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Report to Congressional Requesters

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FOOD STAMP AUTOMATION

Some Benefits Achieved; Federal Incentive Funding No Longer Needed

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GAO

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General Accounting Office
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Resources, Community, and
Economic Development Division

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January 24, 1990

The Honorable Rudy Boschwitz
The Honorable Jesse A. Helms
The Honorable Richard G. Lugar
United States Senate

The Honorable William Emerson
House of Representatives

As requested in your March 1, and May 25, 1988, requests, this report discusses the benefits and the costs of automating the Food Stamp Program in selected states and the need for continued enhanced federal funding to encourage program automation nationwide.

This report includes a recommendation to the Congress to eliminate the 75-percent federal incentive funding for automating the Food Stamp Program. The report also recommends that the Secretary of Agriculture improve the accountability for Food Stamp Program funding, expenditures, and equipment.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 14 days after the date of this letter. At that time, we will send copies of this report to the appropriate House and Senate committees and subcommittees; interested Members of Congress; the Secretary of Agriculture; the Director, Office of Management and Budget; and other interested parties.

This report was prepared under the direction of John W. Harman, Director, Food and Agriculture Issues, (202) 275-5138. Other major contributors to this report are listed in appendix X.

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

In fiscal year 1987 about $10.5 billion in food stamps was distributed, including about $1 billion in erroneously issued food stamps. As the Food Stamp Program has grown, so has the cost of administering the program — from about $119 million in fiscal year 1974 when the federal government began paying 50 percent of the administrative costs to over $2 billion in fiscal year 1987. To improve the program's administration and combat increasing costs, legislation was passed in 1980 and 1985 to encourage Food Stamp Program automation. Since 1980, state agencies have spent about $524 million in federal and state funds to automate their Food Stamp Programs.

In response to congressional requests, GAO discusses the benefits and the costs of automating the Food Stamp Program in selected states. Specifically, GAO was asked to determine (1) whether automated programs were helping state and local agencies improve program administration and control program errors, (2) the costs of these automated systems, and (3) the continued need for federal incentives to encourage program automation. Additionally, in determining costs, GAO reviewed the controls over expenditures of government funds and the safeguards for property purchased with government funds.

Background

The Food Stamp Program is administered by state welfare agencies under the supervision of the U.S. Department of Agriculture's Food and Nutrition Service. Generally, federal funding for state administrative expenses, including automatic data processing (ADP) system development and operation costs, is provided at the 50-percent level. The Food Stamp Act Amendments of 1980 encouraged state agencies without existing automated systems to plan, design, develop, or install such systems by authorizing an increase in the federal funding rate to 75 percent of the cost. (See ch. 1.)

Results in Brief

The four statewide automated Food Stamp Programs in Vermont, North Dakota, Kentucky, and Texas, and the three local office automated Food Stamp Programs in Texas and California that GAO reviewed, improved certain administrative procedures and caseload management, and enabled workers to avoid or detect certain program errors usually made when determining program eligibility. However, GAO did not find that automation has achieved all of the expected benefits in improving program administration, such as reducing program staff. Some of these goals were beyond the capability of the automated systems.

Although Service regional officials approved from about $1.1 million in North Dakota to over $22 million in Texas to develop the automated systems that GAO reviewed, the five state agencies did not always maintain adequate records to account for the costs incurred to develop and operate each automated system. As a result, GAO could not always determine costs. Additionally, the Service did not always monitor state claims for cost reimbursement. Because of these weaknesses, payments to at least one state, North Dakota, exceeded the amount approved for its system's development. Furthermore, not one of the five state agencies reviewed could account for all of its federally funded automated systems' equipment, increasing the risk of fraud, waste, and abuse.

Responses from all state agencies to a GAO questionnaire disclosed that Food Stamp Programs in each state are automated to some extent at either the state office level, local office level, or both. Therefore, GAO believes that the 75-percent funding level established by the Congress to encourage states without existing automated systems to automate their programs is no longer needed.

Principal Findings

Automation's Effects on Program Operations

The Congress and program administrators at all levels have long thought automation to be a major factor in helping state and local agencies control program errors, manage large caseloads, improve services to participants, and implement complex requirements. The majority of state agencies, when requesting federal funding to develop automated programs, highlighted the systems' planned capability to reduce program errors and to streamline administrative procedures. At the locations that GAO reviewed, automation improved certain administrative procedures and caseload management and enabled eligibility workers to avoid or detect certain program errors. For example, the seven automated systems were designed to compare social security numbers of all participants to prevent an individual from participating in two separate households in the same state. Some achieved benefits varied from location to location. For example, GAO's analysis showed that the impact of automation decreased error rates in North Dakota but had no effect in Vermont. Benefits varied because of differences in program administration and automated system capability. GAO's analyses of the impact of automation was limited in some cases by the quantity and quality of data available.

The locations reviewed, however, did not achieve all of the expected benefits from automation. For example, North Dakota expected program workers to spend less time in processing food stamp cases after its program was automated. But, GAO's analysis showed that the automated system had no effect on the amount of time spent on processing food stamp cases.

In addition, automation has limitations that prevent it from achieving certain benefits. For example, automation cannot always prevent certain types of errors, such as unreported income, because the program must rely primarily on the applicant to identify the source of that income. (See ch. 2.)

Inadequate Records and Control of Automated Systems' Costs and Equipment

GAO identified the costs, which ranged from $1.2 million to $19.8 million, claimed by the states to develop the automated systems in Vermont, North Dakota, and Kentucky. However, because of inadequate state agency and Service accounting records, the costs of the four automated systems reviewed in Texas and California could not be identified. Federal, state, and local office records did not routinely account for actual costs incurred to develop and operate each of the seven systems. For example, at the request of Service regional officials in 1985, Texas state officials had to reconstruct costs incurred for the development of the state's automated systems in order to reconcile expenditures with approved funding requests. Also, although required by federal regulations, none of the state agencies included in the review could accurately account for all systems-related equipment for which federal funds had been provided. Because of inadequate internal accounting and administrative controls, the states have no assurance that the equipment is safeguarded against loss, unauthorized use, and misappropriation. (See ch. 3.)

Increased Federal Funding and Program Automation

The Congress intended the 75-percent funding level to encourage states without existing automated systems to automate. According to state agency officials' responses to GAO's questionnaire, this objective has been met. All 53 state agencies have automated their programs to some extent. For the 37 state agencies receiving 75-percent funding, 4 state agencies initiated automated systems development, 13 upgraded or modified an existing system, 16 replaced existing systems entirely, and 4 partially automated their systems. The remaining 16 state agencies received 50-percent funding for similar purposes. (See ch. 4.)

Recommendations

Since all of the state agencies have automated their Food Stamp Programs to some extent, GAO recommends that the Congress amend the Food Stamp Act to end the use of 75-percent federal funding for Food Stamp automation. (See ch. 4.) GAO also recommends that the Secretary of Agriculture improve accountability for program funding, expenditures, and equipment. (See ch. 3.)

Agency Comments

The Service disagrees with GAO's interpretation that the originating congressional committee intended that after the first year of the program the 75-percent funding provision was to be used only to encourage states not computerizing their programs to automate. GAO believes that its interpretation of the intent is correct and that based on the report's findings, all states have automated to some degree, thus fulfilling the intent of the originating committee. The Service states that the methodology used in the report to measure the effects of automation on the program has limitations that are recognized by GAO but that the significance of these limitations is downplayed in the report. GAO acknowledges the limitations of the data and the statistical results pertaining to program changes caused by automation and, accordingly, has highlighted these limitations. In addition, the Service stated that it is prohibited by an Office of Management and Budget circular from requiring greater accountability for state expenditures for specific ADP-related costs as recommended by GAO. The report recommendation has been revised to clarify the level of cost data needed, which GAO believes is not prohibited by the circular. GAO also obtained comments from the states covered in this review. These comments, related largely to the clarity and technical accuracy of the report, have been incorporated where appropriate. (The Service's and states' comments and GAO's responses are included at the end of chapters 2, 3, and 4, and in appendixes V through IX.)

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Abbreviations

ADP	automatic data processing
AFDC	Aid to Families With Dependent Children
AFNC	Aid to Families With Needy Children
ATP	Authorization to Participate
BENDEX	Beneficiary Data Exchange
FNS	Food and Nutrition Service
FOSOLIS	Food Stamp Automated On-Line Issuance System
GAO	General Accounting Office
HHS	Health and Human Services
HIR	Household Issuance Record
IEVS	Income Eligibility Verification System
KAMES-FS	Kentucky Automated Management and Eligibility System--Food Stamps
KACIS	Kentucky Automated Certification and Issuance System
OMB	Office of Management and Budget
SAVERR	System for Application, Verification, Eligibility, Referral, and Reporting
SDX	State Data Exchange
TECS	Technical Eligibility Computer System
USDA	United States Department of Agriculture
WCDS	Welfare Case Data System
WELNET	Welfare Network

Introduction

Since 1980 the Congress and federal, state, and local Food Stamp Program administrators have placed special emphasis on program automation. In addition to the normal 50-percent funding rate, beginning in fiscal year 1981, the federal government began providing 75-percent funding to further encourage states to automate their programs. In requests for federal funding to automate, state program administrators stated that automation would enable them to control program errors, manage increasing caseloads, implement complex program requirements, and improve services to clients. During fiscal years 1981-87, state agencies report having spent about $524 million in federal and state funds to develop and operate automated Food Stamp Programs.

Background

The Congress established the basic authority for the current Food Stamp Program in 1964 to improve the nutrition of low-income households, and required all states to participate in the program beginning in 1971. The program is federally designed and generally requires applicants to apply in person at their local food stamp office and meet numerous program requirements pertaining to their household composition, residency, financial resources, and income to be eligible for the monthly food stamp benefits, which are federally funded. State welfare agencies administer the program under the supervision of the U.S. Department of Agriculture's Food and Nutrition Service. Generally, since October 1974 the federal government has paid 50-percent of the state agencies' costs to administer the program. According to the Service's records for fiscal year 1987, about $10.5 billion worth of food stamps was distributed to participants, and about one-tenth of this amount, or about $1 billion, involving overpayments and underpayments, was issued erroneously. According to Service financial reports, federal and state costs to administer the program amounted to about $2 billion that year.

The high cost of food stamp issuances, erroneous issuances, and administration prompted efforts to improve program administration and to reduce waste, fraud, and abuse. The Congress decided that providing an incentive to automate the program would improve administration and reduce errors. Thus, to encourage states to computerize their Food Stamp Programs, the Food Stamp Act Amendments of 1980 (P.L. 96-249) amended the Food Stamp Act of 1977 and authorized the Secretary of Agriculture to pay, beginning October 1, 1980, 75 percent of the costs incurred by state agencies who met the 75-percent requirements to plan, design, develop, or install automatic data processing (ADP) and information retrieval systems for administering the Food Stamp Program. State

agencies not meeting the requirements for 75-percent funding continued to receive the 50-percent federal funding rate for ADP development.

Continuing this emphasis on automating the Food Stamp Program, the Food Security Act of 1985 (P.L. 99-198) required the Secretary of Agriculture to develop a model plan for the comprehensive automation of program information systems by February 1, 1987. Additionally, by October 1, 1987, each administering state agency was to develop and submit to the Food and Nutrition Service for approval a plan, based on the Service's model, to implement an automated system. The Service developed the required model plan and issued regulations implementing the Food Security Act's Model Plan requirements on September 18, 1987. Service headquarters records show that by May 1989, the Service had approved program automation model plans for all the states.

To obtain federal funding to develop the automated systems, the Food Stamp Program requires that state agencies planning an acquisition of $200,000 or more in federal and state funds over a 12-month period, or $300,000 or more in funds for the total acquisition, must submit requests to the Service for approval prior to purchasing such systems.[1] Service guidelines require that acquisition requests be submitted in the form of an advance planning document, which is a written plan of action containing, among other things, a proposed budget for development and operations cost.[2] Service regional officials review and approve state agency requests. For requests in which the Service's share of the cost will be over $1 million, the regional staff prepare and submit for concurrence an executive summary of the request with their recommendations to the Advance Planning Document Oversight Committee at the Service's national office in Washington, D.C.

Once the state agencies have an approved advance planning document with a stated dollar limit for the automated systems' development, state agency expenditures are claimed for reimbursement by the Service up to the approved dollar limit. Because ADP systems development usually evolves over several years, state agencies submit to their cognizant Service regional office annual program budgets or estimates of the state's total cost of administering the Food Stamp Program, including the share

[1] In February 1987 a policy memorandum raised the limits for prior approval cost thresholds from $100,000 for a 12-month period and $200,000 for total acquisition costs. The higher thresholds also are reflected in a draft rule published August 8, 1988, and a final rule now in clearance.

[2] ADP Advance Planning Document Handbook for State Agencies, Food and Nutrition Service Handbook 151.

of the ADP development and operating costs to be funded by the Service. The Service then issues a letter of credit to the state agency for the approved program budget amount, against which the agency funds its administrative expenditures. During the fiscal year, the state agencies submit quarterly expenditure reports and claims for reimbursement to the Service.

Objectives, Scope, and Methodology

Senator Richard Lugar, Ranking Minority Member of the Senate Committee on Agriculture, Nutrition, and Forestry, and Senator Jesse Helms of the same Committee asked that we review state efforts to automate the Food Stamp Program to determine (1) whether the automated programs were helping state and local agencies improve administration, (2) the costs of these automated systems, and (3) the continued need for federal incentives to encourage program automation. Later, Senator Rudy Boschwitz of the Senate Committee on Agriculture, Nutrition, and Forestry and Congressman William Emerson of the House Committee on Agriculture requested that we include in our review the state of Kentucky's automated Food Stamp Program system to determine whether the newly developed system enabled the state to reduce its program error rates.

Because there is no typical type of automated Food Stamp Program, we selected the locations discussed below to obtain a broad view of different automated systems with different automated capabilities in different parts of the country. (Detailed descriptions of each of the automated systems are provided in app. II.) We chose the statewide systems operated by Vermont and North Dakota for review because each (1) is an online automated system used to determine eligibility for program participation and to maintain food stamp case information; (2) serves other public assistance programs, such as the Aid to Families with Dependent Children (AFDC) and Medicaid Programs; and (3) was cited by Service headquarters and regional officials and state Food Stamp Program administrators as an automated program that has been used as a model for other state agency programs. Also, these state agencies had information available on program operations for several years before the automated system was developed, during system development, and after its implementation.

We selected for review the automated Food Stamp Program operations in Texas and California to achieve geographic balance in our review and to include states that had multiple automated systems. Unlike Vermont and North Dakota, where we reviewed statewide automated systems, we

could review only local office automated systems in Texas and California. Although Texas has a statewide Food Stamp Program system in operation, we could not compare program operations before and after automation to determine benefits of automation on the statewide program because pre-automation program operation data were not available. However, at the time of our review, in addition to the statewide system, Texas had two different types of automated systems in operation at various local offices.[3] Therefore, we selected for review the local office systems in San Antonio and Dallas because, together, they represented both types of local office automated systems in use in the state and because each had available for review program information for several years before and after the systems were automated.

California does not have a statewide automated Food Stamp Program. Therefore, as we did in Texas, we selected for review local office automated programs. However, we found that before-and-after program operations data were generally not available at the local office level in California. As a result, we compared program operations at one of the state's nonautomated local office operations—in Red Bluff, California—to the operations of an automated local office of comparable caseload size in Vallejo, California. In addition, we selected for review the automated system at the San Francisco local office because, unlike the other systems we reviewed, it was the only system we found during our survey that was designed specifically for the food stamp benefit issuance part of the Food Stamp Program.

Furthermore, as requested, we reviewed the statewide system in Kentucky, but we were able to review program operations only for a period prior to the beginning of the system's statewide operations in 1988, fiscal years 1984-88. Because so little time had passed after automation, data were not available to perform a before-and-after comparison.

We had discussions about the benefits and costs of Food Stamp Program automated systems with Service officials at the Northeast, Southeast, Southwest, Mountain Plains, and Western regional offices, and Service headquarters in Alexandria, Virginia. We also interviewed state and local Food Stamp Program officials in the states we visited. At each location we reviewed pertinent records, such as state program policy and procedures and applicable ADP planning documents and operating

[3]Local office systems separately maintain food stamp cases with data entry overnight into the statewide system for eligibility validation and benefit issuance. As of May 1989, the Texas state agency was developing a third local office system, which will be an on-line system used to determine program eligibility and maintain case information.

manuals pertaining to the state Food Stamp Programs and ADP systems. Also, at each location we discussed major deficiencies that we found with appropriate officials and incorporated their comments where appropriate.

Determining Benefits of Automation

To determine the benefits resulting from program automation, in each state we focused on the benefits of automation cited (1) most often by federal, state, and local Food Stamp Program administrators and (2) in the state agencies' requests for Service funding to develop automated systems since fiscal year 1981. These benefits centered on program administration of the application process and case management as reflected by more accurate eligibility determinations, program staff reductions, less time to process food stamp cases, more cases processed within required time frames, and reduced paperwork.

However, the task of determining whether these benefits were achieved as a result of automation is complicated by the fact that changes in program operations can be caused by a host of factors not related to the automated system. For example, a decline in error rates after an automated system begins operations is not a sufficient basis for concluding that the automated system caused the decline. The error rate may have declined because the number of staff increased or the caseload decreased. An increase in staff and/or a decrease in caseload could provide workers more time to process food stamp cases and thus could reduce the chance for error.

Therefore, we used regression analyses to isolate the effects of automation on various components of program administration apart from the effects of changes in other measurable program activity, such as changes in staffing or caseload, for program operations data in Vermont, North Dakota, and Texas locations where sufficient data were available. These regression models, which are described in detail in appendix I, enabled us to determine the statistical significance[4] of possible relationships between automation and each of the different measures of program benefits, while controlling for the effects of other program-related factors. Our analysis does not include all of the factors that could affect program operations because of the lack of adequate data. These factors

[4]We refer to a relationship as statistically significant if we can be 80 percent confident (90 percent for a one-tailed test), based on the results of our analysis, that the relationship exists. Appendix I provides a detailed description of our regression models and corresponding results.

include such things as the quality of staff—education and training, special programs designed to affect program activity, and socioeconomic factors within the community served by the program. The factors we did include were (1) the number of food stamp cases, (2) the number of AFDC Program and Medicaid Program cases,[5] (3) the number of public assistance workers—clerks, eligibility workers, and supervisors—who also may process other assistance program cases in addition to food stamp cases, (4) the frequency with which eligibility determinations were made within program time requirements, (5) the amount of time spent to process food stamp cases, (6) the number of claims established for overissued benefits, (7) the amount of overissuance claims collected, (8) certain changes in program policy, and (9) the percentage of program errors. Administrators of the programs covered by our review agreed that these program-related factors are those needed to determine changes in program operations that could have resulted from automation. In addition, they also agreed that other factors such as quality of staff and socioeconomic factors within the community served by the program, but not included in our analysis, are factors that could affect program operations.

The results from any regression analyses, though, are only as good as the theory of the proposed relationships assumed and the quality and quantity of data used for the analyses. Using Food Stamp Program and ADP-related information, we obtained a general consensus for the theories of the proposed relationships we assumed through discussions with Service and state program officials. The quantity and quality of data used in our regression analyses, however, had limitations. Our tests to determine the effect that automation had on the various program measures were based on a short period of time, fiscal years 1981-87, for an analysis of this kind. Also, for some program measures, particularly staffing, it was necessary to transform annual data to quarterly figures, which could result in some measurement error in the data and in our analysis. Except as noted above, the results of our empirical analyses and regression models also seemed plausible to cognizant state and local program office officials with whom we spoke.

[5]Participants of the Food Stamp Program often participate in other public assistance programs such as the AFDC and Medicaid Programs, which are administered by the U.S. Department of Health and Human Services. As a result, in many states generic (public assistance) workers process the applications and maintain the case information for all of the programs. Thus, the food stamp case could be affected by changes in the number of AFDC and Medicaid cases.

However, we did not examine each automated system to determine if design flaws and/or operational problems may have prevented the automated system from achieving its specific goals or objectives. For example, should Vermont's system not reduce program error rates as planned, it may be because the system does not conform to its design or operational plans. Instead, our objective was to determine only if the presence of the automated system had made a difference in the results of the program's operations.

With the exception of Kentucky and the three offices in California, we obtained program-related data, as described earlier, since fiscal year 1981, when program administrators began placing special emphasis on automation pertaining to each program we reviewed. Because state and local offices in Kentucky and California did not always maintain file data beyond 5 years, we generally obtained Food Stamp Program data for only fiscal years 1983-87 in those states.

Determining Automation Costs

To determine the costs of Food Stamp Program automation, we reviewed the appropriate local office, state agency, and Service regional office accounting records in the five states covered by our review. We also accounted for expenditures pursuant to specific approval of federal funds to develop and operate these systems and tested the records against supporting documentation. For fiscal years 1981-87 when records were available, we determined the Food Stamp Program share of the cost to develop each system and the program's share of the cost to operate the system since it began operations. In Texas, we expanded our records testing for the local office automated systems because, from a sample of claims, we found that not all claims for federal funding to develop automated systems were supported by vouchers. As a result, we reviewed all of the claims for the Food Stamp Program's share of costs to develop Texas' automated systems.

Determining the Continuing Need for Incentives

To determine whether federal incentives are still needed to encourage automation, we sent a questionnaire (see app. III) to all 53 state agencies that administer the Food Stamp Program[6] and conducted a follow up telephone survey to clarify agency responses. Our questionnaire and telephone survey asked about each state's need for and use of federal incentives to automate the Food Stamp Program, as well as the effect of

[6]The 53 state agencies include the 50 states and the three administrating agencies in the District of Columbia, the Virgin Islands, and Guam.

such incentives on its Food Stamp Program automation efforts. All 53 state agencies responded to our questionnaire and telephone survey.

Our work was done between January 1988 and April 1989. We conducted our review in accordance with generally accepted government auditing standards. We made only limited tests to assess the reliability of the Services' computer-generated information. For example, we did not test the validity of state agency reported program information, such as the reported program quality control error rates, caseloads, and staffing. However, through our review of Service regional and state agency records and discussions with Service and state agency officials, we determined that the data had been compiled and reported consistently in fiscal years 1981-88. In addition, in a previous report, Food Stamp Program: Statistical Validity of Agriculture's Payment Error-Rate Estimates (GAO/RCED-87-4, Oct. 1986), we noted that the Service's quality control system provides the most statistically valid estimate available of a state's Food Stamp Program error rate.

Benefits Achieved From Automation Not Always Reflected in Program Results

Since fiscal year 1981, state agencies requesting federal funding to develop automated systems indicated that states were seeking to improve Food Stamp Program administration through automation. The Food Stamp Program agencies we reviewed believed automating the programs should enable them to do such things as more accurately determine applicant eligibility and benefits, use fewer staff to manage larger caseloads, process applications faster and reduce paperwork. These changes would allow program workers more time to serve applicants and to verify reported information, which in turn would reduce the number of errors made in determining program eligibility. Each of the automated systems we reviewed, to some extent, (1) improved program administrative procedures and caseload management and (2) enabled eligibility workers to avoid and detect certain types of errors sometimes made when determining program eligibility.

However, the improvements brought by the automated systems in the states we reviewed were not always measurable in the results of program operations. While error reduction was a major goal of automation, its introduction was only one of many error reduction strategies. For example, Kentucky achieved one of the objectives of its automated system—to reduce errors—before the program was automated. In all of the locations we reviewed, the types of errors occurring in the Food Stamp Programs were often beyond the systems' capabilities because these errors reflected the accuracy or inaccuracy of household-provided information. Additionally, the automated systems' effect on changing program staffing, overissuances, case processing time, processing time limits, and paperwork was not always as expected. Our comparison between an automated local office and a nonautomated local office in California also showed that the presence of an automated system did not necessarily reduce the number of staff or the cost to process food stamp cases.

Many Administrative Improvements Were Experienced as a Result of Automation

According to Food Stamp Program officials in Vermont, North Dakota, Kentucky, Texas, and the Vallejo, California, local office, their automated systems improved program administration. They told us that their automated systems enabled eligibility workers to better process applications and maintain caseloads, more easily notify applicants of case action, and routinely avoid and detect errors to more accurately determine program eligibility. Based on discussions with state and local office program personnel at each of the offices we visited and demonstrations of each automated system's capabilities, we believe that in many respects the automated systems achieved these benefits.

Improvements in Processing Applications and Policy Changes

Each automated system we reviewed assumed many of the manual tasks previously performed by eligibility workers[1] and improved the workers' ability to process Food Stamp Program applications, maintain current case file information, and implement program policy changes. Table 2.1 lists the manual tasks—previously done by program clerks, eligibility workers, and supervisors—performed by the systems we reviewed. As a result, eligibility workers can more easily ensure complete and accurate food stamp applications.

[1] Eligibility workers are program staff who process and maintain food stamp applications and cases.

Table 2.1: Major Manual Tasks Assumed by the Seven Automated Systems GAO Reviewed to Improve Application Processing and Make Policy Changes

	Statewide systems				Local office systems: Texas		Local office systems: California
Processing capability of automated systems	Vermont	North Dakota	Kentucky	Texas	Dallas	S.Antonio	Vallejo
Guide interview through application							
Required	X		X				
Optional		X			X	X	
Prevent invalid entries	X	X	X	X			
Validate entries	X	X	X	X	X	X	X
Compute calculations	X	X	X		X	X	X
Consistent policy application	X	X	X	X	X	X	
Compare information for consistency	X	X	X	X	X	X	
Deny/terminate cases for:							
Missing monthly reports	X	X	X	X			X
End of certification period	X	X	X	X			X
Alert caseworkers to:							
Supervisory notes	X	X	X		X		
Errors	X	X	X	X	X	X	X
Household changes	X	X	X	X	X	X	X
Determine whether eligibility criteria are met							
Resource limit	X	X	X		X	X	
Gross income	X	X	X		X	X	
Net income	X	X	X		X	X	
Verification with other automated systems' data:							
Direct on-line		X	X	X			
Batched overnight	X	X	X	X			X
Batched irregularly		X	X	X			

Legend: "X" indicates that the capability existed.

Automated Systems Help Ensure Complete Coverage of Application Process

Although the extent is not quantifiable, the automated systems improved the entire application processing activity. Eligibility workers process and maintain food stamp applications and cases using the computers to more easily compare or screen reported applicant information at the time of the request for assistance. The automated systems search the statewide food stamp case file information to identify previous or ongoing public assistance received by the applicant and other household members. For example, the North Dakota system compares the names of

each member of an applicant's household to every person receiving food stamps in the state. This helps to prevent an applicant from receiving double benefits because he or she has applied for assistance as a member of two separate households. Furthermore, it aids the worker in processing the current application if the applicant has previously applied for food stamps because much of the information needed may have already been recorded and in the automated system.

Following the initial applicant screening, each of the automated systems, to varying degrees, can guide the eligibility worker through the applicant's interview to help ensure complete and accurate coverage. For example, the automated systems in Vermont, Kentucky, and the two Texas local offices have screens that appear on the workers' terminal in food stamp application sequence. Further, these systems will not permit the worker to bypass any of the information requested on the application. Generally, the systems recognize the type of entries permitted for each data query and prevent or alert the worker of invalid or unacceptable entries. Also, the systems validate certain entries, such as double checking social security numbers for 9 digits, and compute certain calculations for eligibility, such as household budgets and benefits allowed. Furthermore, the automated systems apply program policy as appropriate to each application. For example, for household members reported as students or elderly, Kentucky's system compares their reported ages to ensure that the program-required age limits are met.

Following the eligibility worker's completion of the application processing activity, supervisors can make direct inquiries into the case file at remote terminals and review the completed application. Also, workers can more easily make changes in the case files as the participants' household circumstances change. For example, the eligibility worker can immediately make changes in the automated case file in response to a change in household income. The system then automatically recomputes the effect on allowable household benefits.

Eligibility workers frequently cited their respective systems' capability to automatically prepare for mailing notices of action to food stamp applicants or recipients as a major improvement in food stamp case processing. Generally, each of the systems initiate, print, and prepare for mailing notices of case action, such as appointments for interviews, application approvals and denials, and recipient termination. For example, without direct involvement by the eligibility worker, the systems we reviewed routinely mail reporting forms to the participants who are

required to report monthly about changes in household income. Moreover, all seven automated systems we reviewed immediately identify program participants who are delinquent in submitting monthly reports. In all cases, if the required monthly reports are not received by the extended filing date, the automated system will terminate benefits. Some systems, such as the Texas statewide system, automatically mail a package of information for participants to reapply for food stamps as the end of their period of eligibility approaches.

Certain Program Changes Quickly Implemented

Program administrators and eligibility workers told us that another major benefit of their automated systems was the ease in implementing certain across-the-board or "mass changes" to the Food Stamp Program. These include such program changes as seasonal or annual adjustments to social security, supplemental security income, income eligibility standards, or dependent care deductions. The automated systems can change food stamp allotments overnight to reflect changes brought about by certain program changes. According to program administrators, before automation, eligibility workers spent weekends working overtime to manually change all of the case files to reflect program changes.

Automated Systems Are Designed to Help Eligibility Workers to Prevent, Detect, and Correct Certain Errors

Each of the seven automated systems we reviewed improved the eligibility workers' ability to accurately determine applicant eligibility to participate in the Food Stamp Program. The automated systems were designed to help the workers to prevent, discover, and take corrective action on errors. The following four sections describe the general improvements in error prevention, detection, and correction in several important areas in the applicant eligibility determination process—the process of appropriately determining the applicant's household income, household-related deductions, other household resources, and whether nonfinancial requirements are met—brought about by the automated systems we reviewed.

