentation provided as part of the school
  districts' income verification activities.

FINDINGS

The major study findings are grouped into the
following areas: verification procedures, charac-
teristics of nonapplicants and approved applicants,
error rates and Federal savings, barriers and
deterrence effects, and costs and the ratio of
benefits to costs. This summary focuses on findings
from public school districts.

VERIFICATION PROCEDURES

Federal income verification regulations allow school
districts a fair amount of discretion in how to
implement income verification, for example, in the
methods used to select the verification sample, the
size of the sample used, and the procedures for
reviewing supporting documentation. Prior to this
study, there were no national data on the ways in
which school districts actually carry out income
verification.

How Many Applications for Meal Benefits are Re-
ceived? How Many are Approved? How Many are Se-
lected for Verification?

An estimated 31.3% of the entire public school
student population in grades kindergarten through 12
(about 12.36 million students) were in households
which submitted applications for free or reduced-
price NSLP meal benefits in the 1986-87 school
year. Based on the eligibility determinations made
by school districts, 94.1% of these applications
encompassing 11.63 million students were approved.
Thus, 29.5% of all public school children in kinder-

garten through the twelfth grade were approved to receive free or reduced-price meals.

Nationwide, public school districts verified 6.4% of all approved applications in the 1986-87 school year. This is a higher percentage than might be expected given the 1.5% - 3% sample sizes associated with the Federally-prescribed "focused" and "random" sampling methods.

What Sampling Methods are Used for Verification? How do They Correspond to Federally-Prescribed Guidelines?

Based on reports from school districts, it is estimated that 82.9% of all school districts in the nation used random sampling, 10.3% used focused sampling, and 6.8% verified all applications (Exhibit 1).

However, school districts use many variants of these sanctioned sampling methods. In-depth discussions with a sample of school districts led to a more detailed classification of sampling methods and revealed that, nationwide, 71.4% used random sampling (63.5% sampled 3% of the approved applications and 7.9% sampled more than 3%), 6.4% used focused sampling (4.0% sampled according to regulations and 2.4% selected a focused sample larger than required), and 6.5% verified all applications.
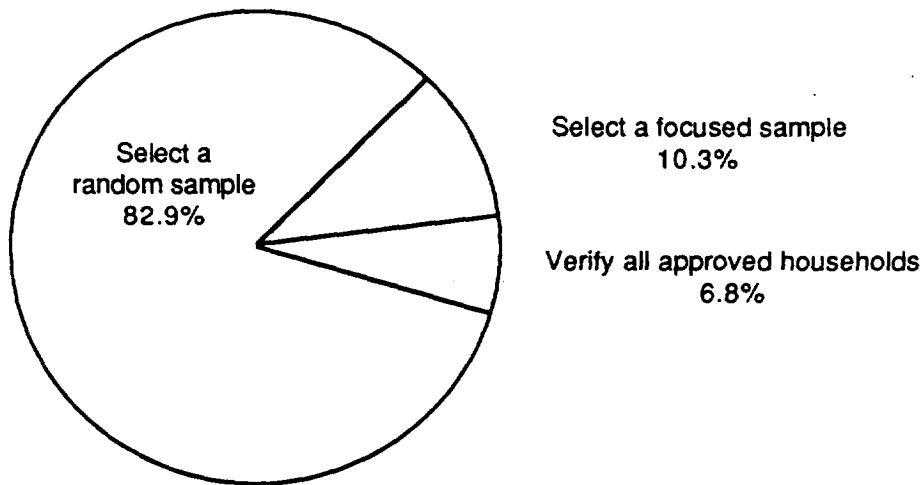
In addition, 15.7% of all school districts used some form of "targeted sampling". This means that part or all of the verification sample was targeted to some group or groups that the school district felt ought to be verified. Specific examples of targeted groups include families with reported zero income, families with mistakes on the application, families new to the district, families with a foster child, food stamp families, minorities, and "suspicious" families. An estimated 3.6% of all school districts used targeted sampling exclusively, another 7.1% of all school districts combined a random 3% sample with the selection of a supplementary targeted sample, and 5.0% of all school districts combined the prescribed focused sample with some sort of targeted sample. Some portion of this targeted sampling is in violation of program regulations because it sometimes targets verification to particular population subgroups.