Automated Systems Help Determine Household Income

The automated systems increased the likelihood of the eligibility worker's accurate use of reported household income in determining eligibility, including verifying reported income and detecting unreported income. Household income consists of any earned or unearned gain or benefit, (wages, salaries, and monies from additional sources, such as other public assistance programs) by any household member. For example, the automated systems were designed to automatically calculate household income and credits according to program policy guidelines, thus ensuring accurate application of policy. To illustrate, Vermont's

system is designed to compute the household's total income and the benefit amount based on that income. The systems in Kentucky, North Dakota, and Texas convert income reported on a weekly basis into a monthly figure as required by the program. Each system can also test certain households for eligibility based on the households' net income, gross income, or both.

Also, each of the automated systems help eligibility workers verify reported information by matching the data with other sources. This type of verification became a program requirement in 1987, when the Service began requiring workers to compare applicant reported income to information obtained in the Income Eligibility Verification Systems (IEVS), which is maintained by the state social services agency. IEVS is a data system that is separate and apart from the automated Food Stamp Programs and contains earned and unearned income information maintained by federal and state agencies, such as unemployment compensation and Internal Revenue Service information. However, each state agency periodically compares automated statewide Food Stamp Program case income information to information contained in IEVS. Not only does this data matching process help verify reported income, it also helps identify income that the applicant failed to report.

The computer match flags discrepancies. Then, so that eligibility workers can compare the data, state agency program staff route notices of the discrepancies through the automated system to individual computer terminals, such as those in North Dakota's system, or through written printouts for local office systems such as those in Dallas and San Antonio. Workers can then determine if an error has indeed occurred and, if so, correct it.

Automated Systems Help Determine Household Deductions

The automated systems we reviewed assisted in the consistent application of Food Stamp Program regulation pertaining to allowable deductions from household income. In establishing an adjusted household income amount, program regulation allows applicants to deduct either a standard amount or the actual amount for certain expenses such as the costs of shelter and utilities, some medical expenses, dependent care expenses, and a standard 20-percent earned income deduction. For example, for deductions such as the utility allowance, the automated systems total the applicant's reported electric, gas, and phone bills, compare the total to the program's standard allowance, and allow the eligibility worker to apply the appropriate amounts in determining adjusted household income.

Automated Systems Help Determine Household Resources

The automated systems generally help to ensure mathematical accuracy of the applicable household resource calculations and help in making accurate determinations of whether the applicant meets the program's resource eligibility requirement. Resources include liquid and nonliquid funds, such as cash, bank accounts, and the cash surrender value of life insurance policies. Program regulations provide that generally the maximum allowable resources of all members of the household should not exceed $2,000. Because this program policy is built into the software, the systems automatically consider each type of resource listed on the food stamp application and determine whether the applicant's total resources meet the eligibility limit.

Automated Systems Help Determine Compliance With Nonfinancial Requirements

According to program administrators and our observations of demonstrations, each system has improved the workers' ability to obtain and verify certain applicant-reported information used to determine the household's compliance with nonfinancial program requirements. Program eligibility depends initially on the applicant meeting certain nonfinancial standards, such as age, citizenship, residency, work registration, and proper household composition. For example, the automated systems we reviewed, such as Kentucky's, automatically determine whether a household member listed as a "student" meets the program definition of a student. If the student definition is met, the systems automatically compute appropriate income, school expenses, and deductions for students.

Improvements in Program Results Not Always Achieved From Automation

The seven automated systems we reviewed achieved many of the expected administrative improvements or benefits. These improvements, however, have not always changed the results of program operations as expected. Some expected benefits preceded automation. For example, as a result of a nonautomated, concerted effort, Kentucky experienced large drops in its program error rates[2] prior to its automated systems operation. In Vermont, North Dakota, and Dallas and San Antonio, Texas, we found that the automated systems did not always change the results of program operations as expected. For example,

[2]Program error rates consist mainly of two reported measures of program errors: "case error rate" and "issuance error rate." From annual statistical samples of their food stamp caseload, states determine and report the percentage of cases containing errors. The result is the case error rate. Using this case error sample, the states estimate and report the percentage of benefits resulting from the errors. This is the issuance error rate and is often referred to as the "payment error" rate. Because our analysis was based on fiscal years 1981-87 data, the issuance error rate includes erroneous overissuances, not underissuances. The Hunger Prevention Act of 1988 (P.L. 100-435) amended the Food Stamp Act to require the issuance error rate to include erroneous underissuances as well as erroneous overissuances.

preventing major types of errors, such as those involving household income, was often beyond each automated system's capability because the system did not always have access to the necessary information. Also, improvements such as reducing the number of program forms needed to process applications were countered by new automated system-required forms to process applications.

Table 2.2 lists the specific Food Stamp Program activity for which we attempted to determine the effect of each automated system in each location we visited and the extent to which data was available to assess the system's impact. As shown in the table, the information available enabled us to address only part of the program activity which should have improved or benefited from each automated system. Appendix 1 describes the regression models we used, where sufficient information was available, to determine the effect that the automated system had on each of the expected benefits, that is, the change in the results of program operations, such as reducing errors or program staff due to automation.[3]

Table 2.2: Locations Where Appropriate Data Were Available to Determine the Effect of the Automated Systems on Specific Program Activity

Program activity for which the effect of the automated system was determined	Availability of appropriate data			
	Vermont	North Dakota	Dallas, Texas	San Antonio, Texas
Program error rates:				
Issuance errors	Yes	Yes	No	No
Case errors	Yes	Yes	No	No
Program staffing	Yes	No	Yes	Yes
Claims for overissuances	Yes	No	No	No
Amount of collections for overissuances	Yes	No	No	No
Amount of time spent on food stamp cases	No	Yes	No	No
Timeliness of case action	No	No	Yes	Yes

The Kentucky program and the automated local office in California are not included in the list because the information was not available for us

[3]Program outcomes—such as error rates, costs, staffing levels, and timeliness of application processing—are affected by the interaction of many characteristics of this environment. The results presented here control for some, but not all, of the factors that affect program operations. For example, we account for changes in total caseload and certain types of staff and policy changes. We do not, however, account for the characteristics of the cases served; corrective actions and management practices other than automation; differences in organizations, staff qualifications, and job responsibilities; or measures of the enthusiasm or commitment of managers and staff.

to evaluate the results of their automated systems operations. As discussed in chapter 1, our analysis was based on data in fiscal years 1983-87; the Kentucky system did not begin operating statewide until March 1988. In California, information about the local office's automated system in Vallejo, California, which had been operating since 1972, was not available and thus we were prevented from comparing operations before and after automation. We were, however, able to compare this office to a similar nonautomated local office in Red Bluff, California, to determine whether automation, alone, may have made a difference in the results in the two offices' program operation.

Kentucky's Error Rates Began Decreasing Before Automation

Although we could not measure or determine the impact of Kentucky's automated system on program operations, we found that the state of Kentucky had success in decreasing both its case and issuance error rates in recent years. This success, though, cannot be attributed to the state's automated system because major management initiatives caused the rates to decline before the system became operational in the spring of 1988.

The Kentucky Food Stamp Program case error rate decreased from 26.5 percent in fiscal year 1984 to 18.3 percent in fiscal year 1987. For the same period, the issuance error rate decreased from 8.9 percent to 4.1 percent. State program officials attribute much of the rate of decrease to measures they took to reduce program errors. Specifically, they changed some program requirements, increased the number of staff, provided additional staff program training, and increased the amount of supervisory monitoring and review. For example, the state shortened the time period between caseworker reviews of recipient household circumstances from the once-per-year requirement to at least once every 3 months for specific types of cases based on earnings and earnings history. Also, the state increased the number of staff administering the program from 1,942 to 2,139 between fiscal years 1984-87, while at the same time the number of food stamp cases had decreased.

According to state program officials, although they do not expect the system to automatically decrease error rates, they believe that as the automated system becomes more of a routine part of the program operation, it should enable workers to avoid making certain errors. In turn, error rates should decrease even further.

Automated Systems' Effect on Error Rates Varied in Vermont and North Dakota

In general, the state agencies covered by our review expected that automating their programs would help reduce the number of Food Stamp Program errors. Reducing the number of errors should, in turn, reduce the state's overall program error rates. For example, Vermont expected to reduce its issuance error rate from about 11 percent to about 4 percent, while North Dakota, which traditionally has had low issuance error rates, expected its system not to increase the error rates during its development and to assist in maintaining its low error rates once it became operational. Our regression models for the program results data from Vermont and North Dakota, which were the only locations with the necessary information for this analysis,[4] suggest that Vermont's automated system was not instrumental in reducing its error rates, but North Dakota's did cause its error rates to decrease. However, in both states the major types of program errors involving household income, resources, and nonfinancial eligibility requirements continue to occur because the necessary information to prevent these types of errors remains beyond the automated systems' reach.

In Vermont, the models indicated that the state's automated system was not a statistically significant factor in decreasing the state's issuance and case error rates. However, as described in appendix I, the model suggests that other factors, such as the number of food stamp cases, had a statistically significant effect on the overall decrease in the error rates during fiscal years 1981-87. Specifically, the issuance error rate declined from 9.6 percent to 6.3 percent, while the case error rate decreased from 17.1 to 14.7 percent. Throughout the period before this automated system—essentially fiscal years 1981 through 1983—and after its development—fiscal years 1984 through 1987—the error rate fluctuated up and down. For example, the issuance error rates began at 9.6 percent in fiscal year 1981, increased to about 14.0 percent in fiscal year 1982, and decreased to about 7.1 percent in fiscal year 1983. During the system's first year of operation in fiscal year 1984, the case error rate increased to 9.0 percent, decreased to 7.3 percent in fiscal year 1985, then to 5.9 percent in fiscal year 1986, and ended at 6.3 percent in fiscal year 1987. It has not yet met the 4 percent goal. The state's case error rate followed a similar up and down pattern.

[4]Reported state agency quality control error rates are statistically valid estimates only for the total statewide food stamp caseloads. No statistically valid estimates exist for local food stamp office operations such as those we reviewed in California and Texas. Also, since the use of our regression models requires information for a period of time before and after automation, Texas' statewide and Kentucky's systems could not be included because, as discussed in chapter 1, information was not available before the Texas system or after the Kentucky system became operational.

On the other hand, in North Dakota, our models indicated that its automated system was a statistically significant factor in decreasing its issuance and case error rates. This is better than North Dakota state officials expected for their automated system. The raw data, too, showed that the issuance and case error rates declined since the automated system began operating in 1985. However, this decline in error rates began even before the automated system began operations. Specifically, the issuance error rate was about 6.6 percent in fiscal year 1981, and decreased to about 5.0 percent by fiscal year 1983. After the program was automated in 1984, the error rate began at 6.2 percent, then dropped to 5.4 percent in fiscal year 1985, to 1.9 percent in fiscal year 1986, and ended at 4.2 percent in fiscal year 1987. The case error rate followed the same pattern, beginning at 22.1 percent in fiscal year 1981 and ending at 12.9 percent in fiscal year 1987.

Error Prevention Often Beyond Systems' Capabilities

We found that the types of errors occurring in the Food Stamp Programs before automation are continuing to occur after automation. According to state program and quality control system administrators, the consistency in the types of errors being made is not surprising even though the automated systems have enhanced the eligibility workers' ability to avoid, detect, and correct many errors in these same categories. They said that many of the same avenues for errors continue to exist. For example, the automated systems do not enable eligibility workers to discover all types of unreported income or other resources, such as motor vehicles, or to always accurately determine household composition, which includes establishing the living and eating arrangements of all household members. To illustrate, the North Dakota automated system has on-line capability that enables the eligibility worker to access the state department of motor vehicles to determine whether the applicant has unreported motor vehicles. However, the automated system would not help the worker discover unreported vehicles registered out of state or in someone else's name.

Furthermore, even though the automated systems' data matching capabilities have enhanced the eligibility workers' ability to detect unreported income and other resources, many times the data bases used in the matching process are not available in a timely manner to prevent errors from being made. Computer matches with the IEVS and other data bases may be monthly or semi-monthly. Additionally, the data may be several months old. For example, according to eligibility workers in Texas, the IEVS data base information, such as employer reports to the state employment commission, is usually from 3 to 6 months old at the time the applicant applies for food stamps. The Texas Department of

Human Services has indicated that it is testing on-line access with the Texas Employment Commission for applicants' wage and unemployment compensation history. However, while the unearned income data may be more current and could enhance the detection of failing to report the receipt of income from this source, the information pertaining to earnings and wages reported by employers will be at least 3 months old, as stated above.

In addition, Internal Revenue Service information is usually at least a year old by the time the eligibility worker receives it. By the time the match is made and unreported income or other resources are discovered, an error, such as in determining an applicant eligible when in fact the unreported income or other resources renders the applicant ineligible, has been made.

Moreover, if eligibility workers did not act on the results of the computer matching process, errors may not be discovered and corrected. Because the information contained in the data bases used in the computer matching process is usually dated, the workers cannot rely only on the fact that the match indicates a problem, such as unreported income. The applicant cannot be denied benefits until additional facts are obtained. The worker must call or write to confirm with the cognizant source that the problem indeed exists. The discrepancy must be resolved, and resolution of the discrepancy depends on the willingness and capability of the eligibility worker, as well as on the availability of documentation or third-party contacts for confirmation.

Vermont's Automated System Had No Effect on Claims or Collections

According to Food Stamp Program administrators in each of the states we reviewed, automated systems enhanced their capability to establish claims and increase collections for overissuances. For example, North Dakota administrators explained that once eligibility workers discover that participants have been overissued benefits, claims are established and collection attempts are made. With their automated system, the workers and state agency administrators can inquire into the case files, physically located anywhere in their state, to determine whether claims were filed promptly and to monitor the amount and timing of collections by local offices. As shown in table 2.3, except for one local office in California, the amounts of overissuance claims and collections generally have increased in recent years in the locations we visited.

Table 2.3: Claims and Collections for Food Stamp Overissuances for Fiscal Years 1982-87

Dollars in thousands

	State agency or local office				
Fiscal year	North Dakota	Vermont	Texas	Kentucky	Vallejo, California
1982					
Claims	N/A[a]	$ 63	$ 8,047	N/A[a]	N/A[a]
Collections	N/A[a]	12	1,184	N/A[a]	N/A[a]
1983					
Claims	N/A[a]	101	8,010	N/A[a]	$ 97
Collections	N/A[a]	28	1,578	N/A[a]	38
1984					
Claims	$293	233	9,614	$1,144	100
Collections	91	69	3,912	586	57
1985					
Claims	174	286	8,761	1,802	137
Collections	96	82	3,801	872	55
1986					
Claims	212	205	11,482	2,324	288
Collections	124	78	5,254	1,119	67
1987					
Claims	435	224	12,480	2,419	172
Collections	159	80	5,744	1,496	63

Note: N/A = not available

[a]State agency and cognizant regional Food and Nutrition Service officials did not have the records of claims and collections.

In Vermont, the only location we visited that had sufficient information for use in our regression analysis, our model showed that the automated system was not statistically significant in increasing claims or collections. Our discussions with eligibility workers, however, revealed that they expected the automated system to increase claims because establishing a claim merely involves recording the overissuance and establishing an accounts receivable. Collections, they told us, involved some activities beyond the automated system's capabilities. Collections depend more on the state's power to enforce and its effort to make the collections.

Automation's Effect on Program Staffing Varied in Vermont and Dallas and San Antonio, Texas

Officials in Vermont and Texas expected that their automated systems would reduce the number of people needed to administer food stamp caseloads. Our models showed that the automated system had a statistically significant effect on the number of program staff needed to administer the Food Stamp Program, increasing the number in Vermont and generally decreasing the number in Dallas and San Antonio. Also, the effect varied according to the type of program worker—clerical workers, eligibility workers, and supervisors—which often differed at each location.

In Vermont, program officials expected the automated system to reduce total program staff by about 11 people. However, the actual number of program staff remained relatively constant, increasing by 1 person, from 136 in fiscal year 1981 to 137 in fiscal year 1987. Furthermore, our models indicated that the automated system, which was implemented in fiscal year 1983, was a statistically significant factor in increasing staff levels. Specifically, the models suggest that the automated system had the greatest impact on increasing the number of eligibility worker review specialists needed to administer the program. The system had no statistically significant effect on the number of eligibility intake workers. (Eligibility workers in Vermont are classified as intake workers who process initial applications or review specialists who maintain ongoing participants.)

Texas program officials expected that the local office automated systems implemented in Dallas and San Antonio would greatly reduce the number of program staff needed to administer the program. In Dallas, while the number of staff increased from 53 in fiscal year 1981 to 65 in fiscal year 1987, our model indicated that the increase in staff probably would have been even higher had it not been for the automated system. For example, the models indicated that the automated system was statistically significant in decreasing the number of eligibility workers. Yet, the raw data showed that the actual number of eligibility workers increased by 10 in fiscal years 1981-87. Thus, had the automated system not decreased the number of workers needed, the actual number of workers would have been greater than 10. On the other hand, the automated system had no statistically significant effect on the number of supervisors needed in the office. The actual number increased by four, from two to six during fiscal years 1981-87.

In the San Antonio local office, total staff increased from 57 in fiscal year 1981 to 83 in fiscal year 1987. Our model suggests that although

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In the San Antonio local office, total staff increased from 57 in fiscal year 1981 to 83 in fiscal year 1987. Our model suggests that although

total staff increased during this period, the automated system was statistically significant in reducing the number of clerical staff needed to administer the program. The number of clerical workers, though, actually increased from 18 to 35 in fiscal years 1981-87. Thus, as was the case in the Dallas office, had it not been for the automated system, the San Antonio office may have needed more than 17 additional clerks to administer the program. On the other hand, our model suggests that the automated system had a statistically insignificant effect on both the number of supervisors and eligibility workers needed.

According to Texas state agency and San Antonio local office program officials, the effect of the automated system on the number and type of staff seems reasonable. They told us that the automated systems permitted the eligibility workers to do more, negating the need for additional staff to handle the increase in the eligibility workers' tasks. For example, along with the introduction of the automated system came a program change that required most of the participating households to report monthly about household circumstances. Although additional staff may have been needed to handle this additional paperwork, the automated system enabled the same workers to track receipt of the reports, process them, and make necessary changes automatically.

Automated System Had No Effect on Time Spent on Food Stamp Cases in North Dakota

North Dakota expected workers to spend less time on food stamp cases after its program was automated. Our model for North Dakota, which was the only location that had sufficient information available to test the effect of automation on the amount of time spent by workers on cases, indicated that the automated system was not a significant factor affecting the amount of time spent on food stamp case processing. In any event, the program results data show that the average time spent by program workers on food stamp only cases increased from 35.4 minutes per case in fiscal year 1983, before the system was automated, to 47 minutes per case in fiscal year 1987, after the system was automated.

As we mentioned earlier, determining why the automated system had a certain effect—in this case increasing the amount of time spent on food stamp cases—was beyond the scope of our review. However, according to program workers these results seem reasonable. For example, in North Dakota, eligibility workers told us that they usually complete the food stamp applicant interview without using the automated system. Following the interview, they spend additional time entering the information obtained into the automated system. Thus, the two-step process

could account for the increase in the total time spent by workers processing food stamp cases.

Automated Systems Had Little Effect on Eligibility Determination Timeliness in Texas

According to planning documents and state agency officials, the Texas local offices' (the only locations with the information we needed to analyze the impact of automation on the timeliness of food stamp case actions) automated systems were expected to standardize the benefit determination process at the eligibility worker level. This standardized procedure would result in more timely food stamp eligibility determinations.[5] However, our models indicated that the automated systems had no statistically significant effect on the timeliness of case processing in either the Dallas or the San Antonio office.

In both offices, as described in appendix I, the automated system was not statistically significant in increasing case processing timeliness. However, the percentage of cases processed within the required timeframes did improve for both offices. For Dallas, the percentage of cases processed in a timely manner averaged about 63 percent for the 3-year period before the automated system went into effect and increased to about 87 percent in fiscal year 1986—the first full year of the automated system's operations. For San Antonio, the percentage of cases processed in a timely manner averaged about 70 percent for the 3-year period before automation, 77 percent in fiscal year 1984—the first full year of the automated systems operations—and increased to 82 percent in fiscal year 1986.

According to state agency program officials, the automated systems should have improved the timeliness of the workers' case actions in each of the offices. They told us that in the Dallas office, the standardization and consistent policy application that came with the automated system should have improved the timeliness of the eligibility workers' actions. In San Antonio, however, they agree that the effect of automation may not be readily apparent. That office had several major reorganizations—which are considered in our models in appendix 1—that could have actually caused a decrease in the timeliness had it not been for the automated system.

[5]Timely food stamp cases are those in which program eligibility is determined (1) within 30 days from the date of initial application for regular program participants or (2) within 5 days from the date of initial application for participants needing expedited services--whereby immediate benefits are provided to households that have access to less than $150. Texas' program, however, requires expedited service to be determined within 1 day of initial application.

Automated Systems Have Not Always Reduced Paperwork in the States We Reviewed

In comparing automated and nonautomated operations, we found that in general, the number of forms used to process food stamp applications and to maintain food stamp cases before automation remained about the same or increased after automation. Even though the on-line systems developed by Vermont, North Dakota, and Kentucky permit paperless, direct entry into the automated systems, eligibility workers still must maintain paper files for each case and some changes in paperwork accompanied the automated operations. Paperwork increased for the batch-process systems in the Texas and California local offices mostly because of the need to duplicate the paper file information for entry into the automated systems.

For example, the number of forms needed to process food stamp cases in Kentucky remained about the same. While the automated system reduced the need for 11 forms used under the manual system, the system required 9 new forms to the process the cases. In North Dakota, the standard federal Food Stamp Program application form was changed to meet the needs of the automated system in North Dakota. Instead of the previous 5-page application, food stamp applicants must complete a 40-page application. According to state and local office administrators, this enabled the workers to obtain more accurate and complete information on all household members, not just the head of the household. Also, the information can be used to apply for assistance in other programs, such as AFDC and medical assistance. In September 1988, the application form was revised down to 34 pages. In the Vallejo, California office, a batched-process system, we found that the number of forms used in the automated food stamp office to process food stamp cases used 34 forms, while the nonautomated local office used 25 forms.

Comparison Shows That an Automated Office Processed Fewer Cases Per Worker at a Greater Cost Than a Nonautomated Office

Our comparison of two local office operations in California showed that the automated office processed fewer food stamp cases per eligibility worker at a greater average cost per food stamp case than did the nonautomated office. We reviewed the results of each office's program operations to determine only whether the presence of the automated system appeared to make a difference in the number of staff or administrative cost to process food stamp cases. We did not include other factors that could have influenced the efficiency of either the automated or nonautomated office. These factors could include such activities as the offices' organization and operating procedures, the characteristics of the cases processed, as well as the efficiency of the automated system itself.

From the results of each office's program operations data, we found that in fiscal year 1983, the automated office had an average monthly caseload of 2,915 food stamp cases and about 42 eligibility workers, a ratio of about 69 cases to 1 person. In 1987 the caseload decreased to an average monthly caseload of 2,362 and the number of staff increased to 49, causing the ratio to decrease to 48 to 1. On the other hand, the nonautomated office had an average monthly caseload of 1,473 and 20 eligibility workers or a ratio of about 74 to 1 in fiscal year 1983. By fiscal year 1987 the ratio had increased to about 78 to 1—an average caseload of 1,793 and 23 eligibility workers.

Correspondingly, our comparison between the two offices' administrative costs to process food stamp only cases also showed that the nonautomated office spent less per case than did the automated office. Specifically, the automated office's administrative cost to process a food stamp only case averaged about $107 in June 1984. In June 1987, the average cost per case increased to about $129.63 per case. While in the nonautomated office, the average cost per food stamp only case was about $92.99 in June 1984 and about $94.71 in June 1987.

Conclusions

Many of the expected benefits have been achieved by the automated systems we reviewed in Vermont, North Dakota, Kentucky, Texas, and California. We found that automation enabled workers to (1) automatically avoid certain program errors and (2) better identify certain program errors for correction. Automation also improved many aspects of the food stamp case processing activity, such as guiding the client interview, managing participant cases, and notifying applicants of case action.

However, in the states with the information needed to perform our analyses, we found that these improvements have not always reduced state agency program error rates or improved program administration. Certain types of program errors prevented by automation, such as arithmetic errors, were never a major problem. Thus, automation has had a limited effect in reducing error rates. On the other hand, preventing or detecting certain major types of program errors, such as earned income errors, has been beyond the automated systems' capabilities. As a result, the major categories of program errors continue to be the same after automation. Furthermore, our analysis suggests that automation has not always resulted in administrative improvements such as less time

processing food stamp cases, fewer staff needed to administer the program, or more timely eligibility determinations. Automation, for example, has resulted in more forms needed to process food stamp cases in some of the programs we reviewed.

We also found that measures of program performance, such as error rates, may be affected by changes in any of a number of program related factors other than automation, such as staffing levels or caseloads. Kentucky experienced a decline in issuance and case error rates following such changes but prior to automation of its program. By considering these other changes along with the impact of the automated systems, our analysis suggested, for example, that North Dakota's automated system played a significant role in reducing its program error rate, whereas in Vermont, the system did not. In doing our regression models, as with all regression analyses, we could consider only a limited number of changes affecting program activity for a short period of time. In addition, more time may be needed to determine whether the automated systems will eventually cause more of the expected improvements in the results of program operations.

Agency and State Comments and Our Evaluation

The Food and Nutrition Service recognizes that the report "addressed the complex subject of the costs and benefits of automation in the Food Stamp Program...." However, the Service indicates that the methodology used by us to measure the effects of automation on the Food Stamp Program has serious limitations that it stated are not adequately emphasized in the report. The Service notes that while our regression models include a number of relevant variables, a number of equally important factors are left out which can be expected to influence the outcome of automation. Service examples of these factors include the economic health of state and local governments, changes in state funding priorities, and differences in the type of households served. The Service acknowledges our awareness of these limitations, but states that we downplay their significance.

We believe that throughout the report we discuss the limitations of the data and the statistical results pertaining to program changes caused by Food Stamp Program automation. Because we had neither adequate data on the factors cited by the Service nor controls in our models for them, we have qualified our report accordingly.

We also obtained comments from the states of Kentucky, North Dakota, Texas, and Vermont covered in this review. Generally, the states indicate that it is difficult if not impossible to accurately measure the impact of automation on their programs due to the large number of variables involved and the lack of reliable data. We acknowledge these difficulties and have stated in the report that we did not include all the variables affecting automation such as quality of program staff and socioeconomic factors within the community served by a program because of lack of adequate data. However, the variables that are included in our analysis enabled us to determine the statistical significance of possible relationships between automation and each of the different measures of program benefits, while controlling for the effects of other program-related factors, such as changes in staffing or caseload. Other comments, related largely to the clarity and technical accuracy of specific statements in the draft report, have been incorporated where appropriate. (See apps. V through IX for the Food and Nutrition Service's and the states' comments of this report and our response.)

States and the Service Did Not Maintain Adequate Records of Automated System Costs and Equipment Inventories

Although no specific federal or state agency requirements exist for state agencies to account for the development or operations costs of specific automated systems, we were able to identify the costs of the automated Food Stamp Programs in Vermont, North Dakota, and Kentucky. However, state agency and Service accounting records were not sufficient for us to identify, in Texas and California, the cost to develop or operate each of the automated systems. In these two states, agency records in general did not identify expenditures related to each specific Service approved funding request. Records at each of the five state agencies did not always account for the operating costs of the system that the Service approved for development. Moreover, despite federal requirements, none of the state agencies could account for all of the automated systems-related equipment in their inventories purchased pursuant to the approved ADP funding requests. Similarly, Service regional office records did not account for approved funding provided to the states. State agency and Service accounting and records problems (1) prevented us from identifying the actual costs of ADP systems developed with Service funds in some states, (2) resulted in state agencies inappropriately allocating expenditures between approved projects and, in at least one state, exceeding approved federal funding levels for ADP development, and (3) increased the potential for fraud, waste, and abuse of system equipment.

Financial Integrity and Internal Control Requirements

The Federal Managers' Financial Integrity Act of 1982 requires, in part, government agencies to evaluate their internal controls and report whether they comply with prescribed internal control standards and provide reasonable assurance that revenues and expenditures are properly recorded and accounted for so that reliable financial reports may be prepared and accountability of assets may be maintained. To ensure such accountability, the act requires that the internal controls be consistent with the Comptroller General "Standards." In addition, the Office of Management and Budget's Internal Control Guidelines of 1982 identify several specific objectives of grant activities that agencies should seek to achieve, some of which the agencies can require of grantees; e.g., state agencies administering the Food Stamp Program need to undertake certain internal control actions.

Thus, while the act does not address the extent to which it applies to grant programs, it is within the contemplation of the act and implementing guidelines that agencies will identify specific internal control objectives for their grant programs and monitor their grant agreements in a

manner that seeks to achieve the specific internal control objectives identified by the agencies.

State Agencies' Accounting and Service's Monitoring of ADP Costs Are Not Adequate

Unlike Vermont, North Dakota, and Kentucky, Texas and California state agency accounting records did not, in general, account for the costs of the specific Food Stamp Program automated systems approved by the Service. While the state agencies' requests for Service funding to develop the automated systems provided estimates of the total costs to develop the ADP system and its annual operating costs, Service regional supervisory personnel told us that state agencies are not required to determine or report the systems' actual development and operating costs to the Service. Also, the Service regions, which approve the state agencies' requests for ADP funding, are not required to monitor or determine the actual expenditures for the ADP systems' development or operations. As a result, we could not determine the actual costs to develop and operate federally funded ADP systems, and in at least one state, the Service-approved cost ceiling was exceeded.

Accounting Practices by States Need Improvement

Inadequate accounting practices have resulted in state agencies inappropriately allocating costs or exceeding approved federal funding limits. For example, Texas inappropriately allocated costs to develop its systems, and California developed the San Francisco automated issuance system without accounting for its specific expenditures. Because of these accounting problems we could not determine the development and operating costs for the Texas and California automated systems. Moreover, inadequate accounting and oversight resulted in North Dakota exceeding the original approved federal funding limit for developing its system.

The five state agencies generally grouped together all ADP-related expenditures charged to the Food Stamp Program and submitted quarterly claims to the Service regions for federal funding during the annual Food Stamp Program budgeting process, as described in chapter 1. For example, at the time of our review, the Texas state agency had 13 separate Service-approved ADP funding requests. All of the expenditures claimed by the state against these funding requests, including those for the three different local office automated systems developed in fiscal years 1981-87, were combined on the required state agency's quarterly claims to the Service Southwest Region and identified as "ADP development expenditures" or "ADP operating costs." According to state program officials, Texas was not required to separate related ADP

development costs or to separate related ADP operating costs among the different automated systems' funding requests.

Because it realized that these accounting problems existed, in fiscal year 1985 the Service's Southwest Region asked the Texas state agency to account for expenditures relating to each Service-approved ADP funding request. According to the two state budget officers involved in the task of reconstructing the expenditure records, they assigned each ADP-related expenditure voucher dating back 5 years to approved ADP funding requests on the basis of their knowledge of each automated system. Table 3.1 shows that on the basis of the reconstructed records, the Food Stamp Program's share of the cost of developing the first local office automated system was about $1.1 million. The program's share of the second local office system cost was about $11 million and the program share of the cost of the third local office system, which is currently under development, is about $1.9 million to date.

Table 3.1: Costs Claimed by State Agencies to Develop and Operate Approved Automated Systems GAO Reviewed for Fiscal Years 1981-87

Dollars in millions

Automated system/date the system began operations	Food Stamp Program share of costs	
	Development costs	Operations costs[a]
Vermont (Sept. 1983 /86)[b]	$1.25	$1.96
North Dakota (Oct. 1984)	$1.40	$1.13
Kentucky (Mar. 1988)	$19.75	Not Applicable
Texas:		
Statewide system (Oct. 1979) estimated operating costs since FY 1981	[c]	$29.83
First local office system - 17 offices (May 1983)	$1.06	Unknown[c]
Second local office system - 37 offices (May 1985)	$11.35	Unknown[c]
Third local office system (not operational)	$1.87	In development
California:		
On-Line issuance -16 Local Offices (Sept. 1983)	Unknown[c]	Unknown[c]
WCDS[d] -19 local Offices (First Office began operating in 1967)	[c]	Unknown[c]

[a]With the exceptions of Texas and the WCDS systems, cumulative costs since date systems operations began.

[b]Vermont's system initially developed for the Food Stamp Program began operations in 1983. Added features to the system to serve other assistance programs began operations in 1986.

[c]With the exceptions of Texas and the WCDS systems, development and operation costs were "unknown" because the state or local office records did not identify the costs or officials could not estimate the applicable costs. Texas and WDCS was developed prior to the period, fiscal years 1981-87, covered by our review.

[d]WCDS=Welfare Case Data System, of which the Vallejo, California, local office is a part.

We found, however, that the reconstructed records may not reflect an appropriate allocation of costs among the various automated systems. Although each voucher we reviewed documented ADP-related expenditures, because of the judgmental method used to allocate the expenditures to the different automated systems, the voucher totals did not correspond with the Texas state agencies' claims to the Service for reimbursement. For example, the reconstructed records showed expenditures of only $10,444 in fiscal year 1987 for the first local office automated system, but the state agency claimed expenditures of $211,888. On the other hand, for the second local office system, the reconstructed records showed expenditures of $6,255,553 in fiscal year 1985, but only $4,682,970 in expenditures was claimed. Thus, on the basis of the reconstructed records, it appears that the state agency claimed federal reimbursement in excess of expenditures to develop the

first system, and claimed less than actual costs to develop the second system.

Because of the way the Texas state agency accounted for expenditures, we could not verify the accuracy of the reconstructed records or the state's allocation of costs. The Service's Southwest Regional Administrator told us in February 1989 that the region was in the process of determining the appropriateness of the state agency's allocation of ADP expenditures. Also, according to Texas state agency budget and accounting personnel, the state agency began in fiscal year 1988 to account for expenditures related to each specific approved ADP funding request.

Because some state agencies did not always account separately for the automated systems developed with funds received from each Service approved ADP funding request, we could not always identify the actual cost to develop and operate each of the automated systems, as shown in table 3.1. For example, the state agency accounting records for Texas did not identify the operating costs of either statewide system or local office system. Similarly, for California, we could not identify the development or operating costs for the San Francisco issuance system or the operating costs for the California local office system we reviewed. Although Texas state agency officials could estimate the cost to operate the Texas statewide automated system, California state agency and local office officials did not have the information to estimate the San Francisco issuance system's operating costs.

On the other hand, based on cited limitations table 3.1 shows that we identified the actual costs claimed by the state agencies to develop and operate the automated systems in Vermont, North Dakota, and Kentucky. Although these state agencies also pooled ADP development and operations costs as a state agency total, they had only one automated system each and essentially only one overall Service-approved ADP funding request to develop the Food Stamp Program's share of the system. Thus, the cost of the automated system was the state agency's allocated share of its total ADP expenditures to the Food Stamp Program.

Limited ADP Funding Oversight by the Service Regions

Service regions have not, in general, ascertained the costs of developing or operating the state agencies' automated systems. Service regional officials told us that there is no requirement that expenditures for ADP development or operations costs be compared to the Service-approved systems development plan. Service regulations and ADP Advance Planning Document Handbook 103 provide that the Service regions perform

on-site reviews. There are generally three types of on-site reviews: pre-installation, utilization, and post-installation. The post-installation review is to be performed after the automated system becomes operational to determine whether the system adequately reflects the system in the state agency's request. The timing and content of this review is left to the regions' discretion. Consequently, we found that the timing and content of the Service post-installation reviews varied from region to region. Also, because state claims for expenditure reimbursement are not evaluated and post-installation reviews do not always include a review of systems' costs, adequate controls do not exist to ensure that approved federal funding amounts are not exceeded.

The Service's Northeast Region did not perform the post-installation review of Vermont's system, which initially began operations in 1983, until May 1988. The region reviewed the system's functional capability but did not address the cost of development or operations. According to Service's Southwest Region program management personnel, because of lack of resources they have not performed a review of the two Texas local office automated systems that have been operational since 1983 and 1985, respectively. They told us that, instead, they have monitored the state's performance through correspondence, on-site visits, and numerous meetings throughout the systems' development. The Service's Western Region has not performed a post-installation review of the San Francisco on-line issuance system, which began operations in September 1983.

The Service's Mountain Plains Region performed a post-installation review in 1984, shortly after the North Dakota system began operations. It included a financial review of the system's development costs. From this review, the Service discovered that the state had claimed federal funding in excess of the approved amount. The Service originally approved North Dakota's ADP request for about $1.10 million in January 1984; the Service share of the cost was about $844,000. However, the state claimed expenditures of about $1.37 million. According to Service regional ADP staff, however, the Service retroactively approved the expenditures for the system following their post-installation review, including the approximately $270,000 that was in excess of the originally approved amount.

Although North Dakota was the only instance in which we found evidence that a state agency exceeded its approved amount to develop its automated system, regions need to monitor ADP expenditures and claims for reimbursement during the Food Stamp Program budgeting process to

ensure approved amounts are not exceeded. We found that this was generally not done. In fact, until October 1988, only the Service Southeast Region required that state agency claims for federal reimbursement be reconciled to approved ADP funding requests. In October 1988 the Service Southwest Region began reconciling state agency ADP budgets and quarterly claims to approved request amounts.

State Agencies' ADP Equipment Inventory Records Were Not Accurate

None of the state agencies we reviewed could account for all ADP equipment purchased pursuant to their approved ADP funding requests. The Kentucky, North Dakota, California, Vermont, and Texas state agencies did not maintain current or accurate inventories of the automated systems equipment purchased in conformance with Service-approved funding requests. These states did not have accurate records of the amounts of equipment purchased or of the locations where the equipment was used. Such inadequate record keeping is contrary to Title 7, part 277, of USDA regulations and Office of Management and Budget Circular A-102, which require that each state agency account for all equipment purchased with federal funds.

Specifically, the regulations and circular require that state agencies' property management records include the equipment's description, identification number, acquisition date and cost, source, percent of Service funds used, location, use, and disposition information. The guidance also provides that where discrepancies between the inventory records and on-hand quantities exist, an investigation be made to determine the cause of the discrepancy.

We found that the Kentucky state agency maintained an automated record of its ADP equipment purchases and individual property record cards identifying the location of the equipment. However, as shown in table 3.2, the lists of equipment requested, the lists of equipment purchased, and the property records did not agree.

Table 3.2: Inventory of Kentucky's Automated Food Stamp Program Equipment

Equipment description	Total planned as per request	Total purchased	Program property records	No record of location	State ADP section records
Controllers	166	166	163	3	166
Terminals	1,834	1,834	1,805	29	1,834
Printers	633	633	629	4	630
Modems	270	275	No record	2	273

According to the state agency program manager, the ADP section maintains the records of the Food Stamp Program's automated system equipment. The ADP section manager supplied us with an equipment inventory record showing 273 modems and their locations. She told us that their record was the most complete and accurate. On the other hand, according to her, the Food Stamp Program property records are not kept current. She could not explain why the modems were not identified in the property records. Also, she could not explain the difference between the 275 modems purchased, and the 273 shown on the inventory record.

The North Dakota state agency could not provide us with a list of the systems-related equipment purchased with Service-approved funding. According to the state agency ADP systems project director, a detailed inventory would have to be developed by contacting each of the state's 53 local food stamp offices to determine what equipment it had. Similarly, the San Francisco office also could not provide us a list of equipment for its on-line issuance system.

In Vermont, state agency officials gave us two inventory listings of equipment purchased for the state's automated Food Stamp Program system, one as of April 1988 and one as of August 1988. However, as shown in table 3.3, the two lists did not agree. The officials could not tell us which list was more accurate nor could they account for the differences between the two lists. Furthermore, they could not explain the difference between the numbers of terminals and keyboards at some local offices. In Newport, Vermont, for example, the April 1988 inventory listed 15 terminals but only 5 keyboards. In Springfield, Vermont, the list showed 19 keyboards and 18 terminals. Yet, the automated system is designed to require one keyboard for each computer terminal.

Table 3.3: Inventory of Vermont's Automated Food Stamp Program Equipment

	Number		
Listed equipment	**April 1988**	**August 1988**	**Difference**
Keyboards	341	397	56
Terminals	361	387	26
Printers	38	35	3
Controllers	14	14	0
Modems	1	3	2
Other	1	1	0

Although auditing the ADP inventory in Vermont was beyond the scope of our review, we checked the equipment on hand at an office we visited

in October 1988 against the state's record of the equipment located there. We were provided information to document the existence of 30 terminals and 30 keyboards in the office; however, the state's inventory list showed 28 terminals and 29 keyboards at that location. Neither local office nor state agency officials could explain the difference.

In Texas, although state agency officials provided us with computer printouts that identified ADP-related equipment and the location of each item, we could not determine which equipment belonged to which automated system because the inventory did not identify the name of the system or the approved federal funding account. An audit performed by the USDA's Southwest Regional Office of the Inspector General in fiscal year 1986 identified incomplete property records and missing ADP equipment. According to the state agency's response to the audit, they located the missing equipment. However, according to the Assistant Deputy Commissioner of Information Systems in Texas, as of January 1989, the ADP equipment listed in the Service-approved ADP funding requests and purchased by the state still cannot be traced to the specific automated system developed.[1]

Conclusions

In furtherance of the purposes of the Federal Managers' Financial Integrity Act of 1982, the Food and Nutrition Service needs to improve its internal controls over the Food Stamp Program's automated systems development and operations costs, and equipment inventories. In addition, the Service should require that state agencies establish controls that allow the Service to properly monitor these Food Stamp Program activities.

For the states we reviewed, specific expenditures to develop and operate automated Food Stamp Program systems were generally not identifiable in the accounting records of those states with multiple ADP systems. Neither Service regions nor state agencies we examined required that accounting records be maintained for specific ADP systems' expenditures. Furthermore, even though state agencies are required to maintain an accurate accounting for ADP-related equipment, they did not maintain

[1]In an August 18, 1989, letter providing comments to the report, the Texas Department of Human Services Commissioner explained that the department can identify the number of workstations, file services, and other equipment purchased to support a particular project. In the department's view, whether or not the equipment identity can be directly related to a specific project seems an unnecessary requirement that could prevent them from using equipment from different systems interchangeably when unexpected delays occur for some systems. According to the Commissioner, once the delays in equipment acquisition are overcome, each system receives the approved amount of equipment.

such records in any of the states we reviewed. Consequently, the Service has no assurance that the state agencies (1) spend the funds as agreed upon in their approved ADP funding requests, (2) do not exceed the ADP development costs approved by the Service, or (3) account for equipment and other assets obtained with federal funds.

To overcome these shortcomings in state agency accounting for and Service regional oversight of ADP expenditures, the state agencies need to account for expenditures for services and equipment against each specific Service-approved ADP funding request, a practice recently implemented by the Texas state agency. In addition, the Service needs to compare state agencies' claims for reimbursement, to the amount approved by the Service. In addition, the Service regions need to include in their post-installation reviews, which are required by Service Handbook 103, a timely financial review of the states' expenditures closely following the systems' development and an inventory of all ADP-related equipment purchased pursuant to the approved funding request.

Recommendations to the Secretary of Agriculture

To help ensure good internal controls over the Food Stamp Program's automated systems development, operations costs, and equipment inventories, we recommend that the Secretary of Agriculture direct the Administrator of the Food and Nutrition Service to:

- Amend Service Handbook 103 to require post-installation reviews to be performed as soon as the state agency's automated system becomes operational and require that the reviews include (1) reconciliation of state agency expenditures with each approved ADP request for funding and (2) reconciliation of state agency equipment purchased, pursuant to the approved ADP request for funding, with state agency property records.
- Amend the Service Food Stamp Program budgeting process to require state agencies to (1) account for total expenditures for each Service-approved request for ADP development funding and (2) account annually for all ADP-related equipment purchased pursuant to each Service-approved request for ADP development funding.
- Amend Service regional operating procedures to require Service officials to monitor agency quarterly claims for federal reimbursement to ensure that state agencies do not exceed the approved ADP funding level.

Agency Comments and Our Evaluation

The Food and Nutrition Service states that although we did not question any specific costs charged to the Service by any of the states, we nevertheless assert that greater controls are needed over ADP-related charges to the Food Stamp Program. Furthermore, the Service states that the controls recommended by us, which center on the Service collecting, recording and reconciling state expenditures for specific ADP-related costs, are prohibited by Office of Management and Budget (OMB) Circular A-102.

We agree that we did not find any questionable costs charged to the Service. However, although there is no Service requirement to reconcile costs incurred to develop a system, the Service's Mountain Plains Region discovered that a $270,000 expenditure was incurred by a state which was beyond the approved ADP amount. We believe that such a requirement represents basic minimal internal controls. Furthermore, we are not recommending that the Service collect, record or reconcile expenditures for specific ADP-related costs as the systems are developed. We are recommending that once the system is operational the Service include in its required post-installation review a reconciliation of the cost incurred to develop the system.

Finally, in our view, the revised OMB circular A-102 does not prohibit federal agencies from requiring state agencies to report the level of detail envisioned by our recommendation. We are not recommending that the Service account for or require state agencies to account for specific "object costs" expenditures, as stated in the OMB circular, for ADP development or operation costs. We are recommending that the Service and the state agencies account for the total actual costs to develop each system. To more clearly convey our recommended action, we revised the recommendation to the state agencies to refer to accounting for total costs for each approved request only. In fact, in fiscal year 1985 the Service's Southwest Regional Office requested our recommended accounting detail from Texas. The state began reporting the requested level of detail in fiscal year 1988. Specifically, all we are recommending is that state agencies, which must request specific approval for ADP development funding, account for associated costs and report the total actual expenditures associated with each specific request approved for funding. Because all expenditures submitted for federal reimbursement are subject to federal audit, the states must be able to account for all claimed expenditures whether for ADP development, operations, or other program related expenditures.

The Service disagrees that it should reconcile state agency equipment acquisition with funds used and state agency property records. We are not recommending that the Service reconcile state agency equipment acquisition with funds used and state agency property records. We agree that this is a state agency responsibility. In fact, we are recommending that the Service specifically require the state agencies to do this accounting for each approved ADP funding request. For the Service, we recommend only that it include in its post-installation review, once the system becomes operational, a requirement to reconcile the equipment purchased for the ADP system approved for development.

Enhanced Funding for Automation Has Achieved Its Objective

In a 1980 House Agriculture Committee report,[1] the Committee expressed the need for increasing the rate of federal funding for ADP development from 50 percent to 75 percent to encourage state agencies with manually operated Food Stamp Programs to initiate automation efforts. Subsequently, the Food Stamp Act Amendments of 1980 provided for 75-percent funding for states to plan, design, develop, or install ADP systems for administering the Program. According to responses to our questionnaire (see app. III), all of the state agencies that received the 75-percent funding stated that the increased funding was very important to either begin automation efforts or to modify, upgrade, and replace existing automated systems. Now, 50 of the 53 state agencies administering the Food Stamp Program have automated systems that support their Food Stamp Programs statewide. The remaining three state agencies have partially automated systems. Thus, it appears that the increased rate of funding at the 75-percent level has achieved its objective.

All State Agencies Have Automated to Some Extent

All of the state agencies administering the Food Stamp Program have automated at least portions of their Food Stamp Program using 75-percent and/or 50-percent federal funding. According to responses to our questionnaire, 50 of the 53 state agencies have developed automated systems that support their program statewide.[2] The other three agencies have automated systems at the local level and plan future automated capabilities at the state level. The majority of functions identified in the Service's regulations for the model plan as discussed below, required by the Food Security Act of 1985, have been completely or partially automated by most of the state agencies. According to our questionnaire results, states that developed systems using only the normal 50-percent funding perform similar program functions to those developed using 75-percent funding.

Tables 4.1, 4.2, and 4.3 present the status of automation in the states with regard to the Service program function requirements of the model

[1]House of Representatives Report No. 788, 96 Cong., 2nd Sess.

[2]The sophistication level of an automated system can vary widely from state to state and within the state. For example, a simple system could be a client index where the computer is essentially a storage mechanism for information. The eligibility worker calculates information and then enters the information into the computer. In a sophisticated system, each eligibility worker has a computer terminal that is used to enter raw data during the interview and the computer then determines eligibility at the time of the interview. In addition, this same system can control benefits and determine the amount of assistance the client will receive. We did not address the sophistication level of automation in this report. Instead, we asked the states to report the extent of automation based on their interpretation of what program automation consists of in their Food Stamp Program.

plan. The model plan calls for systems to be designed to have the capability to perform up to 34 different functions: 12 functions for a certification system including determining applicant eligibility, 13 functions for an issuance, reconciliation, and reporting system including generating authorization for benefits, and 9 general functions, including timeliness and data quality requirements, to be performed by all systems. According to our questionnaire results, states that developed systems using only the normal 50-percent funding perform similar program functions to those developed using 75-percent funding at least once to develop part or all of systems development. All 53 state agencies have developed systems with some of the automated functions identified for a certification system, an issuance, reconciliation, and reporting system, and a general system standard.

Table 4.1 shows that most of the different certification functions are automated to some extent in the majority of the states. Specifically, 28 of the 37 agencies approved for 75-percent funding have partially or completely automated each of the functions essentially used to determine an applicant's eligibility for program participation. Eight of the 16 agencies receiving 50-percent funding for ADP development are partially or completely automated with regard to the certification functions. Table 4.2 shows that the majority of issuance, reconciliation, and reporting functions are partially or completely automated. Twenty-six of the 37 state agencies developing systems with these types of functional capabilities obtained 75-percent funding, while 9 of the 16 state agencies developing these functions used only the 50-percent level of funding. Finally, table 4.3 shows that most of the state agencies developed systems that are completely or partially capable of performing the majority of the general functions. Thirty-two of the 37 states receiving 75-percent funding automated the general functions, while 11 of the 16 states receiving only 50-percent funding automated general functions.

The state agencies reporting the fewest automated capabilities and having partially automated systems include Montana, the Virgin Islands, and Ohio. Specifically, of the 34 possible functional requirements listed in the USDA model plan regulations, Montana reported that 13 were automated statewide, the Virgin Islands reported that 11 were automated, and Ohio reported that 5 program functions were automated statewide. However, for Ohio many of these functions were automated at the local office level. State agency officials reported that in Ohio, 27 of the 34 program functional standards were automated at the local office level. All three state agencies reported that they were currently planning additional ADP development, which should be implemented in 1989 or 1990.

Table 4.1: Status of Automation With Regard to the Model Plan's Requirements for Certification

State	Determine eligibility	Identify elements that affect eligibility	Provide automatic cutoff	Notify certification unit
Alabama[a]	C	C	C	P
Alaska	C	C	C	C
Arizona[a]	C	C	C	C
Arkansas[a]	C	C	C	P
California[a,b]	N	N	N	N
Colorado	C	P	C	C
Connecticut[a]	P	P	C	P
Delaware[a]	C	P	C	C
District of Columbia[a]	P	P	C	P
Florida[a]	P	P	C	P
Georgia[a]	C	P	C	C
Guam[a]	C	P	C	C
Hawaii	C	C	C	C
Idaho[a]	C	C	C	C
Illinois[a]	P	P	C	C
Indiana[a]	P	P	C	P
Iowa[a]	P	P	C	C
Kansas[a]	C	P	C	C
Kentucky[a]	C	C	C	C
Louisiana[a]	C	C	C	P
Maine[a]	C	C	C	P
Maryland[a]	P	P	C	C
Massachusetts[a]	P	P	C	P
Michigan[a]	P	P	C	P
Minnesota[a,b]	N	N	N	N
Mississippi[a]	C	P	C	C
Missouri[a]	C	C	C	P
Montana[a]	N	N	N	N
Nebraska[a]	C	C	C	C
Nevada[a]	P	C	C	C
New Hampshire	C	C	C	C
New Jersey[a]	C	C	C	C
New Mexico[a]	C	P	C	C
New York[a]	C	C	P	P
North Carolina[a]	C	C	C	P
North Dakota	C	C	C	C

Check for duplicate cases	Meet the IEVS system requirements	Provide mass change capabilities	Identify cases pending action	Calculate or validate benefits	Store household characteristics information	Provide for social security enumeration	Monthly reporting and retrospective budgeting
C	C	C	C	C	C	C	P
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	N	N	C	C	C
C	C	N	N	N	N	C	N
C	C	C	C	C	C	P	C
N	C	C	N	N	P	N	C
C	C	C	P	C	C	C	C
C	C	C	N	N	C	P	P
P	C	C	N	N	P	C	C
C	C	C	C	C	C	C	C
C	C	C	P	C	C	N	C
C	P	C	C	P	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	P	C	C	P
C	C	P	N	P	C	P	P
C	C	C	P	N	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	P	C
C	P	C	P	N	P	C	P
C	C	C	P	C	C	C	N
C	C	C	C	C	C	C	
N	C	N	N	N	P	P	N
C	C	P	C	C	C	C	C
C	C	C	C	P	C	C	P
C	C	N	N	N	C	C	P
C	C	C	C	C	C	C	C
P	P	P	N	C	P	P	P
C	C	C	C	P	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	P	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C

(continued)

State	Determine eligibility	Identify elements that affect eligibility	Provide automatic cutoff	Notify certification unit
Ohio[a b]	N	N	N	N
Oklahoma[a]	C	C	C	C
Oregon[a]	C	C	C	C
Pennsylvania[a]	P	C	C	C
Rhode Island[a]	P	P	C	C
South Carolina[a]	C	C	C	C
South Dakota[a]	C	C	C	C
Tennessee[a]	P	P	C	P
Texas[a]	C	C	C	C
Utah	C	P	C	C
Vermont	C	C	C	C
Virginia[a]	C	P	C	C
Virgin Islands[a b]	P	C	N	N
Washington[a]	P	P	C	C
West Virginia[a]	P	P	C	C
Wisconsin[a]	C	C	C	C
Wyoming	C	C	C	P

Check for duplicate cases	Meet the IEVS system requirements	Provide mass change capabilities	Identify cases pending action	Calculate or validate benefits	Store household characteristics information	Provide for social security enumeration	Monthly reporting and retrospective budgeting
N	P	N	N	N	N	P	N
P	C	C	C	P	C	P	C
C	P	C	C	C	C	C	C
C	C	P	P	P	C	C	C
P	P	C	P	P	C	C	P
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	P	P	C	P	C	C
C	C	C	C	P	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	P	C	N	C	C	C
P	P	C	N	P	C	P	N
C	P	C	P	N	C	C	C
N	C	C	P	P	C	C	C
P	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C

Note: The program functional standards presented here are in abbreviated form. For complete version, see appendix IV.

[a]State is in the process of planning or developing a new system or additional automated system capabilities.

[b]State does not have an automated system that supports the Food Stamp Program statewide.

Legend:
C = Function is completely automated.
P = Function is partially automated.
N = Function is not automated at all.

Table 4.2: Status of Automation With Regard to the Model Plan's Requirements for Issuance, Reconciliation, and Reporting[a]

State	Generate authorizations for benefits	Prevent duplicate HIRs	Allow for under- or over-issuance	Reconciliation of transacted authorization documents	Redemption of more than one authorization document
Alabama[a]	C	C	C	C	N
Alaska	C	C	C	C	C
Arizona[a]	C	C	C	N/A	N/A
Arkansas[a]	C	C	P	N/A	N/A
California[a,b]	C	N	C	C	C
Colorado	P	C	C	N/A	N/A
Connecticut[a]	P	N	C	P	C
Delaware[a]	C	P	C	C	C
District of Columbia[a]	P	C	P	C	C
Florida[a]	C	P	C	N/A	N/A
Georgia[a]	C	C	P	C	C
Guam[a]	C	C	C	C	C
Hawaii	C	C	P	C	C
Idaho[a]	C	P	C	C	C
Illinois[a]	C	C	C	C	N
Indiana[a]	C	C	P	C	C
Iowa[a]	P	P	C	N/A	N/A
Kansas[a]	C	C	C	C	C
Kentucky[a]	C	C	C	C	C
Louisiana[a]	C	C	C	C	C
Maine[a]	C	P	C	N/A	N/A
Maryland[a]	C	C	C	C	C
Massachusetts[a]	C	C	C	C	C
Michigan[a]	C	C	C	C	C
Minnesota[a,b]	P	P	N	N	N
Mississippi[a]	C	C	C	C	C
Missouri[a]	P	C	N	P	N
Montana[a]	N	C	N	N	N
Nebraska[a]	C	C	C	N/A	N/A
Nevada[a]	C	C	C	C	C
New Hampshire[a]	C	C	C	N/A	N/A
New Jersey[a]	C	C	C	C	C
New Mexico[a]	C	P	C	N/A	N/A
New York[a]	C	C	C	C	C
North Carolina[a]	P	C	C	C	C

Generate data to meet fed. reporting requirements	Generate data to meet other reporting requirements	Sample selection for QC reviews	Program-wide reduction and restoration of benefits	Expedited issuance of benefits	Participation history covering 3 years	Cutoff of benefits	Tracking collection of recipient claims
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	P	C	N	C	C	C	C
C	N	C	N	C	C	C	N
C	P	C	C	C	C	C	C
C	P	N	C	C	C	C	N
C	C	C	C	C	C	C	C
P	P	C	C	C	C	C	P
P	P	C	C	P	C	C	P
C	C	P	C	C	C	C	C
C	C	C	C	C	C	C	C
P	P	C	C	C	C	C	P
P	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
P	P	P	P	C	C	C	P
P	C	C	C	C	C	C	C
C	C	C	C	C	C	C	
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	C	C	P	C	C
C	P	C	C	C	C	C	P
C	C	C	C	C	C	P	C
C	C	C	C	C	C	C	C
N	P	C	N	N	P	N	P
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
N	P	C	N	N	N	N	N
C	P	P	C	C	C	C	C
C	P	C	C	C	P	C	C
C	P	C	N	C	C	C	P
C	C	C	C	C	C	C	C
P	P	C	C	C	C	C	C
P	P	C	C	C	C	P	P
P	C	C	N	C	C	C	C

(continued)

State	Generate authorizations for benefits	Prevent duplicate HIRs	Allow for under- or over-issuance	Reconciliation of transacted authorization documents	Redemption of more than one authorization document
North Dakota	C	N/A	C	N/A	N/A
Ohio[a,c]	N	N	N	N	N
Oklahoma[a]	C	P	C	C	C
Oregon[a]	C	C	C	C	C
Pennsylvania[a]	C	C	C	C	C
Rhode Island[a]	C	C	P	C	C
South Carolina[a]	C	C	C	N/A	N/A
South Dakota[a]	C	C	N	C	C
Tennessee[a]	C	C	C	C	C
Texas[a]	C	C	P	C	C
Utah	C	P	C	N/A	N/A
Vermont	C	C	C	N/A	N/A
Virginia[a]	P	C	C	C	C
Virgin Islands[a,b]	N	N	N	N/A	N/A
Washington[a]	C	C	P	C	N
West Virginia[a]	P	N	C	N/A	N/A
Wisconsin[a]	C	C	C	N/A	N/A
Wyoming	C	C	C	N/A	N/A

Generate data to meet fed. reporting requirements	Generate data to meet other reporting requirements	Sample selection for QC reviews	Program-wide reduction and restoration of benefits	Expedited issuance of benefits	Participation history covering 3 years	Cutoff of benefits	Tracking collection of recipient claims
P	C	C	C	C	C	C	C
N	N	P	N	N	N	N	P
C	P	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	C	C	N	C	C	C	P
P	P	P	C	N	P	C	P
C	C	C	C	C	C	C	C
C	C	C	C	C	C	C	C
C	P	C	C	C	C	C	C
C	P	C	C	C	C	C	P
C	C	C	C	C	P	C	C
C	C	C	C	C	C	C	C
P	P	C	C	C	C	C	N
N	P	P	N	N	N	N	C
P	P	C	C	P	C	C	C
P	P	C	C	C	N	C	C
P	C	C	C	C	C	C	C
P	P	C	C	C	C	C	P

Note: The program functional standards presented here are in abbreviated form. For complete version, see Appendix IV.