Thus, the methods used by school districts to select verification samples were much more complex than the
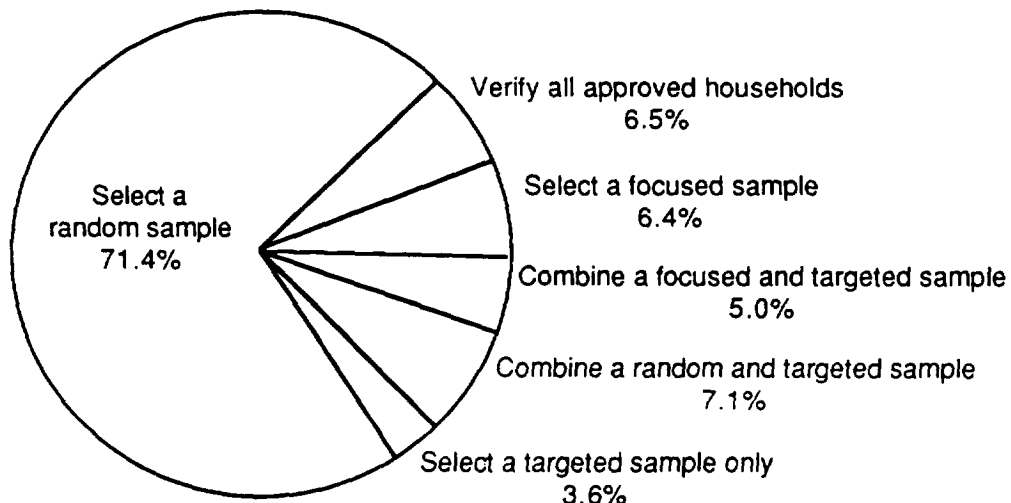
Exhibit 1

PERCENTAGE OF SCHOOL DISTRICTS USING DIFFERENT METHODS OF SELECTING A SAMPLE OF HOUSEHOLDS TO VERIFY (SCHOOL YEAR 1986-87)

As Initially Reported by School Districts

Select a random sample 82.9%

Select a focused sample 10.3%

Verify all approved households 6.8%

As Modified Based on In-Depth Discussions

Select a random sample 71.4%

Verify all approved households 6.5%

Select a focused sample 6.4%

Combine a focused and targeted sample 5.0%

Combine a random and targeted sample 7.1%

Select a targeted sample only 3.6%

Some applicants had difficulty understanding the application form. An estimated 15.1% of approved applicants (1.76 million households) had some difficulty in reading the application, and 6.7% (.78 million households) did not understand the directions on the application. Of the latter group, about one-third felt the application was not in a language they understood (.27 million households).

There appears to be some problem with understanding of verification notices. An estimated 5.1% (18,000 households) did not understand the verification notice. Of these, 32.2% felt the verification notice did not clearly identify the types of documents needed, 10.5% felt the notice was not given in a language they understood, and 42.2% felt the notice used words they did not understand.

ERROR RATES AND FEDERAL SAVINGS

A key part of this study involved the collection and analysis of several sets of data related to the magnitude and types of errors made in the provision of free and reduced-price meal benefits in the National School Lunch Program.

What is the Overall Error Rate as Detected by Current School District Verification Procedures?

Projection of the results of school district income verification activities to all participants in the National School Lunch Program yields a nationally representative error rate of 11.1% due to detected* errors (see Exhibit 2). An additional 10.1% of households were assumed to be in error because they were selected for verification but did not respond to the school districts' verification requests. Thus, the nationally projected total error rate is 21.2% (11.1% + 10.1%).

The estimate of 11.1% error due to misreporting agrees almost exactly with the 11.0% estimate from

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*A detected error is defined as a discrepancy between a household's income eligibility category based on information provided on the application for free and reduced-price meals and the same household's income eligibility category based on the school district's verification activities.

minimum that is required by Federal regulations. Many school districts sampled a larger number of applications than is required. However, some also were in violation of regulations by targeting verification to particular population subgroups. The inclusion of some form of targeted sample was part of the verification process for a substantial (15.7%) percentage of school districts, containing an estimated 5.85 million students.

CHARACTERISTICS OF APPROVED APPLICANTS

This study collected descriptive data on three groups of applicants for meal benefits: (1) approved applicants not selected for verification by school districts; (2) approved applicants who were selected for verification by school districts but who did not respond to the verification request; and (3) approved applicants who were verified by school districts and whose benefits did not change as a result.

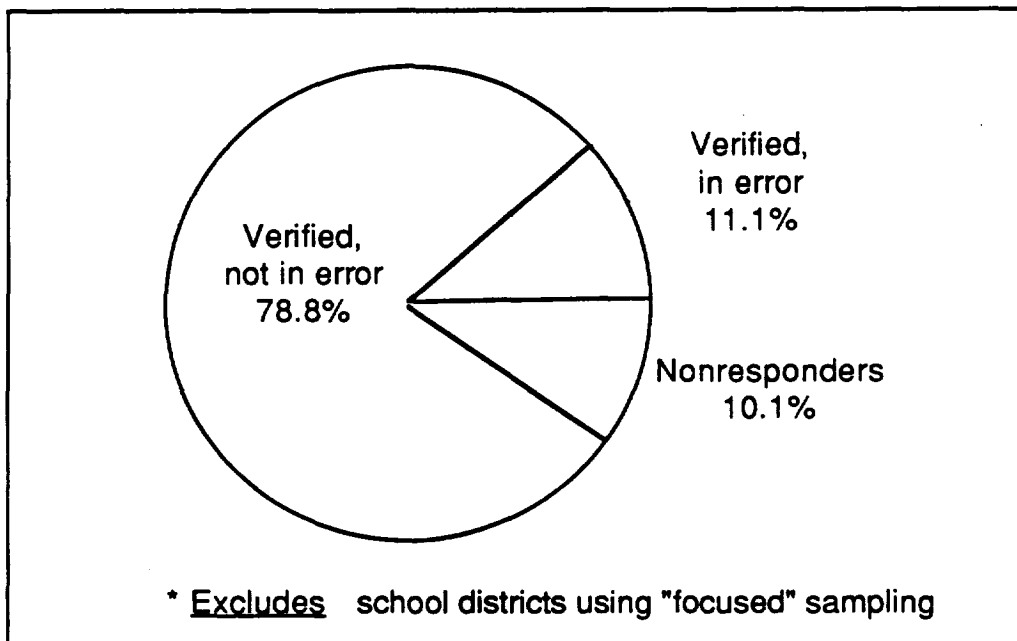### What are the Characteristics of Applicant Households?

An estimated 91.0% of the households approved for meal benefits were satisfied with the National School Lunch Program for financial, nutritional, and other reasons.

Households that applied and were approved to receive meal benefits but did not respond to their school district's verification request had markedly different characteristics than other approved households. Nonresponders tended to be better educated, were more likely to be married, had higher incomes, and were less likely than other households to be the recipient of benefits from the Food Stamp Program or the Women, Infants and Children Program. The finding that nonresponders have greater incomes lends support to the view that they may have underreported their household income at the time of application and therefore were correctly discouraged from responding by the request for documentation during verification.

An estimated 20.1% of nonresponders did not know that meal benefits would be terminated if they did not comply with the verification request. And, an estimated one-third (33.4%) of all nonresponders to verification did not remember being asked to show proof of their income.

Exhibit 2

NATIONAL PROJECTION OF ERROR RATES*
(SCHOOL YEAR 1986-87)

Verified,
in error
11.1%

Verified,
not in error
78.8%

Nonresponders
10.1%

* <u>Excludes</u> school districts using "focused" sampling

the Income Verification Pilot Project** and is close
to the 9.6% estimate from the U.S. General
Accounting Office's study of income verifica-
tion.*** However, the estimate of 10.1% error due
to nonresponse is substantially higher than the 3.0%
estimate from the pilot project, and is lower than
the 19.4% estimate from the General Accounting
Office's study. The differences are likely due to
the fact that the Income Verification Pilot Project
and the General Accounting Office studies were based
on small, non-representative samples of school dis-
tricts, while the present study is based on a large,
nationally representative sample.

The nationally representative error rates of 11.1%
due to misreporting and 10.1% due to nonresponse are
somewhat lower than the rates actually found by all
school districts (12.2% due to misreporting, 11.4%
nonresponders, 23.6% total error) because some
school districts use "focused" sampling to select
households for verification. Since the focused
sampling procedure is designed to generate a higher-
than-expected error rate, data from school districts
using focused sampling were excluded from the
calculation of nationally representative error
rates.