[a]State is in the process of planning or developing a new system or additional automated system capabilities.

[b]State does not have an automated system that supports the Food Stamp Program statewide.

Legend:
C = Function is completely automated.
P = Function is partially automated.
N = Function is not automated at all.
N/A = Not applicable or no response.

Table 4.3: Status of Automation With Regard to the Model Plan's Requirements for General Standards[a]

State	Timeliness and data quality requirements	Coordinate with federal and state programs
Alabama[a]	C	C
Alaska	C	C
Arizona[a]	C	C
Arkansas[a]	P	C
California[a,b]	P	P
Colorado	C	P
Connecticut[a]	P	N
Delaware[a]	C	C
District of Columbia[a]	P	P
Florida[a]	P	P
Georgia[a]	C	C
Guam[a]	C	C
Hawaii	P	P
Idaho[a]	C	C
Illinois[a]	C	C
Indiana[a]	P	P
Iowa[a]	P	C
Kansas[a]	C	C
Kentucky[a]	C	C
Louisiana[a]	C	C
Maine[a]	P	P
Maryland[a]	P	C
Massachusetts[a]	P	C
Michigan[a]	P	C
Minnesota[a,b]	P	P
Mississippi[a]	C	C
Missouri[a]	C	C
Montana[a]	N	P
Nebraska[a]	C	C
Nevada[a]	C	P
New Hampshire	C	C
New Jersey[a]	C	C
New Mexico[a]	P	C
New York[a]	C	C
North Carolina[a]	C	C
North Dakota	C	C
Ohio[a,b]	N	N

Maintain confidentiality information	Maintain security of automated systems	Implement regulatory and other changes	Generate data for management of information	Support management federal of funds	Routine purging case files	Eventual direct transmission of data
C	C	C	C	C	C	N/A
C	C	C	C	C	C	C
C	C	C	C	C	C	C
C	C	C	C	P	N	N
C	C	P	C	P	P	N/A
C	C	C	C	P	C	N/A
C	C	C	P	P	N	N
C	C	C	C	C	C	C
P	P	C	C	P	N	N
C	C	C	C	P	P	C
C	C	C	C	C	C	C
C	C	C	C	C	C	C
P	P	P	P	P	P	N/A
C	C	C	C	C	C	C
C	C	C	C	C	C	C
C	C	C	P	P	C	P
C	C	P	C	P	C	P
C	C	C	C	C	C	C
C	C	C	C	C	P	N/A
C	C	C	C	C	C	N/A
C	C	C	C	N	C	N/A
C	C	C	C	P	C	C
C	C	C	C	C	C	C
C	C	C	C	P	C	P
C	C	N	P	P	N	N/A
C	C	C	C	C	C	C
C	C	C	C	C	C	N/A
P	P	N	P	P	N	N
C	C	C	C	C	C	C
C	C	C	C	P	C	C
C	C	C	C	C	C	C
C	C	C	C	C	C	C
C	C	C	C	P	C	P
P	C	C	C	C	C	N/A
C	C	C	C	C	C	C
C	C	C	C	C	C	C
N	N	P	N	N	N	N

(continued)

State	Timeliness and data quality requirements	Coordinate with federal and state programs
Oklahoma[a]	C	C
Oregon[a]	C	C
Pennsylvania[a]	P	C
Rhode Island[a]	P	P
South Carolina[a]	C	C
South Dakota[a]	C	C
Tennessee[a]	C	C
Texas[a]	C	C
Utah	C	C
Vermont	C	C
Virginia[a]	C	C
Virgin Islands[a,b]	N	N
Washington[a]	P	C
West Virginia[a]	C	C
Wisconsin[a]	C	C
Wyoming	C	C

Maintain confidentiality information	Maintain security of automated systems	Implement regulatory and other changes	Generate data for management of information	Support management federal of funds	Routine purging case files	Eventual direct transmission of data
C	C	C	C	C	C	N
C	C	C	C	C	C	C
C	C	C	C	C	P	C
C	C	C	C	P	P	N/A
C	C	C	C	P	C	N/A
C	C	C	C	C	C	C
C	C	C	P	C	C	C
C	C	C	C	C	C	P
C	C	C	C	C	C	C
C	C	C	C	C	C	C
C	C	C	C	P	P	C
N	N	N	N	N	N	N
C	C	P	C	C	C	N
C	C	C	C	C	C	P
C	C	C	C	C	C	N/A
C	C	C	C	P	C	C

Note: The program functional standards presented here are in abbreviated form. For complete version, see appendix IV.

[a]State is in the process of planning or developing a new system or additional automated system capabilities.

[b]State does not have an automated system that supports the Food Stamp Program statewide.

Legend:
C = Function is completely automated.
P = Function is partially automated.
N = Function is not automated at all.
N/A = Not applicable or no response.

Funding at 75 Percent Encouraged Development of Automation

Section 129 of the Food Stamp Program Act Amendments of 1980 provides that certain state agencies can obtain 75-percent federal funding to plan, design, develop, or install ADP and information retrieval systems for administering the Food Stamp Program. According to the 1980 House Agriculture Committee report, the increase to 75-percent funding for ADP development was a necessary incentive to encourage states not in the process of computerizing their programs to automate. According to responses to our questionnaires, the increased funding did encourage those states to automate and thus appears to have achieved its objective. In fact, state agencies receiving the 75-percent funding went beyond the originally intended purpose of initial automation efforts and

used the funding to modify, upgrade, and even replace existing automated systems. Furthermore, the 75-percent funding rate had a major impact on the type of automated capabilities developed.

Funding Incentive to Automate Was Important to Most State Agencies

According to the results of our questionnaire, for the majority of the state agencies the increased rate of funding to 75 percent was the most important incentive to automate their Food Stamp Programs. We developed a list of automation incentives, shown in table 4.4, from information obtained from (1) state agency requests to the Service since fiscal year 1981 to develop automated Food Stamp Programs, (2) discussions with Service headquarters and regional officials, and (3) discussions with state agency and local office program administrators in each state we visited. The incentives mentioned most often in our questionnaire principally concerned the rate of federal funding. Because most states' automated systems serve other public assistance programs as well as the Food Stamp Program, the funding incentives included funding from the Service for the Food Stamp Program and the Department of Health and Human Services (HHS) for AFDC and Medicaid Programs.

According to Service headquarters officials, any particular use or availability of the 75-percent rate of federal funding should be considered in the context of the funding incentives provided by other federal agencies such as HHS which is 90-percent. They told us that the 75-percent funding rate provides the Service regions some leverage in encouraging the state agencies to develop systems to meet the needs of the Food Stamp Program. Since the states normally receive 50-percent funding to administer the Food Stamp Program or to develop ADP systems, without the 75-percent funding there would be more incentive to design their automated systems to specifically meet the requirements for the HHS' 90-percent rate of ADP development funding. However, according to state officials in Texas and Kentucky, two of the four states we reviewed that had developed systems since 1981 with only 50-percent funding from the Service, not having the 75-percent funding did not affect their systems' capabilities.

Specifically, 21 state agencies reported that Service funding at the 75-percent level was the most important incentive for automation. According to state and federal regional program officials, the availability of 75-percent funding, along with the projected benefits of automation, helped in getting state legislatures to approve the state's share of ADP development costs. They told us that while benefits attributed to automation may greatly increase the efficiency and effectiveness of the program,

the return is usually several years into the future, and the high initial development costs discourage state approval. As a result, the higher 75-percent federal share of development costs reduced the states' immediate outlay, thus encouraging state support for the automation effort.

Generally state agencies integrate their AFDC Program with the Food Stamp Program through automation. Because of this the second most important incentive in encouraging Food Stamp Program automation was HHS' funding rate of 90 percent to develop automated systems for the AFDC program, according to 20 state agencies. HHS' funding at the 90-percent rate for the operations costs of the AFDC system was also an important incentive in encouraging Food Stamp Program automation, ranking third in our list of incentives. State and Service regional officials told us that over half of the Food Stamp Program households also participate in the AFDC program. As a result, state agencies were encouraged to design systems that would serve both programs if they could charge HHS for 90 percent of the cost to develop and operate the AFDC portion of the system. For these integrated systems, state agencies generally obtained either the normal 50-percent or 75-percent federal funding from the Service to develop the Food Stamp Program portion of the systems.

Table 4.4 shows that the normal 50-percent funding rate provided by the Service for ADP development ranked, along with HHS' funding of automated Medicaid programs, at the bottom of our list of most important incentives. Only seven state agencies reported that the Service's 50-percent funding rate was the most important incentive. However, not all states responding to our questionnaire considered it as an incentive. In fact, 10 state agencies reported that the 50-percent rate was the least important incentive for their program automation. HHS' funding incentives, across the board, for the development and operation of systems to serve the Medicaid program were the least important incentives to Food Stamp Program automation. Although our questionnaire showed that the benefits of automation were extremely important to the majority of the state agencies, it placed third in the ranking of most important incentives to encourage automation. Thus, despite the benefits projected for program automation discussed in chapter 2, access to the increased rate of federal funding played a greater role in encouraging the automation effort.

Table 4.4: Importance Placed on Incentives to Automate the Food Stamp Program Statewide

	No. of state agencies[a]	
	Most important incentive	Least important incentive
Service funding at 75 percent	21	6
Service funding at 50 percent	7	10
Projected benefits of automation[b]	15	1
HHS funding at 90 percent for AFDC ADP development	20	12
HHS funding at 90 percent for AFDC ADP operations	15	11
HHS funding at 90 percent for Medicaid ADP operations	10	28
HHS funding at 75 percent for Medicaid ADP operations	7	28
Other	1	2

[a]The two columns may not add up to the 50 state agencies that reported having statewide automated systems because some states selected more than one incentive for each category.

[b]The projected benefits, as discussed in chapter 2, include reducing program errors, staffing levels, and case processing time.

Seventy-Five Percent Funding Used to Initiate, Upgrade, Modify, or Replace Existing Systems

As discussed in our April 1988 report, the drafters of the funding provision in the 1980 amendments to the Food Stamp Act expected the boost in federal cost-sharing to 75-percent to be a one-time incentive to encourage state agencies not in the process of computerizing their programs to automate.[3] Specifically, section 129 of the Food Stamp Act Amendments of 1980 provides that state agencies can obtain 75-percent federal funding to plan, design, develop, or install ADP and information retrieval systems for administering the Food Stamp Program. The Service, however, approved 75-percent funding to some state agencies, sometimes more than once, to upgrade, modify, or even replace existing automated systems. We concluded that these approvals represented a broader interpretation of the act than the drafters of the 75-percent provision expected as set forth in the legislative history of the act. The Service disagreed with our position that Service policy and approval of some requests differed from what the drafters of the 75-percent provision expected. Given the difference in views, we brought this issue to the attention of the Congress for its consideration and any additional direction it wished to provide. The Congress has not yet given any additional guidance, and the service has continued to approve 75-percent funding to upgrade, modify, and replace existing automated systems.

[3]Food Stamp Program: Progress and Problems in Using 75-Percent Funding for Automation (GAO/RCED-88-58, Apr. 28, 1987).

Table 4.5 shows that 37 state agencies were approved for 75-percent funding and, as of December 1988, the Service had approved more than one request for 29 state agencies for 75-percent funding to automate their programs. In fact, the Service approved from 2 to 11 different requests each for these state agencies at the 75-percent funding rate to upgrade, modify, or replace existing automated systems. Also, only four state agencies, Michigan, Nebraska, North Dakota, and Virginia, reported using the 75-percent funding as the House Agriculture Committee expected, that is, to initiate program automation efforts. The rest of the state agencies reported using the increased funding to improve or replace existing automated systems.

Of the four state agencies receiving 75-percent funding for initial ADP development, one state agency received another approved request to replace an existing system. Thirteen state agencies received approval for requests to modify or upgrade automated systems—six of these states also received approved requests to replace an existing system. Nine additional state agencies obtained approval for 75-percent funding to completely replace existing automated systems. The remaining 11 state agencies receiving 75-percent funding received approval to revise previous requests for planned systems development or additional ADP equipment.

Table 4.5: Purposes of Three Most Recent State Agencies' Requests for 75-Percent Funding

	Purposes of requests				
State agency	**Initial ADP effort**	**Modify/upgrade existing system**	**Completely replace existing system**	**Update/revise previous requests**	**Added ADP equipment**
Alabama		X			
Alaska		X	X		
Arizona			X	X	
Arkansas		X			
Colorado				X	
Connecticut			X		
Hawaii				X	
Idaho				X	
Illinois		X			
Indiana		X			
Iowa		X	X		
Kansas				X	
Louisiana			X		
Maryland				X	X
Michigan	X		X		
Mississippi			X		X
Missouri		X			
Montana			X		
Nebraska	X			X	
Nevada					X
New Jersey				X	
New Mexico				X	
New York		X			
North Dakota	X				
Oklahoma		X	X		
Oregon			X	X	
Pennsylvania		X	X		
Rhode Island			X	X	
South Carolina		X	X		X
South Dakota			X		
Tennessee				X	
Utah				X	
Vermont		X	X		
Virginia	X			X	
Washington				X	
Wisconsin		X			
Wyoming			X	X	
Totals 37 States	**4**	**13**	**16**	**16**	**4**

Legend: X = The Service approved at least one 75-percent funding request for this purpose.

Seventy-Five Percent Funding Had Major Impact on Automated Systems' Capabilities

Responses to our questionnaire showed that the use of 75-percent funding had a significant impact on the capability of the automated systems developed by the state agencies. The 1980 act identified a system warranting 75-percent funding as one that enabled state agencies to more efficiently and effectively administer the Food Stamp Program as defined by USDA regulations. USDA regulations defined such systems as those automated systems that are (1) statewide, (2) integrated with the AFDC program, and (3) designed to have the capability to perform certain functions necessary to process Food Stamp Program cases.

Table 4.6 shows that the majority of the 37 state agencies receiving 75-percent funding reported that the increased rate of funding encouraged them to design systems to meet the requirements listed above. Specifically, 20 of 37 state agencies receiving 75-percent funding reported that the funding has had a great to very great impact on their developing a statewide system. Twenty-eight of the 37 state agencies reported that 75-percent funding had a great to very great impact on their developing a system that was integrated with the AFDC program. And 29 state agencies reported that the 75-percent funding had a great to very great impact on selecting the types of automated functions that they included in their ADP systems.

Table 4.6: Impact of 75-Percent Funding on State Agency Systems' Characteristics

	No. of state agencies				
Characteristics	Very great impact	Great impact	Moderate impact	Some impact	Little or no impact
Use of one automated food stamp system throughout the state	13	7	6	2	9
Integrated with other public assistance programs' automated systems (to include AFDC program)	20	8	6	1	2
Type of automated functions	17	12	5	3	0

While most of the state agencies reported that the 75-percent funding had a major impact on their automated systems, (1) some of the states approved for 75-percent funding did not develop statewide, integrated systems and (2) most of the states receiving 75-percent funding did not design systems to perform all of the requirements listed as part of the model plan (shown in app. IV). Specifically, table 4.7 shows that 24 of the 37 state agencies receiving 75-percent funding reported developing statewide automated systems that were integrated with the AFDC program. Five state agency systems were partially integrated statewide,

while eight state agencies developed systems that served only the Food Stamp Program.

Table 4.7: States' Integration of Automated Food Stamp and AFDC Programs With 75-Percent Funding

Level of integrated system	Number of state agencies
Totally integrated statewide	24
Partially integrated statewide	5
Not integrated at all[a]	8

[a]Includes the Virgin Islands, which does not have a statewide AFDC System.

Table 4.8 shows that the systems approved for 75-percent funding are capable of performing many of the model plan requirements. In fact, as compared to tables 4.1, 4.2, and 4.3, all of the states have developed automated systems that are capable of performing many of the model plan requirements, whether or not they received 75-percent funding. However, as discussed in our April 1988 report, the 75-percent funding made available in fiscal year 1981 was not intended to be used in the same manner as the normal 50-percent funding rate to develop ADP systems. According to the report of the House Agriculture Committee, in which the legislation originated, once an initial automation effort was completed with a one-time funding rate of 75 percent, future development and operation of the automated system could receive Service approval at only 50-percent federal funding.

Table 4.8: Extent of State Agencies' Automation, by Function, With 75-Percent Funding

	Number and status of automated functions											
	Certification				Issuance, reconciliation, and reporting				General			
State agency	C	P	N	N/A	C	P	N	N/A	C	P	N	N/A
Alabama	10	2	•		12	•	1	•	8	•	•	1
Alaska	12	•	•		13	•	•	•	9	•	•	•
Arizona	12	•	•		11	•	•	2	9	•	•	•
Arkansas	9	1	2		8	2	1	2	5	2	2	•
Colorado	10	2	•		9	2	•	2	6	2	•	1
Connecticut	4	4	4		7	3	3	•	3	3	3	•
Hawaii	10	2	•		9	4	•	•	8	•	•	1
Idaho	12	•	•		11	2	•	•	9	•	•	•
Illinois	8	4	•		12	•	1	•	9	•	•	•
Indiana	4	7	1		7	6	•	•	4	5	•	•
Iowa	8	3	1		8	3	•	2	5	4	•	•
Kansas	11	1	•		13	•	•	•	9	•	•	•
Louisiana	11	1	•		13	•	•	•	8	•	•	1
Maryland	5	6	1		11	2	•	•	7	2	•	•
Michigan	9	3	•		13	•	•	•	6	3	•	•
Mississippi	10	2	•		13	•	•	•	9	•	•	•
Missouri	9	3	•		9	2	2	•	8	•	•	1
Montana	4	1	7		2	1	10	•	•	5	4	•
Nebraska	12	•	•		9	2	•	2	9	•	•	•
Nevada	4	7	1		11	2	•	•	7	2	•	•
New Jersey	12	•	•		13	•	•	•	9	•	•	•
New Mexico	11	1	•		8	3	•	2	6	3	•	•
New York	9	3	•		9	4	•	•	7	1	•	1
North Dakota	12	•	•		9	1	•	3	9	•	•	•
Oklahoma	9	3	•		11	2	•	•	8	•	1	•
Oregon	11	1	•		13	•	•	•	9	•	•	•
Pennsylvania	8	4	•		11	1	1	•	7	2	•	•
Rhode Island	5	7	•		6	6	1	•	4	4	•	1
South Carolina	12	•	•		11	•	•	2	7	1	•	1
South Dakota	12	•	•		12	•	1	•	9	•	•	•
Tennessee	6	6	•		12	1	•	•	8	1	•	•
Utah	11	1	•		9	2	•	2	9	•	•	•
Vermont	12	•	•		11	•	•	2	9	•	•	•
Virginia	9	2	1		9	3	1	•	7	2	•	•
Washington	7	4	1		8	4	1	•	6	2	1	•

(continued)

	Number and status of automated functions											
	Certification				Issuance, reconciliation, and reporting				General			
State agency	C	P	N	N/A	C	P	N	N/A	C	P	N	N/A
Wisconsin	11	1	•		10	1	•	2	8	•	•	1
Wyoming	11	1	•		8	3	•	2	8	1	•	•

Legend:
C = Completely automated.
P = Partially automated.
N = Not automated at all.
N/A = Not applicable or no response.

Note: State agencies also may have been funded at the normal 50-percent funding level.

Conclusions

The 75-percent funding provided by Section 129 of the Food Stamp Program Act Amendments of 1980 has served its purpose to encourage Food Stamp Program automation. As intended by the House Agriculture Committee, which originated the 75-percent provision, since fiscal year 1981 all 53 state agencies administering the Food Stamp Program have begun automating their programs. According to the responses to our questionnaire, the increased rate of federal funding provided since fiscal year 1981 to specifically encourage initial ADP development played a major role in Food Stamp Program automation. The majority of 37 state agencies receiving this increased funding rate reported that it was the most important incentive not only to automate, but to develop systems capable of performing on a statewide basis and of serving AFDC Program participants as well. Other than the few state agencies receiving 75-percent funding to initiate first-time program automation efforts, many of the state agencies were approved for 75-percent funding to develop automated capabilities similar to those the Service approved for other state agencies at the 50-percent funding rate. As a result, the 75-percent funding is becoming an incentive to ensure that program needs are considered in continued ADP development, especially in light of higher rates of federal funding offered by other agencies such as HHS to encourage ADP development. However, the drafters of the 75-percent funding provision did not intend for this to be a continuing incentive for ADP development. They expected that once the initial ADP development with the 75-percent funding had been achieved, future ADP development would be at the 50-percent rate of funding.

Recommendation to the Congress

Since all of the state agencies have automated to some extent, thereby accomplishing the objective set forth by the originating committee (the legislation for 75-percent funding), we recommend that the Congress

amend the 1980 Amendments to the Food Stamp Act of 1977 to discontinue the 75-percent level of federal funding to plan, design, develop, and install automatic data processing and information retrieval systems to administer the Food Stamp Program.

Agency and State Comments and Our Evaluation

The Food and Nutrition Service indicated that in the past it has proposed an end to the Food Stamp Act's provisions for 75-percent funding for automation. Nevertheless, the Service continues to disagree with our interpretation of the legislative history on the 75-percent funding provision in the Food Stamp Act Amendments of 1980.

As we explained in the 1988 report, "Food Stamp Program: Progress and Problems in Using 75-Percent Funding for Automation (GAO/RCED-88-58), and in this report, the House Agriculture Committee that originated the increase in ADP funding to 75 percent intended the increase to be an incentive to encourage Food Stamp Program automation. This was expressed in the House Committee Report 96-788 as follows: "The boost in cost-sharing is intended to be a one-shot infusion of Federal funds strictly limited to initial developmental costs assuming the fullest possible computerization consistent with cost effectiveness."

The House Committee Report also explained that at the time, many of the states were computerizing their Food Stamp Programs with the normal 50-percent federal funding. Although this level of funding would continue to be available according to the report, an additional incentive was needed to encourage states that were not computerizing their programs to automate. The Committee believed that the increase in federal funding from 50 to 75 percent was more than enough to encourage the needed automation.

The Service's reference in the House Committee Report 96-788 to the Congress recognizing that 75-percent funding was for any state to upgrade existing automation was taken from the report section that was addressing the exceptions for the first year of the 75-percent funding only. So that states in the process of computerizing the program would not be affected adversely by the October 1, 1980, trigger date for the enhanced funding, the Committee Report noted that such states could also apply for 75-percent funding to complete the system's development. Aside from the fiscal year 1981 exception for states in the process of computerizing their programs to complete development, the Committee specified that the 75-percent funding would not apply to the "ongoing

utilization of ADP equipment, services or systems or to any post-installation modification" due to "changes subsequently made in the food stamp program by virtue of laws or regulations." "Ongoing system utilization or upgrading expenses would continue to be shared at the 50-percent rate...."

As we reported in 1988, the Service has provided 75-percent funding for upgrades or replacements of the complete systems as well as 75-percent funding for upgrades or replacements of systems previously funded at the 50-percent rate of funding. Although as we stated in the previous report, the language of the law permits the broad interpretation and action providing 75-percent funding taken by the Service, we are pleased that the Service has ended the use of 75-percent funding for continuing systems development once a state has achieved a sufficiently high level of automation.

The Service indicates that the results of our survey questionnaire on the status of states' automation "must be interpreted cautiously, rather than boldly" as it states we have done in the report. While the survey questionnaire received extensive pre-testing before we sent it to the state agencies, we realized that states may interpret questions differently—especially when considering such a broad term as "automation." Therefore, in order to avoid arbitrarily restricting any state to one definition of what we or the Service believe automation is or should be, we left that decision to the individual states. We believe that the states are in the best position to determine the extent of automation in their Food Stamp Programs in conformance to their definition of what "automation" is.

The Service indicates that our report makes little distinction regarding the degree to which states reported the automation of program functional requirements. As our report indicates, all 53 of the state agencies have automated at least portions (partially or completely) of their program, of which 50 have automated systems that support their program statewide. Tables 4.1, 4.2, and 4.3 indicate the status of automation—completely, partially, or not automated—with regard to the program functional requirements for each state. Finally, the Service indicated that 70 percent of the 50 states identified in table 4.1, certification functional requirements, were completely automated. With the exception of references to the partially automated systems for Ohio, Florida, Michigan, and California, the Service did not provide additional documentation identifying specific states it considered to the completely

automated. As stated earlier, the extent of determining the level of automation was left to the individual states. As indicated in table 4.1, 28 of the 37 responding state agencies approved for 75-percent funding have partially or completely automated each of the functions critical to determine program eligibility. Eight of the 16 responding state agencies receiving 50-percent funding for ADP development are partially or completely automated with regard to the certification functions. Thus we believe the report makes the necessary distinction regarding the degree to which states reported the functional requirements as being automated.

The State of Vermont indicates that it objects to our recommendation asking the Congress to discontinue the 75-percent federal funding because the law and regulations require states to automate. While the requirement to automate exists, it pertains to all states receiving federal funding at the 50-percent and/or 75-percent level.

Estimating the Effects of Automation on the Operations of State/Local Food Stamp Programs

Using multiple regression analysis, we tried to isolate the effects of automation on various measures of food stamp program operations, such as issuance error rates, government claims against overissued benefits and collections of those claims, staffing levels, and the proportion of cases processed in a timely manner. Our analysis accounts for a number of explanatory program factors, such as program caseload and policy changes affecting workload, in order not to attribute more effects to automation than are warranted.

We examined the effects of automation using data from four different state/local food stamp program offices, including the states of Vermont and North Dakota, and local offices in Dallas and San Antonio. These four locations do not, however, constitute a representative sample of food stamp programs nationwide. Consequently, the results of our analysis cannot be used to draw inferences about how automation likely affects program measures nationwide. Further, the type of automated system adopted and the characteristics of both the program operation and participants vary among locations.[1] Because our analysis does not control for all unique aspects of the food stamp program at each location, our results are not comparable across locations.

The results also lack comparability across locations because, despite obtaining all available data from these locations, we did not have data on the identical set of program measures and factors for each location. Further, we had relatively few observations (data points) for analysis. One consequence of having few observations is that the chances are reduced of finding statistical significance for a relationship that actually does exist. Therefore, in some cases or locations, our results may understate the effects of automation and other factors on the different program measures. In contrast, the estimated relationships of automation to the various program factors may be misspecified, where important factors are not adequately controlled for in estimating the relationships. This could mean that our results might overstate or understate the effects of automation or other factors on program factors.

In view of these considerations, it is not surprising that the results of our analysis suggest that the effects of automation on the various program measures are different in the various locations. Additionally,

[1]In addition to socioeconomic factors that vary by location, the automated systems may be different in several ways. For example, the systems in Vermont and North Dakota are capable of comparing different pieces of information for consistency, such as age and status as student or retired, whereas the systems in Dallas and San Antonio do not make such comparisons. Also, Vermont and North Dakota feature on-line systems while Dallas and San Antonio have batch systems.

because of data limitations, not all program measures were examined in each location. Specifically, our results suggest automation was statistically significant in contributing to reductions in error rates in North Dakota and to reductions in one category of staffing in both San Antonio and Dallas. We found that automation was not statistically significant in affecting claims, collections, error rates, or staffing in Vermont; the average time spent processing cases in North Dakota; and some categories of staffing or the more timely processing of cases in both Dallas and San Antonio. In two cases, one staffing category for Vermont and a different staffing category for San Antonio, our results suggest that automation is statistically significant in affecting a program measure in a direction that is not consistent with the expected effects of automation.

This appendix provides a discussion of (1) the concepts of program "measures" and "factors," (2) the rationale for the use of our models on program operations, (3) the nature and quality of the data used in the analysis, (4) the estimation methodology, and (5) the estimation results.

Program Measures and Factors

For the purpose of this report, we define a program measure as any measure of program performance or operations that is likely to be affected by the introduction of automation. For example, automation could affect the different measures of issuance error rates and the pursuit of government claims and collections of overissued benefits. Automation also could affect the average time it takes to process a food stamp case or affect the proportion of food stamp cases that are processed in a timely manner. Moreover, since automation is typically considered a labor saving improvement, it might affect program staffing levels.

We define a program factor as any aspect of the program that could affect the different program measures. Automation is only one of many program factors that could affect program measures. Other program factors include caseloads for food stamps, AFDC, and Medicaid (since all three of these programs may be processed by the same eligibility worker), and changes in government policy affecting participant eligibility or program reporting. All program measures, particularly staffing levels, can serve dual roles as program factors. For example, as a program measure, staffing may be altered in response to changes in factors such as automation or caseloads, while as a program factor, staffing changes may affect program measures such as error rates and claims.

Modeling the Role of Automation in Food Stamp Program Operations

In modeling the role of automation in program operations, we assume that all program measures are determined jointly, conditional upon all program factors. Each program measure is represented by an equation, in which the program measure is expressed as a function of some or all of the different program factors. The equations we estimate are properly considered "reduced form" equations in that all program measures are expressed as functions of program factors only, to the extent that no program measures appear on the right-hand side of any equations. This means that any program measure in a dual role as a program factor (determining some other measure) has been replaced (substituted for) in that role as a factor by other program factors.

Nonetheless, staffing, in its role as both a program measure and factor, is treated differently in our model from other program measures that serve dual roles as program factors. Specifically, the model has equations to explain staffing as a program measure, while equations for other measures include staffing as a program factor. Because we assume staffing (in the current year) is determined by the status of program factors in the previous year, staffing is not jointly determined with other program measures, and therefore it can be a program factor in the reduced form equations for other measures.