What are the Federal Cost Savings That Result From the Changes in Benefit Status Detected by Current School District Income Verification Procedures?
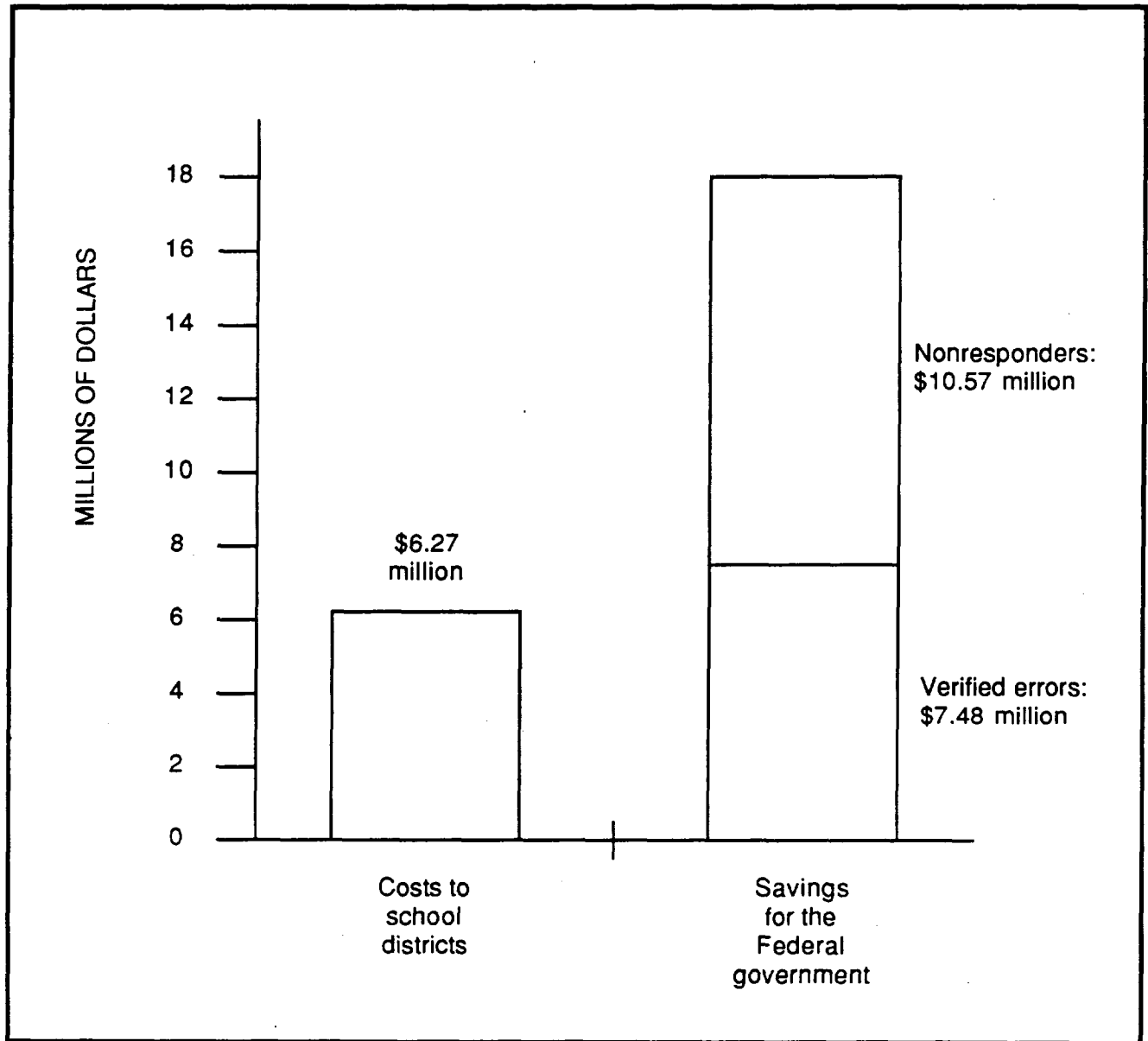
The estimated Federal cost saving associated with
the errors detected through income verification as
currently implemented by public school districts was
$18.05 million. Of this amount, $10.57 million
(58.6%) was associated with benefits denied for
failure to respond to the request for income docu-
mentation, while 7.48 million (41.4%) was associated
with benefit changes attributable to detected errors
(Exhibit 3).

**Income Verification Pilot Project, Phase II,
Results of Quality Assurance Evaluation, 1982-83
School Year. Silver Spring, MD: Applied Manage-
ment Sciences, Inc., April 1984.

***School Meal Programs: Options for Improving the
Verification of Student Eligibility. Washington,
DC: U.S. General Accounting Office, ACED-86-122BR,
March 1986.

Exhibit 3

COSTS AND SAVINGS ATTRIBUTABLE TO INCOME VERIFICATION
(SCHOOL YEAR 1986-87)

MILLIONS OF DOLLARS

18
16
14
12
10
8
6
4
2
0

$6.27 million

Nonresponders: $10.57 million

Verified errors: $7.48 million

Costs to school districts

Savings for the Federal government

What is the Audited Error Rate as Measured Through In-Home Audits?

Income and household size were the subject of an independent audit for three groups of households in spring 1987. The first group that was examined consisted of a sample of households that had been verified by school districts in fall 1986, and whose benefits did not change as a result of that verification. Between the time of the school district verification in fall 1986 and the in-home audit in spring 1987, 15.1% of this group had income and/or household size changes that were sufficiently large to alter their meal benefit status. Put another way, 15.1% of the group that school districts verified in the fall of 1986 and found to be correctly classified were found to be misclassified by the spring of 1987.
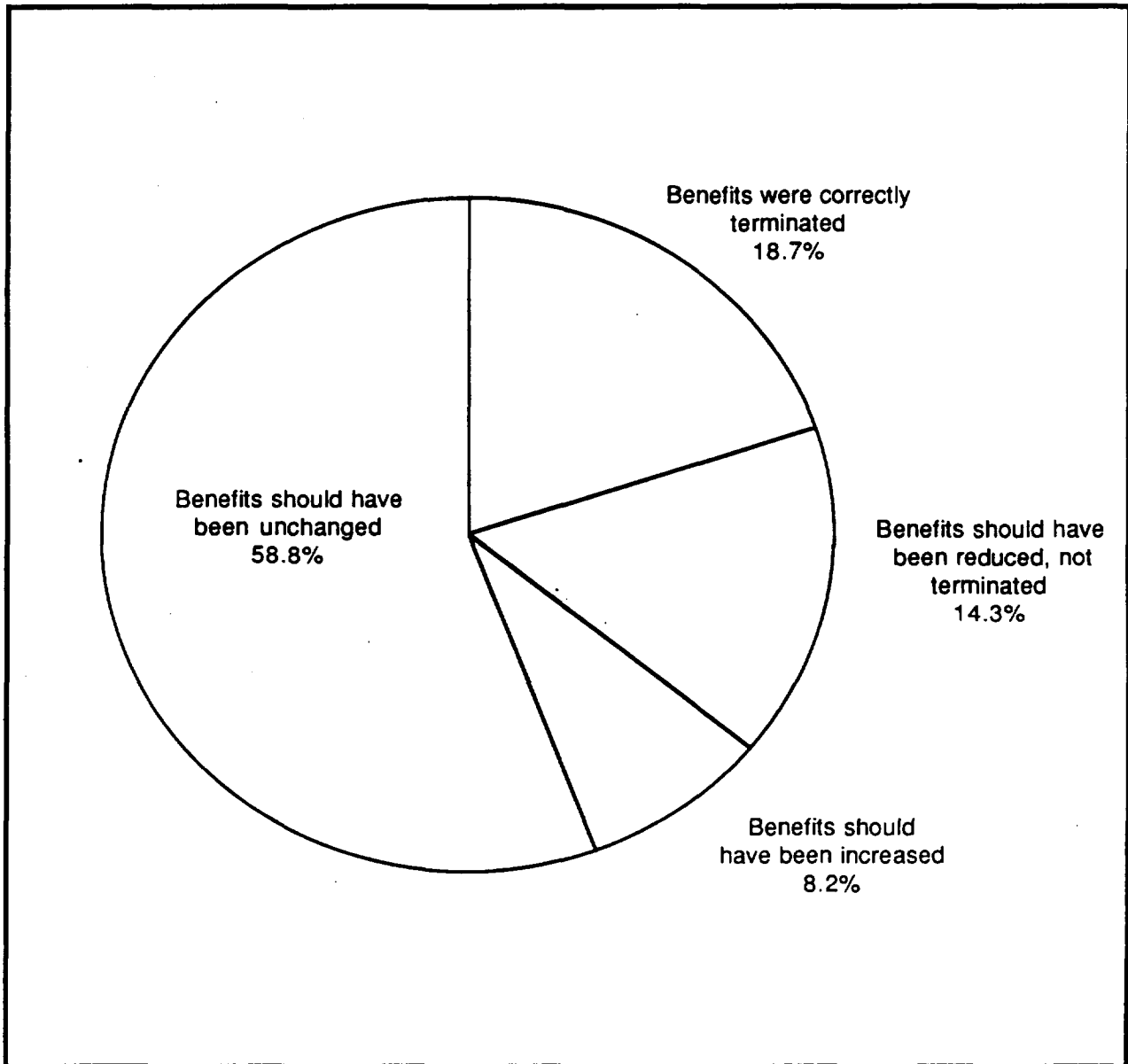
The second audited group was a sample of households that were never selected for verification by school districts. At the time of the in-home audit in spring 1987, 24.8% of the students in these households were found to be erroneously classified.