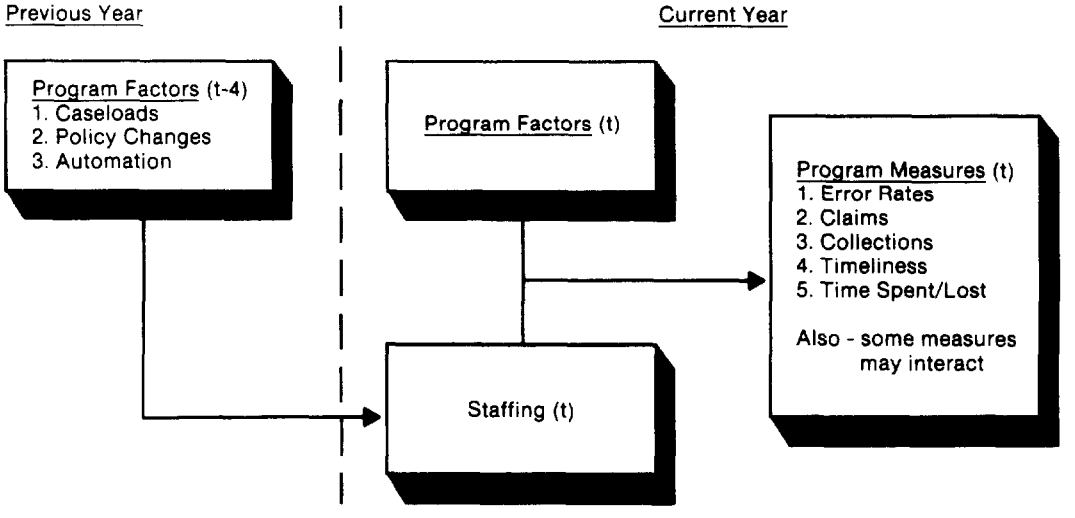
We consider staffing to be determined by program factors in the previous year because current year staffing is primarily dependent on budget decisions made in the previous year. Because reliable budget data were not available, we could not use budget as a factor explaining staffing. Instead, we assumed that previous-year program factors are key determinants of the current year budget and we therefore substituted the previous-year status of program factors for the budget data we had hoped to use.[2]

The relationships over time of the program measures and factors in our model are displayed in figure I.1. It describes, for example, how staffing can be viewed in the current year as both a program measure and factor,

[2]Ideally, the budget (and staffing) for the current year should reflect the current-year status of program factors (automation, caseload, etc.). However, the current-year status of factors cannot be known with certainty during the previous year, when the current-year budget is formulated. Therefore, in the previous year, predictions (expected values) of the status of program factors for the current year must be used to decide on the current-year budget (and staffing). The equations for staffing, then, are based on the assumption that as of the previous year, the best predictors for the current year's status of program factors are the status of those factors in the previous year. We allow one exception to this assumption, however, in that we consider the status of automation in the future to be known with certainty; therefore, as of the previous year, the predicted and actual status of automation for the current year is the same. Thus, our staffing equations show all determining factors as of the previous year except automation, which is shown as of the current year.

because as a measure it is determined by program factors in the previous year.

Figure I.1: Structure of Model of Food Stamp Program Operations



Note: (t) is time in quarters.

Expected Effects of Automation on Various Program Factors

Each program measure is expressed as an equation to show what factors are likely to affect that measure. The estimated parameters of each equation will suggest the direction of each effect. We can use economic reasoning as a basis for developing expectations concerning the direction of an effect, and then evaluate the estimation results with regard to their consistency with these expectations.

Economic reasoning suggests that program measures should improve, e.g., issuance error rates fall, when program-related resources, such as staffing and automation, are enhanced. Similarly, program measures should worsen when demands on program resources, such as caseload, are enhanced. Accordingly, an increase in food stamp program caseload is likely to result in an increase in issuance error rates, given that all else, including staffing, remains unchanged. Thus, food stamp program caseload is likely to be positively related to program error rates. This

and other expected relationships based on economic reasoning are summarized in table I.1.

Table I.1: Expectations of Automation and Other Key Factors Affecting Efficiency Measures

	Key factors					
	Automation		Caseload			
Equation/program measure	Development[a]	Operation[a]	Food stamps	AFDC/ Medicaid	Staffing, all	Policy changes[b]
Error rates	+[c]	−[c]	+	+	−	+/−[d]
Claims	−	+	+/−	+/−	+	+/−
Collections	−	+	+/−	+/−	+	+/−
Timeliness (percent cases processed on time)	−	+	−	−	+	−
Average time spent processing each case	+	−	−	−	+	+
Staffing	+/−	−	+	+	N/A	+

[a]We anticipate the development phase of automation will affect program measures in the opposite direction of automation during the operation phase. This is because the development phase represents a period when the normal activity of program resources is disrupted because of training and other requirements in developing the automated system.

[b]Two policy changes, monthly reporting and computer matching, are accounted for in the model. Both are intended to positively affect program measures (error rates, claims), but they also may increase workload and that may negatively affect these measures.

[c]A plus indicates a positive relationship, meaning an increase (decrease) in the value of a factor should result in an increase (decrease) in the value of the measure. A minus indicates a negative relationship, meaning an increase (decrease) in the value of a factor results in a decrease (increase) in the value of the measure.

[d]A plus/minus indicates that the factor may have opposing effects on the program measure. For example, the factor "food stamp caseload" may be positively related to the measure "claims" because more cases implies more opportunities that can result in a claim, and therefore more claims; or food stamp caseload may be negatively related to claims because more cases implies less time that the staff can spend pursuing claims, and therefore fewer claims.

N/A means not applicable.

Nature of the Data Used in the Empirical Analysis

Appendix II presents a description of the Food Stamp Program automated systems for each of the seven states/local offices we reviewed. Although we collected data from all seven locations, only the four locations of Vermont, North Dakota, Dallas, and San Antonio were able to provide data sufficient to allow us to empirically estimate the effects of automation on different program measures.

Data for each of the four locations consist of quarterly observations extending (on average) from about 1982 to mid-1987. We did not obtain data on all measures and factors for each location. However, we did obtain data on three different measures of error rates for Vermont and

North Dakota and on more than one category of staffing for Vermont, Dallas, and San Antonio.

For two program measures/factors (variables), error rates and staffing, only annual observations were available. We transformed annual observations to quarterly by assigning the value of each annual observation to all four quarters in the corresponding year, and then calculating a five-quarter (centered) moving average to replace the annual observations. Transforming the annual data to quarterly observations was necessary to obtain sufficient observations to estimate the parameters of the equations. Nonetheless, in reality, we have only about six observations for these "transformed" variables. Table I.2 lists all of the variables used in the estimation of the different equations.

Table I.2 List of Variables Used in Empirical Analysis

1. Caseload Variables

All locations:
FSCASE= Number of food stamp cases per quarter.
AFDCCASE= Number of AFDC cases per quarter.
MEDCCASE= Number of Medicaid cases per quarter.
AFMED=Number of AFDC + Medicaid cases per quarter.

2. Staffing Variables

Vermont:
INTKSPEC= Number of intake specialists.
REVSPEC= Number of review specialists.

Dallas and San Antonio:
SUPERV= Number of supervisors.
ELGWORK= Number of eligibility workers.
CLERK= Number of clerks.

3. Program Operations Measures Variables

Error Rates*, Vermont and North Dakota:
LISSERR= State estimated issue error rate.
LFISSERR= Federally estimated issue error rates for state.
LCASERR= State estimated case error rate.
* These error rates are positively related to "more" errors.

Claims and Collections, Vermont:
CLAIMS= Government claims for over-issuance of food stamps, in constant (1982) dollars.
COLLECTIONS= Government collection of CLAIMS, in constant (1982) dollars.

Average Minutes per case, North Dakota:
MINFSCAS= Number of staff minutes devoted to food stamp cases per nonpublic assistance case (FSCASE).

Timeliness of Eligibility Determination, Dallas and San Antonio:
LCAT6TIM= Timeliness in terms of the proportion of eligibility determinations completed within the thirty-day time period established by federal and state program regulations (category 6 on the form), where the estimates are positively related to determinations being more timely.

4. Other Variables

North Dakota, Dallas and San Antonio:
POLY1= Dummy variable equal to 1 beginning when compliance with federally mandated monthly reporting started, and zero prior to that time.[a]

Vermont:
POLY1= Variable equal to the number of food stamp cases subject to federally mandated monthly reporting, since cases were phased in over time.
POLY2= Dummy variable equal to 1 beginning when compliance with Vermont mandated computer matching of case files across human service agencies started, and zero prior to that time.

San Antonio:
DCAT6CAT9= Dummy variable to account for period during which manner of accumulating timeliness data changed, equal to 1 in FYs 1985-86, zero otherwise.

(continued)

5. Automation Variables

All locations have both automation development (AUTODEV) and automation operations (AUTOOP) which are dummy variables that take on the value of 1 during the developmental and operational phases of the automation, respectively, and zero otherwise. The developmental phase of automation is that period when, according to the food stamp program officials at each location, the normal duties of the program staff were affected (interrupted) by training and other tasks associated with making the automated system operational. Often the developmental period overlaps with the beginning of the operational period. These specific periods are listed below (by fiscal year and by quarter) for each location.

Dallas:
AUTODEV 84.3 - 85.4
AUTOOP 86.1 - ON

San Antonio:
AUTODEV 83.3 - 83.4
AUTOOP 83.4 - ON

North Dakota:
AUTODEV 84.1 - 85.1
AUTOOP 85.1 - ON

Vermont:
AUTODEV 84.1 - 84.4
AUTOOP 84.1 - ON

Claims and Collections only:
AUTODEV 85.2 - 85.2
AUTOOP 85.3 - ON

[a]Dummy variables are used to represent the changing status of a factor which, perhaps for lack of data, cannot be quantified.

Estimation Methodology

We estimated the different equations using ordinary least squares.[3] This and other regression methods of analysis are designed to isolate the effects of automation on the different measures of program operations while simultaneously controlling for the possible influence of other program-related factors on these same program measures. In principle, this kind of analysis minimizes the probability of attributing changes in program measures to automation when in fact they may have been caused by other program-related factors.

All equations are assumed linear in functional form. In those models in which the program measure (dependent variable) is expressed as a percentage, including all measures of issuance error rates and timeliness rates, it is appropriate from a theoretical (statistical) standpoint to transform the dependent variable so that it is not constrained to lie

[3]Since we assume the different program measures, for each location, are jointly determined, a simultaneous estimation technique would seem appropriate. However, simultaneous estimation improves results only if there are many observations, and since we had relatively few observations, ordinary least squares was the best technique to use in this case.

between 0 and 1 (or 100 percent). This was done using the standard logit transformation.[4] As a check on the correctness of the logit transformation, we also estimated these equations without the logit transformation, and the results were, as expected, similar to those with the logit transformation.

Estimation Results

As discussed in chapter 2, the estimation results suggest that in some, but not all, offices we examined, automation has affected the various program measures in accordance with expectations based on economic reasoning. Nonetheless, according to Food Stamp Program officials at all four locations, many improvements in program measures, such as lower error rates, have occurred as a result of automation, but have remained unseen, or have been negated, because of the onset of many policy changes during the operation period of automation. Although we include at least one program factor in each equation to control for the effects of the major policy changes, to the extent that these variables do not adequately account for the effects of all policy changes, our results can understate the effects of automation on the different program measures.

Estimation results are presented in tables I.3 through I.11. For each equation (program measure) estimated, the tables show all program factors included in the equation, the estimated parameter for each factor and the associated t-statistic. The t-statistic is used to test the hypothesis that the estimated parameter is different from zero, or that the program factor significantly affects the program measure (dependent variable) of the equation.

For each equation, the results tables also show the sample period, in quarters, and the R-Square. The R-Square measures the goodness of fit or, more specifically, the proportion of the variation in the dependent variable (program measure) that is explained by the estimated equation (the different program factors).

[4]The standard logit transformation for some percentage P = log(P/(1-P)), and the corresponding variance of this term V = n/r(n-r), where n is the number of observations (e.g., cases sampled) and r is the number of observations in which one of two alternatives occurs (e.g., a case either is found in error or it is not). When using a logit transformed dependent variable, heteroskedasticity (violation of the assumption that the estimated residuals have constant variance) is a concern but can be corrected by weighting all data by the inverse of the variance of the (logit transformed) dependent variable. Consequently, the results presented in tables I.3, I.6, I.8, and I.10, all of which are for logit equations, are based on weighted data.

Estimation Results: Vermont

Data available on program measures for Vermont include three different measures of error rates, measures of claims and collections, and two categories of staffing. The three measures of error rates include the state-determined case and issue error rates, and a federally determined issue error rate. The two categories of staffing are intake and review specialists. We estimated equations to explain each of these program measures in terms of other program-related factors.

Error Rate Equations

We present estimation results for the three error rate equations in table I.3. The operational phase of automation is not a significant factor in reducing error rates according to the results for the state-measured case and issue error rates, equations 1 and 2. In equation 3, for federally measured issue error rates, automation does appear significant and consistent with expectations. However, as discussed in the table, there is reason to believe equation 3 results are misleading.

Table I.3: Vermont Estimation Results—Error Rates

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
1. LCASERR(t)			
	CONSTANT	−5.41	−.92
	FSCASE(t)	.00002	2.13[a]
	AFDCCASE(t)	−.000003	−.17
	MEDCCASE(t)	.000003	.23
R-SQUARE=.92	INTKSPEC(t)	−.0016	−.03
	REVSPEC(t)	.032	.54
	POLY1(t)	.00004	.68
	POLY2(t)	.0017	.02
sample: 81.3-87.2	AUTODEV(t)	.2228	3.01[a]
	AUTOOPER(t)	−.14	−1.26
2. LISSERR(t)			
	CONSTANT	−1.27	−.25
	FSCASE(t)	−.00001	−1.67[b]
	AFDCCASE(t)	.00001	.41
	MEDCCASE(t)	.00002	2.03[a]
R-SQUARE=.94	INTKSPEC(t)	−.049	−1.17
	REVSPEC(t)	−.0086	−.16
	POLY1(t)	−.00003	.64
	POLY2(t)	−.053	−.55
sample: 81.3-87.2	AUTODEV(t)	.159	2.39[a]
	AUTOOPER(t)	−.03	−.32
3. LFISSERR(t)			
	CONSTANT	8.65	2.72[a]
	FSCASE(t)	.00004	9.24[a]
	AFDCCASE(t)	.00001	1.34[b]
	MEDCCASE(t)	−.00002	−3.08[a]
R-SQUARE=.99	INTKSPEC(t)	.013	.51
	REVSPEC(t)	−.14	−4.36[a]
	POLY1(t)	.000006	.19
	POLY2(t)	−.073	−1.20
sample: 81.3-87.2	AUTODEV(t)	.096	2.15[a]
	AUTOOPER(t)	−.252	−4.14[a]

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

The results for equation 1, the state-measured case error rate, show that two program factors, food stamp caseload and the development phase of

automation, are significant in affecting the case error rate. For both factors, the direction of their effect on the case error rate is consistent with expectations. Specifically, food stamp caseload is positively related to the error rate, which suggests that more cases, all else including staff held constant, will result in greater error rates. The development phase of automation is also positively related to the error rate, suggesting that development is disruptive and may, even if only temporarily, result in increasing error rates. Although the operation phase of automation is not a statistically significant factor, at least it is nearly significant and negatively related to error rates, which is consistent with the expectation that automation results in lower error rates, all else equal.

The results for equation 2, the state-measured issue error rate, are somewhat consistent with those for equation 1. Program factors that significantly affect the issue error rate include both food stamp and Medicaid caseloads, and the development phase of automation. For all significant factors, with the exception of the food stamp caseload, the direction of their effect on the issue error rate is consistent with expectations. Specifically, Medicaid caseload is positively related to the issue error rate, suggesting that more cases, for a given staff, result in greater error rates. The development phase of automation is positively related to issue error rates, suggesting that development is disruptive and will result in greater error rates. The operation phase of automation is not significant, but the direction of its effect on issue error rates is consistent with the expectation that automation reduces error rates.

We expected that equation 3 results, for the federally measured issue error rate, would be comparable to those of equation 2, for the comparable state measure of the issue error rate. The results for equations 2 and 3 are, however, appreciably different in both the significance and direction of effects for some program factors. In particular, the operation phase of automation is not significant in equation 2, but is significant in equation 3 and suggests that automation results in lowering error rates, which is consistent with expectations. This difference in results likely reflects a substantial difference in the state and federal estimates of issue error rates for a period of time just prior to the operation phase of automation. The different estimates of issue error rates occurred because of a disagreement between Vermont and the Food and Nutrition Service officials on a rule interpretation for determining benefits. Since the state issue error rate reflects the rule interpretation understood by the state caseworkers, it is the more appropriate measure for our analysis. Therefore we believe equation 2 results are more accurate than those of equation 3.

Claims and Collections Equations

The results for the claims and collections equations are presented in table I.4. The results suggest that automation (operation phase) has not significantly affected claims or collections.

The results for equation 4, government claims for overissued food stamp program benefits, suggest that the estimated parameter for only the policy change requiring computer matches of case files, POLY2, is significant in affecting claims. Since POLY2 is negative, the results indicate that this policy change has led to a decrease in claims. Computer matching can result in fewer claims because it means more frequent monitoring of changes in each participant's income status, which often is the reason for an issue error.

Equation 5 results, government collections of claims, should be reasonably consistent with the results for equation 4 since claims and collections are clearly related. However, there are some differences in the results for 4 and 5, including that POLY2 is no longer significant and that review specialists are significant. The parameter for review specialists is positive, which is consistent with our expectation that collections should increase with additions to staff levels.

The results for 5 suggest that only review specialists and the development phase of automation are significant factors affecting collections. Review specialists are positively related to collections, which is consistent with expectations that additions to staff should result in more collections, all else equal. The development phase of automation also is positively related to collections. This is not consistent with expectations that development is disruptive to both claims and collection efforts of the staff.

Table I.4: Vermont Estimation Results—Claims and Collections

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
4. CLAIMS(t)			
	CONSTANT	−173939	−.21
	FSCASE(t)	−.30	−.19
	AFDCCASE(t)	−3.82	−1.00
	MEDCCASE(t)	−2.05	−1.26
R-SQUARE=.79	INTKSPEC(t)	701	.09
	REVSPEC(t)	6548	.83
	POLY1(t)	11.15	1.08
	POLY2(t)	−48080	−2.04[a]
	AUTODEV(t)	−9331	−.48
sample: 81.3-87.2	AUTOOPER(t)	5622	.28
5. COLLECTIONS(t)			
	CONSTANT	−452388	−1.90[a]
	FSCASE(t)	.28	.65
	AFDCCASE(t)	−2.21	−2.03[a]
	MEDCCASE(t)	−.68	−1.48
R-SQUARE=.83	INTKSPEC(t)	2760	1.21
	REVSPEC(t)	5403	2.42[a]
	POLY1(t)	−.52	−.18
	POLY2(t)	−5309	−.80
sample: 81.3-87.2	AUTODEV(t)	10006	1.84[a]
	AUTOOPER(t)	−616	−.11

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

Staffing Equations

We present results for the staffing equations in table I.5. The results suggest that the operation phase of automation is not significantly related to intake specialists, but is significantly and positively related to review specialists, which is not consistent with expectations that automation should lead to a reduction in staff, all else equal.

Equation 6 results, for intake specialists, suggest that food stamp caseload and the development phase of automation are significant factors affecting the number of intake specialists. Food stamp caseload is negatively related to intake specialists, suggesting that as caseload increases the number of intake specialists declines. This is not consistent with expectations that greater caseload should lead to larger staff levels. The development phase of automation is positively related to intake specialists, which is consistent with expectations that development is disruptive and may require additional staff.

Equation 7 results, for review specialists, suggest that the operation phase of automation is the only significant factor affecting review specialists. The operation phase of automation is positively related to the number of review specialists, suggesting that automation resulted in increasing the review staff, which is not consistent with expectations.

Table I.5: Vermont Estimation Results—Staffing

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
6. INTKSPEC(t)			
	CONSTANT	74.12	10.05[a]
	FSCASE(t-4)	−.0002	−1.41[b]
	AFDCCASE(t-4)	−.0001	−.46
	MEDCCASE(t-4)	−.0001	−1.17
R-SQUARE=.83	POLY1(t-4)	.0001	.30
	POLY2(t-4)	.592	.79
	AUTODEV(t)	1.430	2.07[a]
	AUTOOPER(t)	−.501	−.41
sample: 82.1-87.2			
7. REVSPEC(t)			
	CONSTANT	76.2	20.33[a]
	FSCASE(t-4)	.00006	.89
	AFDCCASE(t-4)	−.00007	−.95
	MEDCCASE(t-4)	.00004	1.14
R-SQUARE=.72	POLY1(t-4)	.00006	.27
	POLY2(t-4)	.03	.09
	AUTODEV(t)	−.13	−.36
	AUTOOPER(t)	.87	1.39[b]
sample: 82.1-87.2			

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Estimation Results: North Dakota

Data on program measures for North Dakota include the same three different measures of error rates used for Vermont, and a variable measuring the average time spent in processing a food stamp case. An equation for each of these program measures was estimated. There were not sufficient data on staffing in North Dakota to explicitly include it as a program factor in any equation. However, a state official described staffing levels as constant over our sample period, so the effects of staffing, along with other unknown factors, are represented by the constant term and/or subsumed in the error term in each equation estimated.

Error Rate Equations

Table I.6 presents the estimation results for the three error rate equations. The results for the state-determined case and issue error rates, equations 1 and 2, suggest that the operation phase of automation has led to statistically significant reductions in those two error rates. Equation 3 results, for the federally determined issue error rate, suggest that automation has not had a significant effect on issue error rates.

The results for equation 1 suggest that, in addition to the operation phase of automation, both food stamp and AFDC caseloads and the policy change to monthly reporting are all significant factors affecting the case error rate. AFDC caseload is positively related to case error rate, and that is consistent with expectations that more cases per staff should result in less time processing each case and, therefore, greater error rates. Food stamp caseload is negatively related to case error rate. This result is not consistent with expectations or the results for AFDC caseload, although it has been argued that the staff can become more proficient in processing cases when caseload increases. The policy change to monthly reporting is negatively related to the case error rate. This is consistent with the purpose of monthly reporting, that it should result in fewer case errors, although monthly reporting also increases the workload of the staff and that could result in more case errors.

Equation 2 results suggest that, in addition to the operation phase of automation, the development phase of automation and the food stamp caseload are significant factors affecting the issue error rate. The development phase of automation is positively related to the issue error rate, and that is consistent with expectations that development is disruptive to normal operations. As in equation 1, the food stamp caseload is negatively related to the error rate, and that is not consistent with expectations.

The results for equation 3, the federally determined issue error rate, are the same in sign and similar, though not identical, in significance for all factors, including automation, from the results for equation 2, the comparable state-determined issue error rate. Since these two measures of the issue error rate are reasonably close over time, we can only point to the greater frequency of observation in the earlier periods of the sample for the state-determined rate as the reason for the small differences in results for equations 2 and 3.

Table I.6: North Dakota Estimation Results—Error Rates

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
1. LCASERR(t)			
	CONSTANT	−.75	−1.64[b]
	FSCASE(t)	−.000020	−1.72[b]
	AFDCCASE(t)	.00002	2.74[a]
	MEDCCASE(t)	−.00001	−.82
R-SQUARE=.93	POLY1(t)	−.21	−1.89[a]
	AUTODEV(t)	.0477	.56
sample: 81.3-87.1	AUTOOPER(t)	−.1614	−1.85[a]
2. LISSERR(t)			
	CONSTANT	−.69	−.81
	FSCASE(t)	−.00004	−1.85[a]
	AFDCCASE(t)	.00002	1.09
	MEDCCASE(t)	−.00003	−1.07
R-SQUARE=.91	POLY1(t)	−.197	−1.02
	AUTODEV(t)	.21956	1.47[b]
sample: 81.3-87.1	AUTOOPER(t)	−.22879	−1.56[b]
3. LFISSERR(t)			
	CONSTANT	−.06	−.12
	FSCASE(t)	−.00002	−1.43[b]
	AFDCCASE(t)	−.000	−.03
	MEDCCASE(t)	−.00007	−3.73[a]
R-SQUARE=.96	POLY1(t)	−.039	−.31
	AUTODEV(t)	.164	1.59[b]
sample: 81.3-87.1	AUTOOPER(t)	−.112	−1.16

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Minutes of Staff Time Per Case Equation

Table I.7 presents results for the program measure of average time spent processing nonpublic assistance food stamp cases. The results suggest that the operation phase of automation has not had the expected effect of reducing time spent per case. A North Dakota state official provided two possible explanations for this result. First, automation has been of most help in saving time for upper management, and our data on time spent account only for the time of caseworkers and not that of upper management. Second, time spent per case has risen during the operation phase of automation because of numerous policy changes; therefore, if we do not adequately control for the effects of policy changes (and it is possible we do not), we may understate the contribution of automation to reducing the average time spent processing cases.

The results for equation 4 suggest that both the development and operation phase of automation are contrary in sign to expectations and not significant. However, both the AFDC caseload and the policy change to monthly reporting are significant and consistent with expectations. Specifically, AFDC caseload is negatively related to average minutes, all else equal, which is consistent with the simple fact that a given caseworker with more cases to process must spend less time per case to complete the task. The policy change of monthly reporting is positively related to average minutes, which suggests monthly reporting takes more time per case.

Table I.7: North Dakota Estimation Results—Minutes of Staff Time Spent Per Food Stamp Case

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
4. MINFSCAS(t)			
	CONSTANT	43.7	1.18
	FSCASE(t)	−.001	−.84
	AFDCCASE(t)	−.002	−2.32[a]
R-SQUARE=.86	MEDCCASE(t)	.001	1.03
	POLY1(t)	18.05	1.88[a]
	AUTODEV(t)	−5.72	−.76
sample: 82.4-87.1	AUTOOPER(t)	3.62	.45

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

Estimation Results: San Antonio

Data available on program measures for San Antonio included a measure of timeliness of eligibility determination and three categories of staffing: supervisors, eligibility workers, and clerks. Equations to explain each of these program measures were estimated.

Timeliness

Table I.8 presents the estimation results for the timeliness equation. Timeliness measures the proportion of cases processed within the 30-day time constraint established by federal and state program regulations; therefore, a positive value added to a given measure of timeliness indicates that more cases are processed on time and would be considered an improvement in this program measure. Automation in the operation phase is negatively related to timeliness, and not significant, which is not consistent with expectations that automation should improve the timely processing of cases. A possible explanation for this result, provided by an official at the San Antonio office, is that prior to automation the caseworkers specialized on only one type of case, either food stamps or AFDC/Medicaid. Beginning with the operation phase of automation, however, caseworkers were considered generic, meaning they were

expected to handle any type of case. Since the generic worker must invest more time to understand several programs rather than just one, the switch to generic workers, at the time automation became operational, may have been responsible for a reduction in timeliness. Therefore, the operation phase of automation factor may be capturing the effect of both automation (expected positive relationship) and the switch to generic workers (expected negative relationship), to the extent that the combination of both effects may negate the apparent statistical significance of either.

The other estimated relationships are mostly consistent with expectations and many are significant. Specifically, the food stamp caseload and the AFDC/Medicaid caseload are not significant. All three staffing variables are significant, and two of the three staffing variables, supervisors and clerks, are positively related to timeliness, suggesting that more workers improve the timely processing of cases. The dummy variable, DCAT6CAT9, simply reflects the consequences of a change in the manner in which timeliness was measured. Finally, the policy change to monthly reporting is positive and significant, suggesting that timeliness was improved because of monthly reporting, which is not consistent with our expectations.

Table I.8: San Antonio Estimation Results—Timeliness in Processing Food Stamp Cases

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
1. LCAT6TIM(t)			
	CONSTANT	5.94	4.20[a]
	FSCASE(t)	−.0001	−1.29
	AFMED(t)	.0002	.97
	SUPERV(t)	.6687	2.90[a]
R-SQUARE = .81	ELGWORK(t)	−.3958	−2.60[a]
	CLERK(t)	.2457	1.49[b]
	DCAT6CAT9(t)	−1.36	−4.99[a]
	POLY1(t)	2.35	1.92[a]
sample: 82.1-87.2	AUTODEV(t)	.69	.73
	AUTOOPER(t)	−.48	−.64

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Staffing Equations

Table I.9 presents the estimation results for the three staffing equations. In all three equations, automation in the operation phase is negatively

related to staffing, which is consistent with expectations that automation should permit reductions in staff, all else equal. However, only in equation 3, for clerks, is the relationship significant. These results are consistent with an explanation provided by a San Antonio program official, who stated that so far only clerks have been affected by automation since supervisors and eligibility workers have been understaffed (even with automation) for some time.

Other significant relationships include AFDC/Medicaid caseload, in all three equations, and the policy change to monthly reporting, in equations 1 and 2 only. The AFDC/Medicaid caseload variable is positively related to staffing in all three equations, which suggests that greater caseloads lead to more staffing, and that is consistent with our expectations. However, the policy change to monthly reporting is negatively related to staffing, which suggests that monthly reporting is responsible for reductions in staff levels, all else equal, and that is not consistent with expectations.

Table I.9: San Antonio Estimation Results—Staffing

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
2. SUPERV(t)			
	CONSTANT	3.59	2.63[a]
	FSCASE(t-4)	−.00001	−.12
	AFMED(t-4)	.00029	2.71[a]
R-SQUARE=.63	POLY1(t-4)	−.906	−2.55[a]
	AUTODEV(t)	.2468	.53
	AUTOOPER(t)	−.3880	−.81
sample: 83.1-87.2			
3. ELGWORK(t)			
	CONSTANT	28.61	5.78[a]
	FSCASE(t-4)	−.00008	−.25
	AFMED(t-4)	.0026	6.62[a]
R-SQUARE=.89	POLY1(t-4)	−2.014	−1.56[b]
	AUTODEV(t)	.106	.06
	AUTOOPER(t)	−1.045	−.60
sample: 83.1-87.2			
4. CLERK(t)			
	CONSTANT	26.34	3.90[a]
	FSCASE(t-4)	−.0005	−1.16
	AFMED(t-4)	.0031	5.84[a]
R-SQUARE=.87	POLY1(t-4)	1.686	.96
	AUTODEV(t)	−.41	−.18
	AUTOOPER(t)	−6.719	−2.83[a]
sample: 83.1-87.2			

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Estimation Results: Dallas

Data available on program measures for Dallas included a measure of timeliness of eligibility determination and three categories of staffing: supervisors, eligibility workers, and clerks. Equations to explain each of these program measures were estimated.