The third audited group was a sample of households that did not respond to the school districts' verification requests in fall 1986. The audited error rate of 41.2% for nonresponders is much less than the 100.0% error rate that is assumed for nonresponders (according to program regulations, all nonresponders must have their meal benefits terminated). The 41.2% error rate for nonresponders can be decomposed into three parts: 18.7% of nonresponders correctly had their benefits terminated (free to paid or reduced-price to paid), 14.3% should have had their benefits reduced but not terminated (free to reduced-price), and 8.2% of nonresponders qualified for an increase in benefits (reduced-price to free) rather than having their benefits terminated (Exhibit 4).

At the time of the in-home audit in the spring of 1987, almost half of the nonresponder households (48.3%) reported that children in the household were receiving free or reduced-price meals. That is, about half of the nonresponding households, which presumably should have had their benefits terminated at the end of the verification period, reported in the spring that they were receiving meal benefits.* This has serious implications not only on the estimate of Federal savings resulting from income verification, but also for program implementation. To the extent that nonresponders do not

Exhibit 4

RESULTS OF IN-HOME AUDITS
WITH HOUSEHOLDS THAT DID NOT RESPOND TO
SCHOOL DISTRICT VERIFICATION REQUESTS
(SCHOOL YEAR 1986-87)

Benefits were correctly
terminated
18.7%

Benefits should have
been unchanged
58.8%

Benefits should have
been reduced, not
terminated
14.3%

Benefits should
have been increased
8.2%

have their meal benefits terminated, the estimated
savings associated with the denial of benefits to
nonresponders are overstated.

What are the Major Reasons for Misclassification?

Substantial changes in household income occurred
during the year. An estimated 61.5% of all house-
holds verified by school districts (whether or not
their benefits were changed) had a change in monthly
income of $50 or more between the time of applica-
tion and the time of verification. About 36.5%
experienced an increase in income of $50 or more per
month, while 25.0% experienced a decrease of $50 or
more.*

When compared with information provided on the
application, the above monthly changes in income
result in a change in benefit status for 24.0% of
those households with income changes of $50 or more
(14.3% from free to reduced-price, 1.8% from
reduced-price to free, 4.1% from reduced-price to
paid, and 3.8% from free to paid).

There were also changes in household size during the
school year. Between the time of application
(August) and the time of the in-home audit (April)
28.7% of those not verified by school districts,
35.1% of those verified by school districts with no
resulting change in benefits, and 40.9% for
nonresponders to the school districts' verification
requests had a change in household size. Finally, a
substantial proportion (42.5%) of households which
had reductions in benefits also had an increase in
the number of wage earners in the household.

What Can be Concluded About the Nature of Error Rates?

It has been shown that school districts detect an
error rate of 11.1%, and that an additional 10.1% of
applicants are assumed to be in error because they

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*It should be noted that this study made no attempt
to verify whether nonresponding households actually
had their benefits terminated.
*Current regulations require households approved
for meal benefits to report a monthly change in
income of $50 or more to the school district.
Anecdotal evidence suggests that such reporting
rarely occurs.

do not respond to the school districts' verification requests. However, it has also been shown that substantial numbers of households have changes in monthly income and household size that occur during the school year and that these changes are large enough to lead to alter the benefit status of large number of households. Therefore, it can be concluded that some portion of the 11.1% error rate detected by school districts occurs because households apply for meal benefits and school districts verify those applications based on income and household circumstances <u>reported at different times</u>. That is, households apply for meal benefits based on current income which is typically from August, the month prior to the start of school, while school districts verify those applications during November and December based on current income which is typically from October and November.

The data show that households experience normal changes in income and household size between the time of application and the time of verification, and so the error rate detected by school districts with respect to school lunch meal benefits actually consists of two parts:

(1) error attributable to <u>misreporting</u> at the time of application, and

(2) error attributable to a <u>failure of households to declare changes in household circumstances</u> that occur during the school year.

This means that the amount of error in the assignment of school lunch meal benefits should be recognized as having both static and dynamic aspects. A fixed portion of error is due to misreporting on applications, and a variable portion is due to a failure of households to report normal changes in income and household size that occur between the time of application and the time of verification.

BARRIERS AND DETERRENCE EFFECTS

Because income verification extends to only a small percentage of approved applicants, current verification efforts only identify a small number of misclassified households. The case for income verification is strengthened greatly if it can be claimed that it not only allows school districts to catch a few misclassified households, but that it also

serves as a deterrent to fraudulent applications. On the other hand, the case for verification is weakened to the extent that it is so onerous as to impose barriers preventing program participation by households that are actually eligible to participate. While Federal funds not paid to eligible households could be construed as a "savings" to the Federal government, verification was not instituted with the intent of driving eligible households from the program.

To What Extent do Eligible and Ineligible Households Not Seek Meal Benefits Because of Income Verification?

Barrier effect. Eligible households were asked a series of questions about why they did not apply for meal benefits. Although numerous reasons were cited for not applying, only 2.9% of eligible households provided reasons for which income verification may have acted as a barrier to application. These households indicated that they did not apply because they did not like the possibility of having their income verified. By making the assumptions that all of the students in these households would have applied in the absence of income verification and that all would have qualified for free meals, it is possible to calculate that income verification imposed a barrier to program participation which saved the Federal government a maximum of $18.68 million in the 1987-88 school year. This amount is a small effect; less than 1% of the total Federal dollars spent on free and reduced-price meal benefits in Fiscal Year 1986.

Deterrence effect. Ineligible households were also asked to list reasons why they did not apply for meal benefits. An examination of the responses shows that an estimated 1.8% of the ineligible households did not like the possibility of having their income verified. By making the assumptions that all of these households would have applied in the absence of income verification, and that all would have been granted free meal benefits, it can be calculated that the maximum Federal savings from the deterrence effect of income verification during the 1987-88 school year is about $50.12 million. This is also a small effect; equal to about 2% of all Federal expenditures for free and reduced-price meals in Fiscal Year 1986.

COST OF INCOME VERIFICATION AND BENEFIT-COST RATIO

Prior studies of verification in the school lunch program and of other needs-based programs have evaluated procedures in terms of a benefit-cost ratio. This study provides estimates of the costs of verification to school districts, as well as the benefits (savings) for the Federal government.

What are the Costs to School Districts of Verification Procedures?

The total cost of income verification to school districts is estimated at $6.27 million for the 1986-87 school year (Exhibit 4). The average cost per verified application was $10.51. Almost all of this was labor cost ($9.68 or 92.1%), while the remainder was nonlabor cost ($0.83 or 7.9%). The amount of time required to verify an application is about 1 hour, and the total amount of time spent on income verification by public schools is estimated to be 628 thousand hours, or about 300 person-years.

What is the Ratio of Benefits to Costs for Income Verification?

Income verification yields a net benefit from the taxpayer's viewpoint. The total annual costs of $6.27 million were outweighed by the savings of $18.05 million. Thus, each dollar spent by school districts on income verification generated an estimated $2.88 in Federal savings (Exhibit 5). If upper-bound estimates of deterrence and barrier effects are included as part of "savings", each dollar spent by school districts generated $13.85 in Federal savings. However, it should be understood that $10.57 million of the savings from verification were generated by the termination of meal benefits for nonresponders, and that verification would yield a small net benefit if judged solely on the basis of savings generated from documented errors (savings of about $7.48 million as opposed to costs of $6.27 million).