Timeliness

Table I.10 presents the estimation results for the timeliness equation. Similar to the results for the same equation for San Antonio, automation in the operation phase is negatively related to timeliness and not significant, which is not consistent with expectations that automation should improve the timely processing of cases. The possible explanation for this result, discussed above for San Antonio, applies here as well—that the

switch to generic workers at the time automation became operational may cause our results to be misleading as to the true effect of automation on timeliness.

Most of the other estimated relationships are significant and consistent with expectations. One exception is the staffing category of eligibility workers, which is significant but negatively related to timeliness. This result suggests, contrary to expectations, that additional staff reduces timeliness. However, the staffing category of supervisors is positively related to timeliness, which is consistent with the expectation that additional staff enhances timeliness. Both AFDC/Medicaid caseloads and the development phase of automation are significant and negatively related to timeliness, and that is consistent with expectations that both additions to caseload and the disruptive nature of development should reduce the proportion of cases processed on time.

Table I.10: Dallas Estimation Results—Timeliness in Processing Food Stamp Cases

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
1. LCAT6TIM(t)			
	CONSTANT	13.16	3.54[a]
	FSCASE(t)	−.00008	−.96
	AFMED(t)	−.0004	−2.02[a]
	SUPERV(t)	.2787	1.52[b]
	ELGWORK(t)	−.2160	−1.87[a]
	CLERK(t)	−.1220	−1.14
R-SQUARE=.68	POLY1(t)	−.681	−.86
	AUTODEV(t)	−.958	−1.33[b]
	AUTOOPER(t)	−.3091	−.40
sample: 82.1-87.2			

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Staffing Equations

Table I.11 presents the estimation results for the three staffing equations. Only in equation 3, for eligibility workers, is automation in the operation phase both significant and negatively related to staffing, which is consistent with our expectation that automation should permit reductions in staff, all else equal.

In general, the results presented in table I.11 are mostly inconsistent with expectations, and equation 4, clerks, has a very poor fit (low R-Square). Besides automation in equation 3, only one other estimated

relationship in table I.11, the policy change of monthly reporting in equation 2, is both statistically significant and consistent with expectations. These results for the Dallas staffing equations may be a consequence of the fact that our data for Dallas actually reflect several suboffices. These several suboffices were merged into one office during the sample period, and this may mean that the nature of the operation and the staffing requirements were affected by these mergers during our sample period.

Table I.11: Dallas Estimation Results—Staffing

Equation/dependent variable	Independent variables	Parameter estimate	t-Statistic
2. SUPERV(t)			
	CONSTANT	6.17	5.54[a]
	FSCASE(t-4)	−.00003	−.54
	AFMED(t-4)	−.0001	−.45
	POLY1(t-4)	1.01	3.15[a]
R-SQUARE=.83	AUTODEV(t)	.162	.59
	AUTOOPER(t)	.187	.50
sample: 83.1-87.2			
3. ELGWORK(t)			
	CONSTANT	31.66	5.83[a]
	FSCASE(t-4)	−.00003	−.11
	AFMED(t-4)	.0009	1.03
R-SQUARE=.90	POLY1(t-4)	−1.66	−1.06
	AUTODEV(t)	−7.002	−5.20[a]
sample: 83.1-87.2	AUTOOPER(t)	−6.220	−3.42[a]
4. CLERK(t)			
	CONSTANT	32.19	7.92[a]
	FSCASE(t-4)	.00004	.18
	AFMED(t-4)	−.0006	−.94
R-SQUARE=.44	POLY1(t-4)	−3.27	−2.79[a]
	AUTODEV(t)	1.448	1.44[b]
	AUTOOPER(t)	3.624	2.66[a]
sample: 83.1-87.2			

[a]The coefficient is significantly different from zero (plus or minus) at a 90 percent confidence level.

[b]The coefficient is significantly different from zero (plus or minus) at an 80 percent confidence level.

Description of the Automated Food Stamp Programs GAO Reviewed

Following are brief descriptions of the automated Food Stamp Program systems developed and operated by the state agencies of Vermont, North Dakota, Kentucky, Texas, and California.

Vermont State Agency

Background

Vermont's request for federal funding described an automated system called "ACCESS" as an on-line computer system for administering social welfare programs. Using a fully integrated data base, the system, developed for the most part in fiscal year 1983, handles data collection, eligibility determination, caseload management, administrative decision support, and child support collections for such welfare programs as the Food Stamp, Aid to Families with Dependent Children, and Child Support Programs. It uses a fully integrated data base to support all functions to offer financial management.

Overview

The system consists of two main components, an on-line component and batch component. The on-line component provides for data entry, editing, and correction; eligibility and notice determination; and data inquiry. The system operates on-line via remote cathode ray tubes in district offices attached to the central site computer with leased lines. The batch component provides periodic functions such as disbursements and reports. The on-line system runs during the normal working hours with minimal operator intervention. It is menu driven. A user signs onto the system and is presented with a menu of functions from which to select. Each function operates in three modes (entry, correction, display) which, for security reasons, users are allowed to use or prohibited from using depending on their functional roles. The batch system runs daily in the evening when the on-line system is not operational. The major batch functions include (1) notices of decision; (2) AFDC checks; (3) food stamp mailing labels, cash out checks, and benefits list; (4) Medicaid cards; (5) interface to other systems (Medicaid claim processing, Social Security Administration, etc.); (6) correction request notices; (7) automatic discontinuation for failure to correct; (8) mailing labels for case reviews; (9) periodic operational reports; and (10) periodic management reports.

The ACCESS intake process is capable of accepting new applicant data and all changes to data. The information collected on the application

form (name, address, date of birth, program applied for and date, social security number, sex) is entered into the system. All raw data necessary for eligibility determination are transmitted into the system in an efficient, integrated operation. Both financial and nonfinancial tests are included. The system prompts the eligibility worker to ensure that all information has been gathered. If it is not entered, error messages will appear in association with the case, and on the worker's daily report.

North Dakota State Agency

Background

On October 1, 1984, the North Dakota Department of Human Services implemented a statewide on-line system to assist with the administration of the public assistance eligibility determination process for applicants. The statewide on-line system is referred to as the Technical Eligibility Computer System (TECS) with capabilities of determining eligibility, calculating benefits for food stamps and AFDC, and providing management with a tool to maintain state-supervised and county-administered welfare programs. The Service approved the state's request for the development of the TEC system for about $1.1 million. The Food Stamp and AFDC Programs are administered by the Department of Food Services, which is within the state's Human Services Department.

Overview

TECS was developed and designed as primarily an on-line system that creates, edits, and updates application, case, and recipient data on a statewide data base. Using on-line data entry techniques, transactions are edited at the terminal and not accepted on the data base until all edits are complete and accurate. TECS also has components that produce notices, listings and case status documents and benefits, and reports on either an on-line or batch process made on a regular cycle for program management purposes.

Specifically, TECS' conceptual design is divided into five major sections : (1) client certification, (2) financial information and control, (3) management information and control, (4) TECS data base, and (5) control requirements.

- The client certification system is primarily an on-line system which creates, edits, and updates application, case, and recipient data on a data base.
- The financial information and control and the management information and control systems are primarily batch systems to produce benefits and reports on a regular cycle.
- The TECS data base contains the information necessary to identify the eligible recipients for the public welfare programs administered by the system and the services for which they are eligible.
- The control requirements incorporate both manual and automated measures to ensure that client data are accurately captured at the local office level and processed and reported at the central state office.

Kentucky State Agency

Background

To adequately serve the needs of its citizens, simplify and decrease the workload of its caseworkers, and lower case error rates and related federal penalties, the Commonwealth of Kentucky developed and implemented the Kentucky Automated Management and Eligibility System—Food Stamps (KAMES-FS). The state started implementing the system in March 1987, with three pilot counties. Initially, in 1983, the Kentucky state agency requested funding to develop the Kentucky Automated Certification and Issuance System (KACIS). KACIS was intended to automate the certification and issuance process of the Kentucky Food Stamp Program. However, during the course of the development and implementation of KACIS, the Commonwealth terminated the contract with the company developing the system. In December 1985 the Commonwealth, through a court settlement, purchased the KACIS software from the contractor and submitted a new ADP development plan (KAMES) to the Food and Nutrition Service, which was approved in July 1986.

Overview

The December 1985 KAMES planning document explained that the plan was for the KAMES-FS to be a stand-alone system. KAMES will later be integrated with a separate system, known as the KAMES Income Maintenance, being developed to support the AFDC, Medical Assistance, Refugee, and State Supplementation programs. KAMES is to replace Kentucky's current computer system with a system that will meet the

increased needs of administering the Food Stamp Program. KAMES-FS is an on-line, menu-driven system that provides for the on-line collection, update, and inquiry of food stamp information. The system supports an interactive client interview through use of an on-line application.

The systems includes such features as the capability to (1) determine eligibility and compute allotments through an automated process, (2) detect and control eligibility errors prior to issuance of benefits, (3) determine and calculate financial eligibility computations, and (4) generate notices to clients.

Texas State Agency

Background

The Texas state agency has developed four different automated systems that service the Food Stamp Program statewide and in selected local offices throughout the state. The statewide automated system is called the System for Application, Verification, Eligibility, Referral, and Reporting (SAVERR). For the local office level, the state agency developed a network of automated systems distributed across the state to interact with the statewide system. This system is referred to as WELNET (Welfare Network).

Overview—The Statewide System

The system began development in 1977 as an integrated database for application, eligibility determination and case maintenance, referral, and reporting processes. It is designed to process application data via on-line data entry for Food Stamp Program, AFDC, and Medical Assistance only programs and to store the information on an application area of the data base.

An integrated client data file is the central feature of the SAVERR data base design. The SAVERR database includes a single master client file for Food Stamps, AFDC, Supplemental Security Income, and Medical Assistance only clients. The client area of the SAVERR database contains only one client record for each client, regardless of the number of cases in which the client is (or has been) active.

The unique client identifier number is a randomly generated nine-digit number which identifies each client in the data base. The SAVERR client number remains with a client through time, so that if he or she leaves

the state's rolls and later reapplies for benefits, the same client number is used each time he or she reapplies. Remote data entry processes notices of applications, certification forms, and case update forms.

The on-line Case/Client Inquiry to the SAVERR data base includes the following:

A. Applicant cross-reference by name, Social Security Number or Historical Information in Casefile.

B. Application File, by application number.

C. Client cross-reference by name, Social Security Number, Historical Information in Casefile, or alias.

D. Client file, by client number.

E. Public Assistance, AFDC/Medical Assistance only case, by case number.

F. Food Stamp case, by case number.

G. State Data Exchange and Supplemental Security Income cases, by case number.

H. Additionally warrant or Authorization To Participate (ATP) information can be called up by warrant or ATP number.

Overview—The Local Office Automated Systems

Because of the monumental task foreseen by state officials in automating all 202 local food stamp offices in Texas, state officials developed a phased approach for WELNET to automate the certification process at the local offices. The Service approved the state's request to develop Welnet I and II for $1 million and $21 million, respectively. Welnet, which initially consisted of two phases, now consists of three:

- WELNET Phase I, at a program cost of about $1 million, consisted of microcomputers capable of performing only required program household budget calculations. The first phase of WELNET specifically entailed the installation of 611 Sanyo microcomputers that were used to support the eligibility intake process at the case determination level in large offices in major metropolitan areas of the state. The Phase I implementation is principally a local data processing function installed on small

microcomputers. It automates the client information intake process, performs the budget calculation associated with eligibility determination, calculates the food stamp allotment and the AFDC benefit amount, and prints documents designed for both case folders and SAVERR eligibility system data entry.

- WELNET Phase II was planned as a system providing terminals at each worker's desk to interact with the applicant and participant during the application and eligibility determination process through benefit calculation and, eventually, on-line issuance and reporting. The network was to consist of a principal network node directly linked with the central site mainframe computer installed in Austin, Texas. Phase II, however, ran into unexpected equipment limitations, causing the state to abandon this $26 million expenditure and move into WELNET Phase III.
- WELNET Phase III has an estimated cost of about $28.7 million. Because of the problems in Phase II, this phase was essentially planned to accomplish the Phase II objectives. Phase III consists of the implementation of an additional 60 offices and the retrofit of the original 36 offices from Phase II. The equipment consists of personal computers with substantially more capability than those to be used in Phase II.

The local offices will have a network which includes hardware and software that performs the print, file storage, and communication functions. The implementation of this strategy requires four tiers of networked automation support: central site mainframe, regional node, local office network, and individual work station.

California State Agency

Local Office Automation—Welfare Case Data System (WCDS)

Background

WCDS is designed to improve the administration of public assistance programs for 19 California counties. The system, designed by Santa Clara County, was first implemented in that county in April 1967 and is made available at no charge to other governmental entities.

Overview

The WCDS provides automated support for all functions in which a California county welfare department is involved. The system includes such features as

- automatic error detection;
- exception and "reminder" information for each worker;
- automatically produced statistical data to meet county, state, and federal reporting requirements;
- automatic communication between eligibility and service workers and between the welfare department and other federal and state agencies;
- automatic updating of Central Index Systems;
- automatic notice to recipients of action taken;
- an automated "reminder" system which allows the eligibility workers to enter free-form or coded reminders; and
- automatic computer-generated mail transmittals to be mailed with case renewals, recertification, and income report forms.

San Francisco Local Office Food Stamp Automated On-Line Issuance System

Background

San Francisco County was among the first counties to develop a Food Stamp Automated Issuance and Reporting System. The state of California assumed ownership and called it a Food Stamp Automated On-Line Issuance System (FOSOLIS). San Francisco County is one of the pilot test counties of a 16-county consortium using the Case Data System to administer the program, which will use the FOSOLIS system to issue benefits.

Overview

FOSOLIS is an automated system that uses an on-line computer network to facilitate the issuance of food stamps accessed on-line using a plastic magnetic card at food stamp outlets. This system replaces paper ATPs with electronic communications to food stamp outlets to distribute food stamp coupon books to clients.

Food stamp benefits are authorized through the state's Case Data System's daily process and transmitted to FOSOLIS on the morning of the day following the date printed on the form used for the appropriate transaction. The Case Data System, which maintains limited statewide food

stamp caseload information, produces an ATP register for local office use to reconcile the on-line benefits issued by FSOLIS.

U.S. General Accounting Office Survey of State Food Stamp Programs

U.S. General Accounting Office
Survey of State Food Stamp Programs

The United States General Accounting Office, an agency responsible for evaluating federal programs, is conducting a review of the level of automation of the food stamp programs in the United States. Specifically we are interested in the progress the states have made in developing statewide systems and the roles of federal financial participation in that development. This review was requested by Senators Richard Lugar and Jesse Helms of the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate. Collecting information from each state or territory is the most important part of this investigation. Please help us fulfill the Committee's request by completing this questionnaire.

INSTRUCTIONS

- Please return the completed questionnaire in the enclosed self-addressed business reply envelope within one week of receipt, if possible. It should take no more than 30 minutes to complete.
- If you have any questions about the questionnaire please call collect Mr. Michael Rives or Ms. Linda Lohrke at 214-767-2020.
- If the envelope has been misplaced please mail the completed questionnaire to:

U.S. General Accounting Office
Attn: Mr. Michael Rives
Suite 607
1114 Commerce St.
Dallas, TX 75242

Thank you for your help.

PLEASE NOTE THE FOLLOWING DEFINITIONS FOR TERMS THAT WILL BE USED IN THIS QUESTIONNAIRE

System: means by which the food stamp program is supported in a state. This could include computer hardware and software or manual means to perform case record storage, eligibility determination, benefit calculation, front-end verification, verification matching, notice generation, claims tracking and recovery, issuance, and program reporting.

Enhanced Funding: any funding over the standard 50 percent federal financial participation for food stamp program ADP development, operations, and/or administrative costs. (Enhanced funding does not include grants or money-in-kind.)

Statewide: in use in **all** local offices in the state.

Local Offices: includes any office that conducts intake, eligibility determination, and case management.

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1. Does your state have an automated system that supports its food stamp program statewide? (Check one)

   1. [ ] Yes

   2. [ ] No —> SKIP TO Q. 28

2. What is the name and acronym of your statewide system?

3. From what federal agency(s), if any, has your state requested enhanced funding for food stamp ADP development? (Check one)

   1. [ ] Requested enhanced funding from both FNS and HHS

   2. [ ] Requested enhanced funding only from FNS

   3. [ ] Requested enhanced funding only from HHS

   IF YOU CHECKED CHOICE 3 ABOVE, PLEASE SKIP TO Q. 9

   4. [ ] Have not requested enhanced funding from either FNS or HHS

   IF YOU CHECKED CHOICE 4 ABOVE, PLEASE SKIP TO Q. 21

4. Since Oct 1, 1980, how many requests has your state made of FNS for enhanced federal funding for the purpose of developing or improving the ADP system(s) used to support the food stamp program in your state? Please include requests made from Advanced Planning Documents (APDs) and amendments or revisions to APDs. (Enter number of requests; if none, enter 0)

   _____ number requests

5. How many of these requests for enhanced funding have been approved? (Enter number approved; if none, enter 0)

   _____ number approved

6. How many of these requests have resulted in actual enhanced funding disbursements for your state? (Enter number of disbursements; if none, enter 0)

   _____ number disbursements

   IF NONE, SKIP TO Q. 8

7. In your opinion, how much of an impact, if any, did obtaining enhanced funding have on the development of the following system characteristics in order to meet enhanced funding requirements for the food stamp ADP system in your state? (Check one for each)

	Very great impact 1.	Great impact 2.	Moderate impact 3.	Some impact 4.	Little or no impact 5.
1. Type of functions performed by the automated system					
2. Integration with other public assistance automation systems					
3. Use of one automated food stamp system throughout the state					

8. In your opinion, how important, if at all, was FNS enhanced funding to your state's ability to automate its food stamp system? (Check one)

1. [ ] Extremely important
2. [ ] Very important
3. [ ] Moderately important
4. [ ] Somewhat important
5. [ ] Little or no importance

Please consider requests your state has made for enhanced federal financial participation for the purpose of developing or improving the ADP system used to support your state's food stamp program. Specifically consider only those requests made in Advanced Planning Documents or amendments/revisions to Advanced Planning Documents for system improvements since October 1, 1980.

For the most recent enhanced funding request:

9. When did your state make its most recent request for enhanced funding to develop or expand its food stamp ADP system(s)? (For example if the date was January 1982, enter 01/82.)

__/__ / __/__
Mo. Yr.

10. Which of the following categories, based on the FNS guide to preparing Advanced Planning Documents, best describes the basic purpose of this automation effort? (Check one)

1. [ ] First time automation (i.e., automating a manual system)
2. [ ] Completely replacing an existing automated system with a new system
3. [ ] Making additions to an existing automated system
4. [ ] Making deletions from an existing automated system
5. [ ] Making changes to an existing automated system
6. [ ] Other (Please explain)

11. What was the name and acronym of the system being developed?

12. What level of federal financial participation, if any, was approved for this request through each of the following programs? (Check one for each program)

Food Stamps

1. [ ] 75%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)

AFDC

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

Medicaid

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

For the second most recent enhanced funding request:

13. When did your state make its second most recent request for enhanced funding to develop or expand its food stamp ADP system(s)? (For example if the date was January 1982, enter 01/82. **If your state did not make any such request please enter "NA" in the year space and skip to Q. 21**)

__/__ / __/__
Mo. Yr.

14. Which of the following categories, based on the FNS guide to preparing Advanced Planning Documents, best describes the basic purpose of this automation effort? (Check one)

1. [ ] First time automation (i.e., automating a manual system)
2. [ ] Completely replacing an existing automated system with a new system
3. [ ] Making additions to an existing automated system
4. [ ] Making deletions from an existing automated system
5. [ ] Making changes to an existing automated system
6. [ ] Other (Please explain)

15. What was the name and acronym of the system being developed?

16. What level of federal financial participation, if any, was approved for this request through each of the following programs? (Check one for each program)

Food Stamps

1. [ ] 75%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)

AFDC

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

Medicaid

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

For the third most recent enhanced funding request:

17. When did your state make its third most recent request for enhanced funding to develop or expand its food stamp ADP systems? (For example if the date was January 1982, enter 01/82. **If your state did not make any such request please enter "NA" in the year space and skip to Q. 21**)

__/__ / __/__
Mo. Yr.

18. Which of the following categories, based on the FNS guide to preparing Advanced Planning Documents, best describes the basic purpose of this automation effort? (Check one)

1. [ ] First time automation (i.e., automating a manual system)
2. [ ] Completely replacing an existing automated system with a new system
3. [ ] Making additions to an existing automated system
4. [ ] Making deletions from an existing automated system
5. [ ] Making changes to an existing automated system
6. [ ] Other (Please explain)

19. What was the name and acronym of the system being developed?

20. What level of federal financial participation, if any, was approved for this request through each of the following programs? (Check one for each program)

Food Stamps

1. [ ] 75%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)

AFDC

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

Medicaid

1. [ ] 90%
2. [ ] 50%
3. [ ] Request denied
4. [ ] Request still pending
5. [ ] Other (Please specify)
6. [ ] Not applicable

21. In your opinion, how important, if at all, were each of the following in your state's progress in automating its food stamp program? (Check one for each of the following incentives)

	Extremely important 1.	Very important 2.	Moderately important 3.	Somewhat important 4.	Little or no importance 5.
1. Enhanced 75% federal financial participation for food stamp program automation **development**					
2. Standard 50% federal financial participation for food stamp program automation **development**					
3. Projected benefits of automation					
4. Incentives offered by HHS for AFDC automation **development** that was integrated into your food stamp system					
5. Incentives offered by HHS for AFDC automation **operations** that was integrated into your food stamp system					
6. Incentives offered by HHS for Medicaid automation **development** that was integrated into your food stamp system					
7. Incentives offered by HHS for Medicaid automation **operations** that was integrated into your food stamp system					
8. Other (please specify)					

22. Which, if any, of the items listed in question 21 was most important for automating the food stamp system(s) in your state? Please explain briefly.

23. Which, if any, of the items listed in question 21 was least important in automating the food stamp system(s) in your state? Please explain briefly.

24. In your opinion, how much, if at all, has the level of food stamp system automation in your state increased or decreased the level of each of the following food stamp program characteristics? (Check one for each)

	Greatly increased 1.	Moderately increased 2.	Neither increased nor decreased 3.	Moderately decreased 4.	Greatly decreased 5.
1. Number of eligibility workers					
2. Number of clients served					
3. Program accountability					
4. Food stamp program errors					
5. Timeliness of processing food stamp applications					
6. Other (Please explain)					

25. For the automated system that supports your state's food stamp program statewide, which one or more of the following statements best describes the level of automation used to perform each of the following functions? Please fill in the blanks with one letter from the key provided:

A: The function is completely automated.
B: The function is partially automated.
C: The function is not automated at all.

FUNCTIONS:

1. _____ Storage of case record information
2. _____ Maintenance of issuance history
3. _____ Eligibility determination at initial application
4. _____ Eligibility determination at recertification
5. _____ Eligibility determination with changes in applicant status
6. _____ Benefit calculation
7. _____ Front-end verification
8. _____ Checking participation in other public assistance programs
9. _____ Claims tracking: calculating over-payments
10. _____ Claims tracking: deductions and calculations for recoupment
11. _____ Claims tracking: tracking recoupment amounts
12. _____ Issuance
13. _____ Reconciliation
14. _____ Termination at end of certification period
15. _____ Generation of any food stamp program notices
16. _____ Generation of any food stamp program reports
17. _____ Generation of any AFDC reports
18. _____ Any electronic mail capabilities
19. _____ Sampling for quality control
20. _____ Other, please specify

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26. For which of the functions listed on the preceding page that are either not automated or partially automated, if any, are automated capabilities being planned in your state? (List all that apply)

27. For which of the functions listed on the preceding page that are either not automated or partially automated, if any, are automated capabilities actually being developed in your state? (List all that apply)

28. What level, if any, of food stamp offices in your state are capable of matching reported wage and resource information against the following other data bases before food stamp eligibility is determined? Please fill in the blanks with one letter from the key provided:

C — Central state level office
L — Local office (all or some)
B — Both central and local offices
N — Do not match

1. _____ Social Security Administration wage data
2. _____ Social Security Administration validation of social security number
3. _____ AFDC
4. _____ Medicaid
5. _____ Supplemental Security Income
6. _____ Energy assistance
7. _____ State unemployment compensation agency wage data
8. _____ State department of motor vehicle data
9. _____ State assistance programs
10. _____ Other, please specify.

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29. Is the automated system(s) that supports the food stamp program in your state totally integrated with the AFDC database statewide, partially integrated statewide, only integrated in parts of the state, or not integrated at all? (Check one)

    1. [ ] Totally integrated statewide
    2. [ ] Partially integrated statewide
    3. [ ] Only integrated in parts of the state
    4. [ ] Not integrated at all
    5. [ ] No statewide food stamp system
    6. [ ] No statewide AFDC system

30. What percent of your state's food stamp caseload is processed under the current state administered automation system? (If no state administered system enter N/A)

    _____

31. What was the average number of food stamp cases per month in your state from Oct. 1, 1986 to Sept. 30, 1987? (Enter number below)

    _____

32. In your opinion, when do you expect the next major functional alteration or improvement in your state's food stamp automation system? (For example, for Jan, 1989 enter 01/89. If no state administered system enter N/A.)

    _____/_____
    Mo. Yr.

33. Please explain the nature of the next expected major functional alteration or improvement in your states food stamp system.

Please give the name, title, and telephone number of the person who completed this survey in case we need to clarify any answers.

Name:_____

Title:_____

Phone number:_____
(Area code)

Thank you for your assistance

Model Plan Requirements for Certification; Issuance, Reconciliation, and Reporting; And General Standards

Certification

1. Determine eligibility and calculate benefits or validate the eligibility worker's calculations by processing and storing all casefile information necessary for the eligibility determination and benefit computation (including but not limited to all household members' names, addresses, dates of birth, social security numbers, individual household members' income by source: earned and unearned, deductions, resources, and household size). Redetermine or revalidate eligibility and benefits based on notices of change in households' circumstances.

2. Identify other elements that affect the eligibility of household members such as alien status, presence of an elderly person in the household, or status of periodic work registration, disqualification actions, categorical eligibility, and employment and training status.

3. Provide for an automatic cutoff of participation for households that have not been recertified at the end of their certification period.

4. Notify the certification unit (or generate notices to households) of cases requiring Notices of

(a) Case Disposition,
(b) Adverse Action and Mass Change, and
(c) Expiration.

5. Prior to certification, cross-check for duplicate cases for all household members by means of comparison with food stamp records within the relevant jurisdiction.

6. Meet the requirements of the IEVS system. Generate information, as appropriate, to other programs.

7. Provide the capability to effect mass changes: those initiated at the state level, as well as those resulting from changes at the federal level (eligibility standards, allotments, deductions, utility standards, Supplemental Security Income, AFDC, Social Security Administration benefits).

8. Identify cases for which action is pending or followup must be pursued; for example, households with verification pending or households containing disqualified individuals.

9. Calculate or validate benefits based on restored benefits or claims collection, and maintain a record of the changes made.

10. Store information concerning characteristics of all household members.

11. Provide for appropriate Social Security enumeration for all required household members.

12. Provide for monthly reporting and retrospective budgeting, as required.

Issuance, Reconciliation, and Reporting

1. Generate authorizations for benefits in issuance systems employing ATPs, direct mail, or on-line issuance and store all Household Issuance Record information including: Name and address of household, household size, period of certification, amount of allotment, case type (Public Assistance or Nonpublic Assistance), name and address of authorized representative, and racial/ethnic data.

2. Prevent a duplicate Household Issuance Record from being established for participating or disqualified households.

3. Allow for authorized under- or overissuance due to claims collection or restored benefits.

4. Provide for reconciliation of all transacted ATPs to the Household Issuance Record masterfile. This process must incorporate any manually issued ATPs, account for any replacement or supplemental ATPs issued to a household, and identify cases of unauthorized and duplicate participation.

5. Provide a mechanism allowing for a household's redemption of more than one valid ATP in a given month.

6. Generate data necessary to meet federal issuance and reconcilation reporting requirements, including:

(A) Issuance

(1) Food and Nutrition Service (FNS)-259—Summary of mail issuance and replacements, and

(2) FNS-250—Reconciliation of redeemed ATPs with reported authorized coupon issuance.

(B) Reconciliation: FNS-46—ATP Reconciliation Report.

7. Generate data necessary to meet other reporting requirements, including

(A) FNS-101—Program participation by race,

(B) FNS-388—[State] Coupon issuance and participation estimates, and

(C) FNS-209—Status of claims against households.

8. Allow for sample selection for quality control reviews of casefiles, and for management evaluation reviews.

9. Provide for program-wide reduction or suspension of benefits and restoration of benefits if funds later become available, and store information concerning the benefit amounts actually issued.

10. Provide for expedited issuance of benefits within designated time frames.

11. Produce and store a participation history covering 3 years for each household receiving benefits.

12. Provide for cutoff of benefits for households which have not been recertified timely.

13. Provide for the tracking, aging, and collection of recipient claims and preparation of the FNS-209, Status of Claims Against Households report.

General

The following standards apply to all proposed systems.

1. Perform all activities necessary to meet the various timeliness requirements established by the Service.

2. Allow for reprogramming to implement regulatory and other changes, including a testing phase to meet implementation deadlines, generally within 90 days.

3. Generate whatever data are necessary to provide management information for the state agency's own use, such as caseload, participation, and case actions data.

4. Provide support as necessary for the state agency's management of federal funds relative to Food Stamp Program administration, and generate information necessary to meet federal financial reporting requirements.

5. Provide for routine purging of casefiles and file maintenance.

6. Perform all activities necessary to coordinate with other appropriate federal and state programs, such as AFDC or Supplemental Security Income.

7. Perform all activities necessary to maintain the appropriate level of confidentiality of information obtained from applicant and recipient households.