Focused sampling has a better benefit-cost ratio than random sampling, although both procedures generate more savings than costs. Spending $1 on income verification generated Federal savings of $4.80 for school districts that use focused sampling, compared with Federal savings of $2.27 for school districts that use random sampling. Verification of all applications may have a better

Exhibit 5

**SAVINGS GENERATED BY SPENDING $1 ON
INCOME VERIFICATION,
FOR DIFFERENT VERIFICATION SAMPLING METHODS
(SCHOOL YEAR 1986-87)**
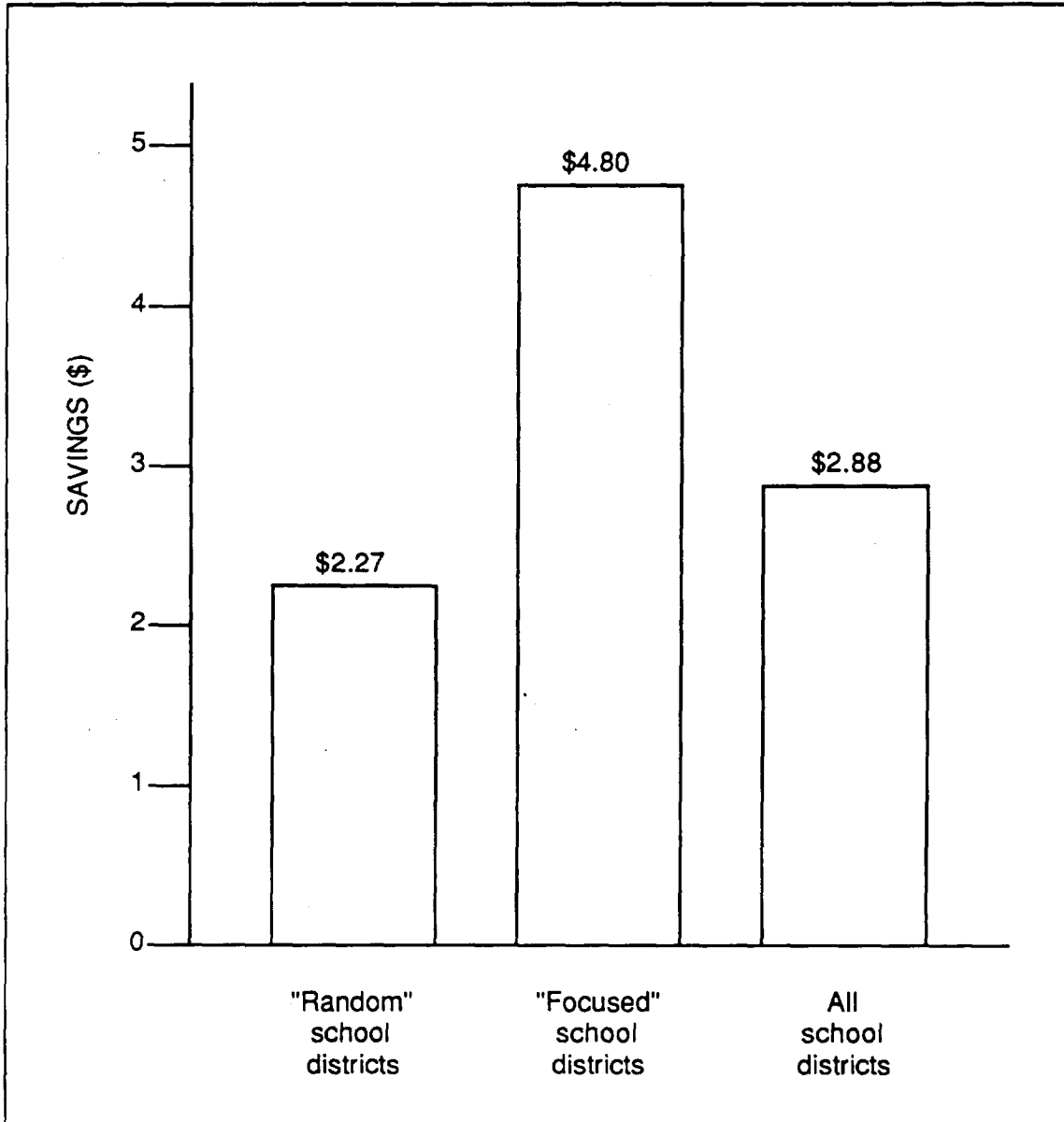
benefit-cost ratio than the use of either sampling method, although the small number of school districts in the study that verify all applications makes it difficult to place confidence in this conclusion.

Including savings associated with nonresponders means that either estimate presented above (with or without the inclusion of savings from deterrence and barrier effects) reflects a substantial savings which indicates that verification is clearly a cost-effective activity when viewed from the perspective of the taxpayer. That is, from the taxpayer's viewpoint, the increase in costs incurred by school districts (which might be reflected in higher meal prices or higher local property taxes), is more than offset by the savings at the Federal level (which might be reflected in, for example, lower Federal taxes, or a reduced Federal deficit).