8. Perform all activities necessary to maintain the security of automated systems to operate the Food Stamp Program.

9. Provide for the eventual direct transmission of data necessary to meet federal financial reporting requirements.

Comments From the U.S. Department of Agriculture's Food and Nutrition Service

Note GAO comments supplementing those in the report text appear at the end of this appendix.

United States Department of Agriculture

Food and Nutrition Service

3101 Park Center Drive
Alexandria, VA 22302

Mr. John W. Harman
Director, Food and Agriculture Issues
Resources, Community, and
Economic Development Division
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

September 5, 1989

Dear Mr. Harman:

We have received your official draft report, number RCED-89-172, entitled "Food Stamp Program Automation: Some Benefits Achieved; Federal Incentive Funding No Longer Needed." We appreciate the opportunity to comment on this draft, and we anticipate that this process will improve the final product.

In this report the General Accounting Office (GAO) addressed the complex subject of the costs and benefits of automation in the Food Stamp Program and concluded that 75 percent funding for State automation is no longer needed. The Food and Nutrition Service (FNS) has in the past proposed an end to the Food Stamp Act's provisions for enhanced funding for automation (virtually all other State administrative costs are matched at the rate of 50 percent). Nevertheless, in spite of our concerns about 75 percent funding for automation, we must urge caution in using the GAO data to reach the conclusions contained in the report. The methodologies employed by GAO to measure the effects of automation and the extent of State automation have serious limitations that are not adequately emphasized in the report.

Policy on Automation Funding

See comment 1.

In its response to an earlier GAO report on this subject, number RCED-88-58, FNS questioned GAO's interpretation that 75 percent funding was available only where no automated systems existed. We still differ on this matter. The legislative history in the House Committee Report 96-788 (page 113) says:

> ". . . although the great majority of States now have systems, those systems cannot perform more sophisticated computer functions, such as computing eligibility or integrating with AFDC files. The planning necessary to transform and upgrade those systems would necessarily result in most States incurring significant developmental and installation costs . . ."

Clearly there was recognition by the Congress that States had some degree of automation in place, however rudimentary or unsophisticated, and the 75 percent funding was an incentive for any State to achieve a more effective level of automation. Therefore, we differ with GAO's position that Congress intended enhanced funding only for States without any automation.

Nevertheless, FNS believes that Congress may not have intended to provide ongoing support at the enhanced rate for continuing system development once a State has achieved a sufficiently high level of automation. As a result, FNS does not provide 75 percent funding for upgrades or replacements of complete systems which meet existing standards and which were funded at the enhanced rate.

Effects of Automation

See comment 2

In this report GAO attempted to measure the effectiveness of State automation of the Food Stamp Program. While the regression models developed to determine this effectiveness do include a number of relevant variables, a number of equally important factors are left out. For example, no consideration is given to the economic health of State and local governments, changes in State priorities regarding social service funding, differences in the types of households served, varying capabilities of different automated systems, adequacy of central computer servicing resources, and proficiency of State ADP staffs. These and other characteristics of the local operating environment can be expected to influence the outcomes of automation examined by GAO.

GAO indicates its awareness of this limitation, although relegating the acknowledgment to a footnote unduly downplays its significance. Given the complexities of the issue, it is unlikely that any of the relatively simple models presented in the report can provide a definitive answer to the question of automation's effectiveness. We believe, therefore, that it is prudent to interpret these findings with great caution.

Status of State Automation

See comment 3

Similarly, the results of GAO's survey questionnaire also must be interpreted cautiously, rather than boldly as is done in the report. FNS believes there are problems of definition in the questionnaire; the States have not always interpreted the questions in the same way which makes it unwise to compare one State to another unless qualifying statements are added. Further, in interpreting the questionnaire, the report makes little distinction regarding the degree to which States reported the program functional requirements as being automated. GAO says that 50 States are automated. In fact, many large States such as Ohio, Florida, Michigan and California still are only partially automated. Based on our own reading of the GAO survey findings, it appears that of those 50 States that GAO describes as automated, only about 70 percent have completely automated all of the certification functional requirements and about 30 percent of the States have partially completed or not automated the certification requirements.

Federal Oversight of Automation

See comment 4.

Another aspect of automation reviewed by GAO was the cost accounting for the development of State automated systems. Although GAO did not question any specific costs charged to FNS by any of the States audited, GAO nevertheless asserts that greater controls are needed over ADP-related charges to the Food Stamp Program. The controls recommended by GAO center on FNS collecting, recording and reconciling State expenditures for specific ADP-related costs. However, the revised Office of Management and Budget (OMB) Circular A-102, published March 11, 1988, prohibits Federal grantor agencies from requiring grantees to report at this level of detail. Thus, FNS cannot collect the information recommended by GAO, and FNS' accounting records cannot be considered inadequate for not containing such information.

We do agree with GAO that additional emphasis should be placed on ADP equipment inventory management. However, we do not agree that FNS should reconcile State agency equipment acquisition with funding draws and State agency property records; this is clearly the responsibility of the State agency. FNS will be revising current handbooks to strengthen equipment inventory management and control upon publication of the final FNS revised regulation for ADP system development and funding.

To conclude, we acknowledge that this report tackles a complicated area of Food Stamp Program administration. It attempts to bring some new understanding to the subject, but additional analysis and interpretation are required. The Food and Nutrition Service intends to continue its pursuit of both knowledge and improved management in this area. Specific technical comments follow in an enclosure to this letter.

G. SCOTT DUNN
Acting Administrator

Enclosure

ENCLOSURE
Page 1

FNS RESPONSE TO GAO REPORT RCED-89-172

	Page	Paragraph	Comments
Now on p. 3. See comment 5.	4	1	Delete the last phrase of the last line: ",raising the possibility of fraud, waste and abuse." This is an unsubstantiated allegation against the States when the problem appears to be inadequate recordkeeping.
Now on p. 4. See comment 6.	6	1	Line 1 delete the phrase ". . . and Service . . ."
Now on p. 6. See comment 6.	8		Chapter 3, line 1 delete ". . . and the Service . . ."
Now on p. 38. See comment 6.	48		Line 1 of title delete ". . . and the Service . . ."
Now on p. 38. See comment 6.	48	1	Line 5 delete ". . . and Service . . ."
Now on p. 39. See comment 7.	49	1	Lines 8-13 are misleading. FNS does monitor project development and costs as indicated in the audit report. However, FNS is not permitted to require reporting of actual operational expenditures by approved ADP project. Such project-specific data can be obtained from State administering agencies.
Now on pp. 38-49. See comment 8.	48-60		In Chapter 3, GAO indicates that FNS' accounting for approved ADP projects is inadequate because specific data relating to cost object expenditures by State agencies for ADP developmental and operational costs are not maintained in FNS' accounting system. GAO further concludes that controls would be improved by FNS' collection and recording of State expenditures for specific ADP related costs in FNS' accounting records. These findings and subsequent recommendations are based on the premise that grantee object class expenditure data should be reported to FNS and recorded in FNS' accounting records. GAO's finding and recommendation are inconsistent with governmentwide rules and regulations for the reporting of grant related expenditures. OMB has prohibited Federal grantor agencies from requiring grantees to report by object class category or expenditure. This policy of OMB was clearly stated in its March 11, 1988, publication of the revised Circular A-102, Grants and Cooperative Agreements with State and Local Governments. The rule specifies:

"Federal agencies shall not require grantees to report on the status of funds by object class category or expenditure (e.g., personnel, travel, equipment)."

FNS, as the grantor agency, is permitted to require financial reporting on program functions or activities. Because of the two differing rates of reimbursement for ADP developmental and operational costs (i.e., 75 percent and 50 percent, respectively), FNS is permitted to require States to report expenditures for ADP developmental and operational costs as separate categories on the SF-269, Financial Status Report. FNS is not permitted to require the reporting of object class expenditures related to specific ADP development projects as recommended by GAO. Thus, FNS cannot collect the information recommended by GAO, and FNS' accounting records cannot be considered inadequate for not containing such information. The sections of the draft report listed above should be revised to delete reference to Service accounting records, and the recommendations should be revised accordingly.

Further, the specific validation and reconciliation by FNS of all such charges to the grant may be duplicative of the cost audits required by the Single Audit Act and OMB Circular A-128.

Now on p. 43.
See comment 9.

54 3

The last sentence is misleading in that it implies that FNS retroactively approved the total cost and not just the $270,000. Also, the report gives the impression that FNS approved the overrun with no explanation or justification from North Dakota. The report on the post-installation review, which was made available to GAO during their audit, says in part, "Costs examined during the review are in compliance with the appropriate regulations and planning documents governing their allowability. Project costs allocated to the Food Stamp Program through October 31, 1984 exceeded the project budget of $843,877 by $185,574. With the addition of late billings the final project overrun may approach $300,000. Although an overrun of this magnitude is of obvious concern, it does not appear to be the result of wasteful spending, as the project was completed in a satisfactory and timely manner. In retrospect, it is clear the project budget was inadequate, especially in the area of central data processing charges for data base software operation and system

communication during the testing period." North Dakota was required to provide FNS with a report explaining its cost overruns. Retroactive approval was granted after receipt and review of that information.

Now on pp. 44-46.

55-58

With regard to ADP equipment inventory management, OMB Circular A-102 Attachment G requires grantees to maintain effective controls over and accountability for all property and other assets, and to ensure that such property is used for authorized purposes. Such controls are a component of the annual audits performed by States under OMB Circular A-128.

Now on p. 71.
See comment 10.

78 Table 4.8

Table 4.8 leaves open a number of possibilities for interpretation, some of which would be misleading. One erroneous interpretation that could result can be exemplified by Montana: A casual reader could believe that Montana received 75 percent funding to automate, but failed to complete the project, since many Program functions are not fully automated. However, the truth is that Montana received 75 percent funding only for planning and feasibility analysis, and not for development.

The following are GAO's comments on the Food and Nutrition Service's letter dated September 5, 1989.

GAO Comments

1. Our response to the Service's comments is discussed at the end of chapter 4.

2. Our response to the Service's comments is discussed at the end of chapter 2.

3. Our response to the Service's comments is discussed at the end of chapter 4.

4. Our response to the Service's comments is discussed at the end of chapter 3.

5. We are not alleging that the states we visited have contributed to fraud, waste, and abuse of federally funded automated systems equipment. We maintain that, because of inadequate accounting and administrative controls, the states have no reasonable assurance that the equipment is safeguarded against waste, loss, and unauthorized use.

6. We have not deleted "Service" from the pages indicated by the Service because we have sufficient evidence to support our position in the report that the Service did not maintain adequate accounting records and monitor ADP costs to oversee the states' ADP expenditures.

7. We do not believe that the report's discussion on the Service not being required to monitor or determine the actual expenditures for the ADP systems is misleading. In fact, while not required to do so, the Service currently asks all state agencies to report ADP operational costs. More specifically, the Service should require that state agencies account for expenditures related to specific funding approvals, which are approved to develop specific systems, in addition to general ADP operations costs incurred to operate the Food Stamp Program. As noted in the report, project-specific data could not be obtained from state administering agencies, as claimed by the Service.

8. In neither the report draft nor the final report do we suggest or recommend that the Service account for or require state agencies to account for specific object costs expenditures for ADP development or operation costs. We state that the Service and the state agencies should

account for the total actual costs to develop systems that required specific Service approval. As explained in the report, the Service requests specific approval of ADP expenditures that equal or exceed $200,000 or more over a 12-month period, or a total of $300,000 or more at the regional office level. For estimated ADP costs of over $1 million, regional office approval also must have concurrence with Service headquarters. While this elaborate system for approval is in place to ensure that economic, efficient, and effective ADP systems are developed, no corresponding requirement exists for the state agencies to report that they spent the specific amount approved. Our recommendation merely states that the Service require that the states report the total amount spent to develop the approved system for which the Service approved a specific amount. Currently, the Service's Southeast Regional Office requires that state agency claims to federal reimbursement be reconciled to approved ADP funding requests.

Finally, our report neither makes reference to nor recommends any action by the Service to validate or reconcile any charges to the grant which could be construed as duplicative of the cost audits required by the Single Audit Act and Office of Management and Budget Circular A-128. Our recommendation pertains to amending the Service post-installation and budget review process. Specifically, we found that many of the Service's regional offices did not routinely monitor or account for state expenditures reported against the specific ADP approved amounts. Thus, our recommendations request that the Service routinely account for state-reported expenditures against the total Service-approved amount to ensure that states do not exceed the approved amount—as was done in North Dakota. During the time of our review, the Service's Southeast and Southwest Regions were already doing this.

9. As stated in the report, we were not able to obtain any information to show that the Service approved only the $270,000 overrun. According to Service Mountain Plains regional officials, based on the post-installation review, the Service approved the total system, which inadvertently meant that they retroactively approved the overrun. According to a post-installation review, covering October 1, 1983, through October 1, 1984, the overrun stood at $185,574 but was estimated to eventually approach $300,000. At the time of our review, the overrun amounted to about $270,000. According to a Service regional official, the North Dakota state agency never requested approval of this overrun from the Service. The agency did request approval from the Department of Health and Human Services for that agency's share of the cost overrun.

It should not be inferred from the report that we believe the overrun represented wasteful spending. Rather, our point is that spending ADP funds prior to Service approval is prohibited by Service regulations [7 CFR 277.18 (d) 6].

10. Table 4.8 makes no reference to or attempt to indicate anything about the plans, progress, or extent of automation in any state that received 75-percent funding. It merely states that the listed states received 75-percent funding and each state has certain functions automated.

Comments From the State of Kentucky

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

CABINET FOR HUMAN RESOURCES
COMMONWEALTH OF KENTUCKY
FRANKFORT 40621

DEPARTMENT FOR SOCIAL INSURANCE
"An Equal Opportunity Employer M/F/H"

August 23, 1989

Mr. John W. Harmon, Director
Food and Agriculture Issues
U.S. General Accounting Office
441 G Street, NW
Room 4075
Washington, DC 20548

Dear Mr. Harmon:

The Commonwealth of Kentucky appreciates the opportunity to review the draft report entitled Food Stamp Program Automation: Some Benefits Achieved; Federal Incentive Funding No longer Needed and provide comments prior to finalization of the report. For the most part, our comments are directed to the portions of the report dealing with the Kentucky Automated Management and Eligibility System - Food Stamps (KAMES - FS).

See comment 1.

As an general observation, it is noted the General Accounting Office evaluated the following criteria to determine benefits of program automation:

- current costs / benefits to federal, state, and local administrators; and
- effectiveness for error reduction.

The following criteria should also have been included in the evaluations:

- advantages accruing to the client as a result of automation; and
- future savings in administrative costs as a result of lower costs to process cases automatically when compared to the costs to process cases manually.

Now on pp. 34-35
See comment 2.

It is also noted that portions of the report addresses major areas with a narrow approach, eg. pages 44 - 47 compares case processing costs between one automated county and one nonautomated county. The comparison excludes all factor except the worker to caseload ratio. The excluded factors include office organization, staff tenure and training, salary scales, office overhead costs, case characteristics, accuracy of case processing, and efficiencies of the automated system. It would appear that this narrow drawing of data would not be indicative of the actual situation.

See comment 3.

It is further noted that the varying socio - economic conditions in each state and the varying degree of automation in each state affects the accuracy of the results.

See comment 4.

Now on p. 50.

The reports presents no strong statistical data to support the conclusion that automated systems have not been cost effective in case processing and that further accomplishments cannot be made. The conclusion that federal incentive funding is no longer needed to encourage automated systems is at variance with the statement on page 61 - "According to responses to our questionnaire - - - all of the state agencies stated that the increased funding was very important to either begin automation efforts or to modify, upgrade, and replace existing automated systems."

Our specific comments are:

Now on p. 16.

Page 19, Paragraph 2, lines 1 - 3: "However, we did not examine each automated system to determine if design flaws and / or operational problems may have prevented the automated system from achieving its specific goals or objectives."

See comment 5.

Comment: If operational problems are not considered, the results of the study is biased.

Now on p. 18.

Page 21, Paragraph 2, Line 3: "In fact, Kentucky achieved one of the objectives of its automated system - to reduce errors - before the program was automated."

See comment 6.

Comment: This statement does not address further error reduction or prevention resulting from KAMES - FS implementation but makes it appear that the objective was achieved in toto prior to KAMES - FS implementation. It also does not address the part automation played in keeping the error rate low. Were there any further error reductions / prevention as a result of automation?

Now on p. 20.

Page 23, Table 2.1, Line 5 from bottom under "Direct On - Line": Indication is that Kentucky does not match other automated files on - line.

See comment 7.

Comment: This table does not reflect the KAMES - FS on - line matching with other automated system files that occurs during the application / recertification process.

Now on p. 21.

Page 25, Paragraph 2, Line 4: "- - -and enter notes to the worker of any additional action needed on the case."

See comment 8.

Comment: KAMES - FS does not allow the supervisor to enter notes on - line to the worker indicating additional actions needed in the case.

Now on p. 24.

Page 29, Last 2 lines; Page 30, Line 1: "For example, as a result of a nonautomated, concerted effort, Kentucky experienced a large drop in its program error rates prior to its automated system's operation."

See comment 9.

Comment: Further error reduction or prevention resulting from KAMES - FS implementation is not addressed. The error rate reduction could not have been sustained without the support of automation.

2

Now on pp. 25-26

Page 32, Line 1 through Page 33, Line 10, and Page 33 - 34, footnote 4: "The Kentucky program - - - are not included in the list because the information was not available - - - it should enable workers to avoid making certain errors. In turn, error rates should decrease even further."

See comment 10

Comment: While specifying that data is not available to support a conclusion regarding the impact of KAMES - FS implementation upon error rates, this section implies that Kentucky had already achieved its limit in error reductions / preventions and there was only a "belief" that the system should enable workers to avoid certain errors. If this is to be asserted, statistics should be presented to support the position.

Now on p. 26

Page 32, Last 2 Lines through Page 33, First 2 Lines: "For example, the state shortened the time period between caseworker reviews of the recipient household circumstances from the once - per - year requirement to at least once every 6 months."

See comment 11.

Comment: Certification periods of "once - per - year" were never assigned to cases across the board but only to specific types of cases, eg. all SSI or RSDI households and cases with income only from annualized farm income. These households are still given a year certification period. Certification periods were shortened for other specific types of cases, eg. earnings / earnings history cases whose certification period was set at three months.

Now on p. 28

Page 35, Last 4 Lines: "Other errors, such as those resulting from arithmetic calculations, - - - to be minor after automation."

See comment 12.

Comment: One result of automation should be the virtual elimination of calculation errors. Though the rates both before automation and after automation are "minor", are there statistics to show there was no change or that the change was insignificant?

Now on p. 34

Page 43, Paragraph 3, Lines 4 - 8: "Even though the on - line systems - - - permit paperless, direct entry - - - paperwork accompanied the automated operations."

Comment: A primary cost of paperwork, is the costs involved in completing the paper. Before automation, paper was produced as a result of the worker hand completing various forms. After automation most of this paper is system generated, eg. application , request for information, etc. Were there any verifiable savings / costs as a result of automation?

Another costs of paperwork is the handling and storage of paper. Prior to automation certain paper files were required to meet federal guidelines. Under KAMES - FS paper files of each case are still maintained for the same reason , eg. client's statement at application. Kentucky continues to negotiate for paper reduction to decrease these costs. It is anticipated that an abbreviated printed application will be approved which will significantly reduce handling and storage of paper files.

Now on p. 34

Page 44, Paragraph 1, Lines 1 - 4: "For example, the number of forms needed to process food stamp cases in Kentucky remained about the same. - - - reduced the need for 11 forms - - - required 9 new forms to process the case."

See comment 13.

Comment: Were the 11 eliminated forms hand completed and are the required 9 new forms system generated? If so is there a verifiable savings / cost in worker time and a possible decrease / increase in errors due to incorrect forms.

Were the required 9 new forms mandated simply because of automation; or are they system back-up forms such as a hard copy application; or would they have also been required under the manual system due to program / policy changes? If some or all are back-up forms for the automated system, they will not be used except when the system is down. If some or all would have been required under the nonautomated system, there is no savings / costs difference.

Now on p. 50.

Page 61, Paragraph 1, Lines 8 - 10: "- - -all of the state agencies stated that the increased funding was very important to either begin automation efforts or to modify, upgrade, and replace existing automated systems."

See comment 14.

Comment: Kentucky did not receive enhanced (75%) funding for design, development, and implementation of the automated system KAMES - FS). Incentive funding was not an inducement to automate. Other factors eg, client advantages, case accuracy, staff utilization and costs, etc. were factors.

Now on p. 57.

Page 65, Table: "Generate Data to Meet Other Reporting Requirements" is indicated as "Partially" automated.

See comment 15.

Comment: Without citation of instances when KAMES - FS does not meet reporting requirements, we are unable to verify or question this indicator.

Now on p. 57.

Page 65, Table: "Tracking Collection of Recipient Claims" is indicated as "Partially" automated.

See comment 16.

Comment: Prior to the development and implementation of KAMES - FS, the claims collection system was in operation in Kentucky. This system automatically tracked claims collections that were not in recoupment status. KAMES - FS did not incorporate the functions of that system but does automatically reduce benefits and track collection for cases under recoupment. Between the two systems, all claims collections are automatically tracked.

Now on pp. 76-98.

Page 81 - 113 Appendix 1: The general indication of Appendix 1 is that due to variables and factors that cannot yet be measured, the study cannot arrive at statistically valid conclusions.

See comment 17.

Comment: Before decisions are made regarding terms of funding, the study should be re-designed and repeated when more valid data is available.

Now on p. 101.

Page 117, Paragraph 4, Line 6: " - - - June 1987, with 3 pilot counties - - - over a 9 months period."

See comment 18.

Comment: KAMES - FS pilot was begun in March 1987.

Now on p. 101

Page 118, Paragraph 2, Line 2 - 4: KAMES will later be integrated with a separate system known as KAMES Income Maintenance - - -State Supplementation programs."

Comment: Though KAMES - FS is currently a stand -alone system, the intention is for it to be the basis for a larger, integrated system (KAMES) currently being developed to support AFDC, Medical Assistance, Refugee Assistance, and State Supplementation as well as Food Stamps.

We hope these comments are of benefit.

If you have further questions, please contact James E. Randall, Director of the Divisionof Management & Development, at (502) 564-3556.

Sincerely yours,

Mike Robinson

Mike Robinson, Commissioner
Department for Social Insurance
275 East Main Street
Frankfort, Kentucky 40621

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The following are GAO's comments on Kentucky's letter dated August 23, 1989.

GAO Comments

1. In response to Kentucky's comments pertaining to the criteria used or not used in the report to determine benefits of program automation, we did not include the "current costs" as a criterion for evaluating or determining the benefits of automation. Our report does not present a cost/benefit analysis to determine whether automation is cost effective. The analyses presented in the report show that automation has achieved many of the expected benefits, such as enhancing the eligibility workers' ability to prevent or detect program errors. It also shows that automation has not always made the expected changes in the results of Food Stamp Program operations, such as reducing the program error rates.

In addition, although Kentucky stated that our analysis does not include the "advantages accruing to the client as a result of automation" our analysis does include many of the advantages accruing to the client. For example, more timely application processing, which we tested for in San Antonio and Dallas, Texas, benefits the client through more timely receipt of benefits. As stated in chapter 2, more accurate benefit eligibility determination, complete coverage of the application process, quicker implementation of program changes, and more accurate determination of household income all benefit the clients through accurate food stamp allotments.

Although we did not perform an administrative cost comparison between manual versus automated case processing, results of our regression models suggest that future savings may have been achieved. For example, we tested for the change in program staffing in Vermont, and Dallas and San Antonio, Texas. In each situation, our regression models considered numerous factors over a period of time before and after each of the systems were automated, as shown in appendix I.

2. We realize that in some situations, such as the comparison between the two California counties, our review is very narrowly focused. Accordingly, we recognize this in the report to ensure that the reader makes the proper judgment pertaining to our observations.

3. Because we recognized that varying socioeconomic conditions in each state and the varying degree of automation in each state affect the accuracy of the results, we purposely do not compare the results of the automated systems for each of the programs we reviewed. However, the

report does consider other factors, such as the number of food stamp and AFDC cases, claims collection, and eligibility determination timeliness, that are needed to determine possible changes resulting from automation.

4. The report does not conclude that automated systems have not been cost effective in case processing or that further accomplishments cannot be made. We did not attempt to determine the cost effectiveness of any of the automated systems we reviewed. As stated above, our report determines only whether some of the benefits attributed to automation have been achieved. As a result, we showed that the automated systems we reviewed achieved many of the expected benefits, such as enhancing the eligibility workers' ability to prevent or detect program errors. We also showed statistically that the same automated systems did not always make the expected changes in the results of their respective Food Stamp Program operations, such as reducing the program error rates. We concluded that additional time may be needed to determine whether the benefits achieved by automation will eventually cause more of the expected changes in the results of program operations and that to date—after 9 years of the program administrators' special emphasis on automation—the expected results have not been fully achieved.

Finally, we do not agree with Kentucky that the report's conclusion that federal incentive funding is no longer needed to encourage automated systems is at variance with the statement that the increased funding was very important to states to either begin automation efforts or to modify, upgrade, and replace existing automated systems. The first statement pertains to the legislative intent for enhanced funding. As stated in our report, according to the 1980 House Agriculture Committee report, the increase to 75-percent funding for ADP development was a necessary incentive to encourage states not in the process of computerizing their programs to automate. According to the states' responses to our questionnaire, all of the states are at least in the process of computerizing; thus, enhanced funding is no longer needed to meet that intended objective. We also found from the questionnaire responses that the enhanced funding had been very important in meeting not only the objective for which it was intended but also assisted the states to upgrade, modify, or replace existing ADP systems.

5. We have appropriately identified and recognized limitations in the data and analysis presented in the report to allow the reader to place the results in proper perspective.

6. We do not believe this introductory statement makes it appear that the objective was achieved in total prior to KAMES. The report accurately portrays Kentucky's automated system. The report states that we could not and did not evaluate the impact of Kentucky's automated system because it had only become operational during the period of our review and data were not available for a before-and-after comparison. Further, we state that Kentucky has had success in reducing its program error rates—success which could not be attributed to the automated system because the reduction occurred before the system was implemented. In addition, we stated that Kentucky officials said that although they do not expect the system to automatically decrease error rates, they believe that as the automated system becomes more of a routine part of the program operation, it should enable workers to avoid making certain errors. In turn, error rates should decrease even further.

7. We corrected table 2.1 to indicate the system's on-line matching capability.

8. We deleted the statement from the report based on Kentucky's comment.

9. We did not evaluate error reduction or prevention resulting from KAMES-FS because the automated system was not operational until 1988, subsequent to our field work. Thus, appropriate data on the automated system were not available for our review.

10. The report does not imply that Kentucky achieved its limit in error reductions nor does it draw any conclusions regarding the impact of KAMES-FS implementation. Moreover, the "belief" that the system should enable workers to avoid certain errors is based on systems documentation, demonstration of systems operational capabilities, and discussion with state agency personnel.

11. The report has been revised to reflect this new information supplied by Kentucky's responses.

12. We agree that one result of automation should be the virtual elimination of calculation errors. As indicated in our report, each automated system we reviewed ensures accurate arithmetic calculations in the area of household income and resources calculations. For example, our review of obtained state program error data for North Dakota and Vermont revealed that arithmetic errors had minimal impact on overall program error rates before and after automation. However, we believe

virtual elimination of such errors may never occur when viewed in context to invalid entries entered by the eligibility worker or the integrity of client-supplied information.

13. We did not obtain information to determine whether there were verifiable savings/costs in worker time or decrease/increase in errors due to incorrect forms. Also, we did not make the determination nor does the report state that the change in the number of forms resulted from automation. We merely showed that the number of forms had not been noticeably reduced after the system was automated.

14. The sentence has been revised to limit the discussion to those state agencies receiving 75-percent funding.

15. Table 4.2 has been revised based on a Kentucky state official's clarification of KAMES' ability to meet federal reporting requirements such as reconciliation and status of claims against household reports.

16. Table 4.2 has been revised to reflect the new information presented in Kentucky's letter.

17. The report makes no relationship between benefits achieved or not achieved and ADP funding. We make no recommendation concerning the funding of individual ADP systems per se. Our recommendation to discontinue the 75-percent funding pertains only to the original purpose of the enhanced funding—that of being an incentive to encourage those not in the process of computerizing to begin automating the Food Stamp Program. Since this purpose has been met, enhanced funding is no longer needed.

18. The report has been revised to reflect this change.

Comments From the State of North Dakota

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

NORTH DAKOTA DEPARTMENT OF HUMAN SERVICES
600 E BOULEVARD AVENUE
STATE CAPITOL - JUDICIAL WING
BISMARCK, NORTH DAKOTA 58505

NORTH DAKOTA DEPARTMENT OF HUMAN SERVICES
John A. Graham, Executive Director

NORTH DAKOTA CENTENNIAL
George A. Sinner, Governor

August 21, 1989

Mr. John W. Harman, Director
Food and Agriculture Issues
U.S. General Accounting Office
441 G Street NW
Room 4075
Washington, DC 20548

Dear Mr. Harman:

Your letter of July 28, 1989, to Mr. John Graham, Executive Director of the North Dakota Department of Human Services, regarding Food Stamp Program Automation was forwarded to me for technical comment.

Now on p. 23.
See comment 1.

Page 27, the last sentence of the first paragraph is in error. In compliance with 7 CFR 273.9(a), our automated system does the following in regards to income eligibility tests:

1. For categorically eligible households, the gross and net income tests are not applied.

2. For households containing a food stamp defined elderly or disabled member, both the gross and the net income tests are applied.

3. For households containing an elderly or disabled member, only the net income test is applied.

Now on p. 25.
See comment 2.

We do not concur with GAO's conclusion as indicated by Table 2.2 on page 31 that appropriate data to evaluate the system's effect on overissuance claims and collections was unavailable. Even though quarterly claims reports (FNS-209) were available only back to October 1983, the increase of newly established claims from 283 in the 01-03/84 quarter to 633 in the 03-06/89 quarter, and the increase in collections

OFFICE OF ECONOMIC ASSISTANCE (701) 224-2332
AFDC 224-2331
Child Support 224-3582
Food Stamps 224-2328
Fuel Assistance 224-2065
Medical Assistance 224-2321
EXECUTIVE OFFICE (701) 224-2538
OFFICE OF VOCATIONAL REHABILITATION (701) 224-2907 voice
224-2699 TDD

GOVERNOR'S COUNCIL ON HUMAN RESOURCES (701) 224-2970
OFFICE OF MANAGERIAL SUPPORT (701) 224-2538
Legal Services 224-2311
Management Services 224-2330
Personnel 224-2339

OFFICE OF FIELD SERVICES & PROGRAM DEVELOPMENT (701) 224-2318
Aging 224-2577
Alcohol and Drug 224-2769
Children and Family 224-2316
Crippled Children 224-2436
Developmental Disabilities 224-2768
Mental Health 224-2766
Volunteer Services 224-4777
GENERAL INFORMATION (701) 224-2310
TOLL FREE 1-800-472-2622

from $19,939 in the 10-12/83 quarter to $61,279 in the 03-06/89 quarter, are highly indicative that as workers began to familiarize themselves with the capabilities of the new system, both newly established claims and collections increased dramatically. See Attachment 1 for individual quarterly amounts.

Sincerely,

Conrad J. Moe
Administrator of Food Services

CJM/mj

Enclosure

ATTACHMENT 1

QUARTER	NEW CLAIMS	DOLLARS COLLECTED
10/83 - 12/83	740*	19,939
01/84 - 03/84	283	22,970
04/84 - 06/84	255	26,896
07/84 - 09/84	191	20,691
10/84 - 12/84	104	15,284
01/85 - 03/85	300	22,000
04/85 - 06/85	335	25,292
07/85 - 09/85	303	33,364
10/85 - 12/85	352	33,600
01/86 - 03/86	386	23,702
04/86 - 06/86	425	38,707
07/86 - 09/86	270	27,527
10/86 - 12/86	380	31,852
01/87 - 03/87	979	32,891
04/87 - 06/87	887	43,486
07/87 - 09/87	480	47,848
10/87 - 12/87	486	42,652
01/88 - 03/88	331	37,206
04/88 - 06/88	445	38,686
07/88 - 09/88	450	38,916
10/88 - 12/88	450	44,410
01/89 - 03/89	586	46,986
04/89 - 06/89	633	61,279

*This Form 209 was not indicative of new claims actually established in the quarter because all claims loaded from a previous manual system registered as new claims this quarter. It is estimated that about 200 new claims were actually established during the quarter.

The following are GAO's comments on North Dakota's letter dated August 21, 1989.

GAO Comments

1. We revised this report to more accurately reflect the specificity required when discussing income eligibility tests.

2. North Dakota states that it disagrees with our conclusion that appropriate data were not available to evaluate the automated system's effect on overissuance claims and collections. As evidence the state provided quarterly claims and collections data from October 1983 through June 1989.

Although the state provided additional data, the data were not sufficient to allow us to estimate the system's effect on overissuance claims and collections by using our regression model. Additional "points in time" would be needed to perform a viable regression model. While the data in North Dakota's letter show a marked improvement in collections since fiscal year 1984, the data alone do not show that automation caused this increase. For example, according to Service and state officials, increased emphasis was placed on collecting overissuances around the fiscal year 1984 time frame, which coincides with the implementation of North Dakota's automated system. Thus, without the aid of a regression model, we were unable to distinguish among the impact of either the new program emphasis, the automated system, or other events that could have caused a change in the amounts of collections.

Comments From the State of Texas

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

Texas Department of Human Services

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Ron Lindsey

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San Antonio

August 18, 1989

Mr. John W. Harman, Director
Food and Agriculture Issues
United States General Accounting Office
441 G. Street, NW
Room 4075
Washington, D.C. 20548

Dear Mr. Harman:

Attached are the department's comments pertaining to your report entitled Food Stamp Program Automation: Some Benefits Achieved; Federal Incentive Funding No Longer Needed. The department appreciates the opportunity to comment on the document.

In developing conclusions and recommendations from the data gathered in this study, two factors are apparent which should receive serious consideration in that process.

o Relevance to current automation systems in Texas

Texas currently has implemented the Phase III WelNet system. This system is in operational use by 80% of the eligibility staff in Texas. Since it was in the developmental stage at the time of this study, data on that system was not appropriate for inclusion. Consideration should be given to the fact that users generally prefer this system to the two systems which are included in the study. Also, it is apparent to developmental staff that many requirements of the Family Security Act would be extremely difficult to satisfy without an integrated automated system like the Phase III system. That system is scheduled to be in use by 100% of the eligibility staff by the end of July 1990.

o Lack of sufficient data to justify the generalization of results

See comment 1.

The study frequently cites lack of data and conflicting results in the various sections of this report. In order to successfully develop a funding strategy for automation efforts in the states, further study designed to gather more comprehensive and generally applicable evidence is advised.

John H. Winters Human Services Center • 701 West 51st Street
Mailing Address P.O. Box 149030 • Austin, Texas 78714-9030
Telephone (512) 450-3011

Mr. John W. Harman
August 18, 1989
Page 2

If you require additional information, please call Ms. Nancy Vaughan at (512)450-3063.

Sincerely,

Ron Lindsey

RL:ma

Attachment

IAS COMMENTS ON GAO DRAFT REPORT
FOOD STAMP PROGRAM AUTOMATION
Some Benefits Achieved; Federal Incentive
Funding No Longer Needed

Now on p. 12.

CHAPTER 1: Objectives, Scope, and Methodology, Page 15
We selected for review the Texas ... automated Food Stamp Program operations..."

See comment 2.

It is explained that Texas was chosen to provide geographic balance. The statement that the statewide system (SAVERR) could not be reviewed "because pre-automation program operation data were not available" is unclear as to the reason for and the nature of the unavailability. Clarification of this statement is requested.

Additionally, the fact that Texas did not receive the enhanced 75% funding and the justification for the inclusion of the Texas systems in this study of the effects of that funding would be more clearly explained in this section. Currently, this information appears later in the report.

Now on p. 20.

CHAPTER 2: Table 2.1, Page 2
Major Manual Tasks Assumed by the Seven Automated Systems GAO Reviewed to Improve Application Processing and Make Policy Changes

The table omits several tasks that Texas did assume in both the Statewide and Local Office systems.

See comment 3.

The Statewide system capabilities that exist but are not marked on Table 2.1 are:

- Compute calculations: The Statewide system (SAVERR) checks all ongoing Food Stamp budgets for accuracy. If the budget run on SAVERR is not identical to the locally generated figures, an error message is generated rejecting the attempted update.

- Consistent policy application: A multitude of edits are run by SAVERR that check various codes against other data elements to minimize possible errors or local variations in the application of policy. Examples include checking for eligibility for medical deductions from income, invalid exemptions from the employment component of the program, and premature recertification of clients sanctioned due to intentional program violations.

1

- Compare information for consistency: Again, SAVERR has numerous comparative edits. There are approximately 1700 possible error messages that SAVERR may generate to avoid various errors. Examples of those using comparison of data include, comparison of demographic data of applicants against the active client file to avoid duplication of benefits, comparisons of authorizations for benefits against those already issued for the same reason, and comparison of program code indicators against the parameters of age or location to ensure validity.

- Determine whether eligibility criteria are met for Gross Income: SAVERR checks gross income for every case in which that limit applies against the household size to ensure eligibilit.

- Determine whether eligibility criteria are met for Net Income: Similarly, SAVERR always edits against net income limits for the authorized number of recipients. This is true of benefit amount as well as program eligibility.

See comment 4.

The Local Office systems capabilities that exist but are not marked on Table 2.1 are:

- Compare information for consistency: Eligibility is determined in the Local Office system by utilizing the Generic Worksheet(GWS). One of the features of the GWS is to perform edits that match those performed on SAVERR. This is desirable in that inconsistencies are discovered while the worker is still actively communicating with the client, thereby easing resolution of the discrepancy. Additionally, the GWS performs edits that are beyond the scope of those possible on the SAVERR mainframe. An example is to compare previous GWS information to the information being entered in the current interview. This detailed information was previously unavailable in automated records.

- Alert caseworkers to supervisory notes: The offices studied have Office Automation systems that allow communication with the caseworkers. This can be in the form of memorandum like instructions or in the form of "immediate" messages that will appear on the caseworkers' screen regardless of the application being utilized at the time.

Now on p. 21.

CHAPTER 2: Administrative Improvements From Automation, Page 24
"Following the initial applicant screening, each of the automated systems, can guide the eligibility worker..."

See comment 5.

This section later states: "Further, the Vermont and Kentucky systems will not permit the worker to bypass any of the information requested on the application." The Texas Generic Worksheet also requires the worker to address all of the information requested on the application. Our system for processing reported changes after certification will allow information not normally required for such adjustments to be bypassed in order to enhance the efficiency of that process.

See comment 6.

At the end of this paragraph appears the statement: "For example, for household members reported as students or elderly, Kentucky's system compares their reported ages to insure that the program-required age limits are met." This is also true of both the local and statewide systems in Texas.

Now on p. 22.

CHAPTER 2: Automated Systems Are Designed to Enable Eligibility Workers to Prevent, Detect, and Correct Certain Errors, Page 26
"Each of the seven automated systems we reviewed improved the eligibility workers' ability to accurately determine applicant eligibility to participate in the Food Stamp Program."

The last sentence of this paragraph in summarizing the "....general improvements brought about by the automated systems...." lists: "the process of appropriately determining the applicant's household income, household related deductions, other household resources, and whether non-financial requirements are met." The Texas system also has a well documented history of avoiding, detecting, and recovering duplicated benefits. This will be covered in more detail in subsequent comments.

Now on p. 22.

CHAPTER 2: Automated Systems Help Determine Household Income, Page 27
"The automated systems increased the likelihood of the eligibility worker's accurate use of household income...."

See comment 7.

The sentence, "The systems in Kentucky and North Dakota convert income reported on a weekly basis into a monthly figure as required by the program.", would correctly include a reference to the Texas system, since the local Generic Worksheet also performs this function.

3

Now on p. 23.

See comment 8.

In the description of IEVS on pages 27-28, the word "discrepancies" may be misleading. Not all IEVS notices reflect discrepancies in the comparison of case income with IEVS income as the text implies. In the case of Internal Revenue Service data (unearned income), there is no automated comparison of case income to IEVS income. The IEVS system simply reports Internal Revenue Service data to the caseworker if the interest income exceeds a certain threshold; therefore, it is not a discrepancy at the time it is reported to the worker. Furthermore, not all discrepancies in the comparison of case income with IEVS income are reported to the worker as the text implies. Discrepant income must exceed a certain threshold before it is reported to the worker.

Now on p. 24.

CHAPTER 2: BENEFITS NOT ALWAYS ACHIEVED THROUGH PROGRAM AUTOMATION, Page 30
"As just described, the seven automated systems...."

See comment 9.

This section addresses expected benefits of automated systems that were not determined statistically to have been achieved during the performance of this study. The end of the referenced paragraph states: "For example, preventing major types of errors such as those involving household income was often beyond each automated systems capability because the system did not always have access to the necessary information." It should be noted that the Texas Department of Human Services is currently testing on-line access with the Texas Employment Commission. They have on-line data regarding applicants' wage and unemployment compensation history. The limitation of unavailability of data is being rapidly reduced in importance by on-going developmental activities. Other examples of this enhanced ability to use interagency information include systems currently being developed to obtain birth records from the Texas Department of Health and an automated child support referral system to the Texas Office of the Attorney General.

The last sentence of this paragraph states: "Also, improvements such as reducing the number of program forms needed to process applications were countered by new automated system-required forms to process applications." Although still in development during this study, implementation of the WelNet Phase III system has reduced orders for client notification forms by 20%. The Automated Data Entry system used in Phase III has also reduced utilization of data entry forms associated with most automated systems. For these reasons, caution is advised regarding generalized conclusions in the area of reduction of program forms.

4

Now on p. 25.

Now on p. 27.

See comment 10.

Now on p. 30.

Now on p. 28.

See comment 11.

CHAPTER 2: Table 2.2, Page 31
"Locations Where Appropriate Data Was Available...."

This table indicates that there was no appropriate data for the two offices studied in Texas to determine the effect of automation on program error rates. Later, in footnote 4 on page 33, it is explained "Reported state agency quality control error rates are statistically valid estimates only for the total statewide food stamp caseloads." Due to this characteristic of the quality control system, an attempt to determine trends in Texas on a statewide basis would have been advisable. The quality control sample could have been reviewed for determination of whether the actions sampled were processed using an automated application or not. Comparison of automated and non-automated results on a statewide basis might have resulted in significantly different rates.

The table further indicates that data was not available in Texas for the areas of claims for overissuances and amount of collections for overissuances. Subsequently, in Table 2.3 on page 38, data is represented indicating that between 1982 and 1987, claims increased from $8,047,000 to $12,480,000. Similarly, collections rose from $1,184,000 to $5,744,000. Most recent data for 1988 indicates that claims are up to $13,560,000 and collections have risen to $6,196,000. Specialized recovery units exist in Texas that were automated beginning in 1986. All claims and recovery activity does not, however take place in the automated units. It is encouraging that during this period of increasing results in these areas, the automated system's share of the statewide total has been increasing. Their share has gone from 22% in 1986, to 27% in 1987, and to 37% in 1988. For the first three quarters of 1989, automated recovery units are producing 40% of the statewide total. Since the results obtained in Vermont were not found to be significant, conclusions and recommendations in this area might best address the need for further study.

Finally, in the area of the amount of time spent on Food Stamp cases, Texas is implementing the capability to gather this type of data. That capability is targeted for availability in November 1989.

CHAPTER 2: Same Errors Occurring After Automation, Page 35
"We found that the types of errors occurring...."

One characteristic of the errors referred to in the sentence, "Thus automation does not appear to have affected the major types

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of errors that are being made.", is that the majority are attributable to clients' failure to report accurate information. The next section of the report addresses this problem. It is suggested that these sections be combined, or that the nature of these errors be introduced in this section.

Now on p. 28

CHAPTER 2: Error Prevention Often Beyond Systems Capabilities, Page 36
"Further, even though the automated systems data matching capabilities have enhanced....."

See comment 12.

This paragraph refers to wage data available from the Texas Employment Commission being 3 to 6 months old. It is notable that this valid limitation does not apply to Unemployment Compensation income data that will be available upon the implementation of the on-line interface with that agency that was described earlier in these comments. The data on this type of income is current and can potentially enhance the detection of failing to report the receipt of income from this source.

Now on p. 31.

CHAPTER 2: Automation's Effect on Program Staffing Varied in Vermont and Dallas and San Antonio, Texas, Page 40
"Texas program officials expected...."

See comment 13.

Beginning with this paragraph, the positive relationship between automation and reduction of staff in Texas is documented. It is suggested that the magnitude of this reduction be depicted. For example, based on caseload increase alone during this period, the increase of ten staff members in Dallas would have been an increase of 13. Also, in San Antonio, a Local Office Practices tracking system was used that involved extensive monitoring of changes reported to the office. This system was designed to reduce agency errors in acting on changes. It was not an automated system and required a high volume of staff activity. The monitoring systems currently being tested in Texas are largely free of recordkeeping activities by staff members. As work is assigned and completed, the automated system produces feedback as requested locally. This system is designed for use in the Phase III network which is currently in use by 80% of the eligibility staff. The positive results which Texas has already experienced in increasing productivity should continue to increase as development progresses in the area of automation.

Now on p. 33.

CHAPTER 2: Automated Systems Had Little Effect on Eligibility Determination Timeliness in Texas, Pages 42-43
"In both offices,....., the automated system was not statistically significant....."

See comment 14.

This section states that in the first year of using the automated system, the percentage of cases processed timely in Dallas increased by 24%. The inability to find a significant relationship to automation is probably due primarily to the limited scope of the study in Texas. The level of improvement cited for Dallas has been experienced throughout the state as automation has been implemented. Additionally, a wider study might have increased the ability to differentiate between competing factors such as the Local Office Practices techniques mentioned in the preceding section of these comments.

Now on p. 34.

CHAPTER 2: Automated Systems Have Not Always Reduced Paperwork In The States We Reviewed, Pages 43-44
"In comparing automated and nonautomated operations,..."

The first paragraph concludes with this sentence: "Paperwork increased for the batch-process systems in the Texas and California local offices mostly because of the need to duplicate the paper file information for entry into the automated systems. "This appears to reference the San Antonio practice of entering data regarding the Local Office Practices system into an automated format. It should be clarified that this was not a requirement but a voluntary practice chosen at that location. This tracking system was not designed as an automated system and was therefore labor intensive as a result of trying to add an automated component. The WelNet system is designed to reduce paperwork, eliminate duplication of tasks, and provide automated tracking without batch data entry processes. The selection of this location of study probably hindered the potential for significant findings in this area.

Now on pp. 34-35.

CHAPTER 2: Comparison Shows That an Automated Office Processes Fewer Cases Per Worker at a Greater Cost Than a Nonautomated Office, Pages 44-45
"Our comparison of two local office operations in California......."

See comment 15.

This finding is not applicable to Texas. The number of cases processed per worker has been increasing throughout the period between 1981 and 1987. While caseloads have increased about 28%, eligibility worker staff levels have only been increased by about 16%. Due to staff funding procedures, these figures include Aid

to Families With Dependent Children and Medicaid cases. The generic casework approach being adopted in Texas complicates efforts to differentiate savings between programs within the scope of Income Assistance Services.

Now on p. 44

CHAPTER 3: State Agencies' ADP Equipment Inventory Records Were Not Accurate, Page 55
"In Texas...we could not determine which equipment belonged to which system because the inventory did not identify the name of the system or the approved federal funding account..."

See comment 16

The department can identify the number of workstations, file servers, etc. that were purchased in support of a project and can determine that amount of equipment is used to support the project. Whether or not an inventory tag number can be directly related to a specific project's procurement seems an unnecessary requirement and could result in unnecessary delays in the implementation of necessary systems. For instance, a large system, such as WelNet Phase III, may require the installation of equipment over a period of several months, and the equipment is stored in the warehouse until it is scheduled for installation. During that time, another federally approved system, such as an accounting system, may require equipment at once. WelNet equipment that would not be installed for several months is used in support of the accounting system, and, once the accounting system equipment is received, it is used to replenish the WelNet stock. In doing so, the amount of equipment approved for a project is the same as the amount of equipment used in support of the project; the department has not exceeded approval thresholds nor delayed system installation. In fact, system installation is expedited.

Now on p. 46

The above clarifies the statement attributed to the assistant deputy commissioner at the bottom of page 58 that equipment "cannot be traced to the specific automated system developed."

Now on p. 50

CHAPTER 4: All State Agencies Have Automated to Some Extent, Page 61
"All of the state agencies administering the Food Stamps Program have automated at least portions of their Food Stamp Program using 75 percent federal funding as well as the normal 50 percent federal funding.

See comment 17.

The department has not claimed the 75% funding for any WelNet development or procurement costs. The only system for which the

department receives 75% funding is a case management system which supports the management of fraud investigation cases.

Now on p. 103

APPENDIX II: Overview - The Local Office Automated Systems, Page 120
"Phase II, however, ran into unexpected equipment limitations, causing the state to abandon this $26 million expenditure and move into WelNet Phase III."

The Phase II equipment has been used in Income Assistance Services offices since 1984 in support of the Generic Worksheet. It is presently being deinstalled in favor of the more flexible and powerful PC/LAN equipment. It should be noted that the equipment has served a useful purpose for five years and that it is fully depreciated. Furthermore, approximately half of the equipment will be used to support other application systems, at no additional expense to federal agencies, while the remainder will be used for maintenance spares.

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The following are GAO's comments to Texas' letter dated August 18, 1989.

GAO Comments

1. Although the report frequently cites lack of data, it correspondingly cautions the reader as necessary about the conclusions reached. Moreover, the report is very careful not to generalize the data beyond the scope of their applicability since the data sets pertain only to each individual automated system's Food Stamp Program. Furthermore, the funding issue as presented in the report pertains only to the issue of whether the increased 75-percent ADP funding has achieved its original purpose of encouraging states not in the process of computerizing to automate. We believe that our evidence and analyses in the report are sufficient to recommend that the Congress discontinue 75-percent funding for Food Stamp Program automation.

2. According to Texas' comments the report's statement that its statewide system could not be reviewed because pre-automation program operation data were not available is unclear as to the reason for and the nature of the unavailability. Our statement is based on interviews with Texas ADP management personnel who indicated that information about Food Stamp Program operations, including error rates, personnel, and timeliness, was not available because there is no requirement to maintain those data. Moreover, the Advance Planning Documents prepared for the SAVERR system, which was developed in fiscal years 1977 and 1979, were not available.

The fact that Texas did not receive 75-percent funding to automate its Food Stamp Program was not a major consideration for including it in our review. As stated in the report's objective, scope, and methodology section, because there is no typical type of automated system, we selected the locations, Texas being one, to obtain a broad view of different systems with different automated capabilities in different parts of the country. Texas' local offices were selected because they represented both types of automated systems in use in the state and each had available for review program information for several years before and after the systems were automated. Finally, our review of these systems focused on only the system's operations and did not address the rate of funding to develop the systems.

3. The report has been revised where appropriate.

4. The report has been revised where appropriate.

5. The report has been revised based on Texas' clarification of the initial and recertification process. We concur with the state's contention that the automated system will not permit the worker to bypass any of the information requested on the client's application.

6. Kentucky is cited as an example of the prior statement, "Further, the automated systems apply program policy as appropriate to each application." This statement includes the Texas systems.

7. The report has been revised to include the Texas systems in discussion on the conversion of reported income.

8. The report's text that describes Texas' use of IEVS has been changed.

9. The report now includes a discussion of Texas' testing of on-line access to income and unemployment data with its employment agency.

10. In order to compare error rates for nonautomated and automated Food Stamp Programs, the error rates must be established for each particular program. Texas statewide program error rates are established from the composite of the numerous local office operations that process the caseload using varying degrees of automation from essential manual systems to the current on-line operations in locations such as Galveston. Thus, the statewide error rates cannot give a true picture of automation's relationship to program error rates. And as stated in the report, there is no statistically valid error rate established for less-than-statewide programs.

In response to Texas' comment that table 2.2 indicates that data on claims and collections were not available in Texas, we state that the table indicates only that the data pertaining to claims and collections identified for the specific local operations we reviewed in Dallas and San Antonio were not available. Thus, for these locations we could not statistically determine the existence of a relationship between the automated system and claims or collections.

11. In response to Texas' comment we have revised the report.

12. The report has been revised to indicate that unearned income data are current and can potentially detect the reporting of unearned income.

13. We are unable to validate Texas' statement that the Dallas office would have increased by 13 staff members instead of the actual 10 staff

members without automation. As stated in the report, the regression models indicated that the automated system was statistically significant in decreasing the number of eligibility workers. However, the model cannot provide the actual number of workers that decreased.

14. We disagree with Texas' comment that the inability of the model to find a significant relationship between the cases processed in a timely manner in Dallas and automation was "probably" due primarily to the limited scope of the study in Texas. Since each location has to be viewed on its own merits, a wider study in Texas, which would also include different types of automated systems would likely show varying relationships between automation and case processing time. Moreover, in each location we considered in fact included "dummy" variables, as shown in the appendix I, to account for the impact that local office practices and techniques may have on case processing time.

15. The report's discussion comparing an automated office to a nonautomated office pertains only to the two local offices in California, not Texas.

16. The report has been revised to reflect Texas' comment.

17. The report has been revised in response to Texas' comment.

Comments From the State of Vermont

Note GAO comments supplementing those in the report text appear at the end of this appendix.

Commissioner's Office
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STATE OF VERMONT
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103 SOUTH MAIN STREET
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August 10, 1989

Mr. John W. Harmon, Director
Food and Agriculture Issues
U.S. General Accounting Office
441 G Street, N.W.
Room 4075
Washington, D.C. 20548

Dear Mr. Harmon:

Thank you for the opportunity to review the draft report, Food Stamp Program Automation: Some Benefits Achieved; Federal Incentive Funding No Longer Needed. Although conclusions and recommendations have been excluded from the draft, it is obvious from the title of the report that one recommendation is to eliminate enhanced funding for automation. Since Vermont is already completely automated, we would be unaffected by such a decision; however, we strongly object to this recommendation on behalf of other states who are in the process of automating in order to comply with the requirements of Section 1537 of the Food Security Act of 1985 (P.L. 99-198). The regulations issued by FNS to implement the above law do allow for some exceptions if a State can demonstrate that it is not cost-effective to automate specific functions of the Food Stamp program, but it is clear that the intent of Congress was to require automation; therefore, an assumption was made that automation was beneficial. If Congress now wishes to conclude on the basis of the GAO study that automation is not cost-effective and therefore not beneficial, and that enhanced funding should be eliminated, then it should also remove the requirement to automate. Were Congress to eliminate enhanced funding without also removing the mandate to automate, one would have to conclude that their purpose was to shift this administrative cost burden back to the States.

See comment 1.

In addition to this fundamental concern, we also question whether or not it is even possible to measure the cost-effectiveness of automation, given the large number of variables involved and the resulting difficulty of isolating the variable of the effects of automation. Although the GAO study does attempt to account for some of the variables, such as caseload size and program changes, it cannot adequately account for all variables.

See comment 2.

See comment 3.

For example, the report concludes that automation in Vermont increased the number of review specialists by 15 between the years 1981 and 1987, though Vermont had estimated that numbers of staff would decrease. One factor not taken into account in drawing the conclusion that the increase was attributable to automation was that the Department of Social Welfare assumed responsibility for the administration of the Fuel Assistance Program (LIHEAP) during this same timeframe, and also significantly expanded its Medicaid program. It was for these reasons that additional review specialists were added; in fact, without automation we would have needed to add an even greater number of staff. This increase in staff, therefore, had nothing whatsoever to do with the Food Stamp Program.

Now on p. 30.

See comment 4.

We question the validity of the model used in the regression analysis based on the results in two other areas, claims establishment and collection, and the Food Stamp error rate. Page 38 of the report shows that in 1982 Vermont established $63,000 in claims and collected $12,000; in 1983, claims established were $101,000 and collections were $28,000. In 1984, the year in which our automated claims system was installed, claims increased to $233,000 and collections to $69,000. Taking an average for the years 1984 through 1987, the dollar amount of claims established is $237,000 per year, and collections are $77,000 per year. This shows that both claims and collections have more than doubled since automation was installed. We do not understand how this dramatic increase could be seen as statistically insignificant.

Now on p. 27.

Page 34 of the draft report states that automation has not had a statistically significant effect on Vermont's error rate. The following table presents Vermont's reported case error rates for the period of 1981 through 1987:

Fiscal Year	Error Rate
1981	10.89%
1982	12.00
1983	9.75
1984	10.45
1985	8.55
1986	8.40
1987	6.80

See comment 5.

Using a statewide implementation date of 9/83 for the automated system, the years 1981 - 1983 represent pre-automation years, and the years 1984 - 1987 are post-automation. The average error rate for the pre-automation years is 10.88%, and the post-implementation average is 8.55%. There has been, therefore, an overall decrease of more than 2% in the error rate. We believe that it is probably impossible to draw meaningful conclusions about the causes for this

decrease, given the many changes in Food Stamp Program rules over the last few years that probably have had an impact on the error rate; for example, changes in household composition, one of the highest error categories, have made the determination of who must be included in the Food Stamp household more complex and therefore more error-prone. We also question the assumption made in the regression analysis model that higher caseloads result in higher error rates. To our knowledge, there is no evidence to support this assumption.

See comment 6.

To summarize, we do not believe it is possible to measure accurately the cost-effectiveness of automation due to the large number of variables involved and the lack of reliable data on how these variables affect the components chosen in this study. We wish also to point out the obvious omission of other less easily quantifiable benefits of automation, such as better management information, more consistent application of policy and therefore more equitable treatment of recipients, and improved notification to recipients of case actions. We certainly recognize the difficulties experienced by GAO staff in attempting to carry out the charge given them by the Senate Committee on Agriculture, Nutrition, and Forestry, and we urge you to make our comments known to the recipients of this study.

Thank you once again for inviting our comments, which we hope will be helpful to you.

Sincerely,

Veronica H. Celani

Veronica Celani
Commissioner

VHC:bfb

The following are GAO's comments on Vermont's letter dated August 10, 1989.

GAO Comments

1. In response to Vermont's disagreement with our recommendation to eliminate enhanced funding for automation because the law and regulations make it clear that automation is required, we disagree that the mandate to automate was directly timed only to the use of enhanced funding. The requirement to automate exists for all states receiving 50-percent and/or 75-percent funding. Also, the 50-percent actual funding for developing and operating automated systems in the Food Stamp Program will continue to be available. Our report does not state that automation is not cost effective as stated in Vermont's letter. The report does state that states and the Service did not maintain adequate records of automated systems costs. In addition, our analyses show that automation has achieved many of the expected benefits, such as enhancing the eligibility workers' ability to prevent or detect program errors. However, our analyses also show that automation has not always experienced the expected changes in the results of Food Stamp Program operations, such as reducing the program error rates.

2. As discussed above, our report does not measure the cost effectiveness of automation in the Food Stamp Program. The report does discuss automation's effect on program operations including reducing program error and streamlining administrative procedures and costs associated with automation.

As stated earlier in the report, we did not include all the variables affecting automation, such as quality of staff and socioeconomic factors within the community served by the program, because of the lack of adequate data. However, the variables that are included in our regression models enabled us to determine the statistical significance of possible relationships between automation and each of the different measures of program benefits, while controlling for the effects of other program-related factors, such as changes in staffing or caseload.

3. After receiving Vermont's comments, we contacted Vermont officials and clarified the consequences of the Fuel Assistance Program on our data set. The result of our discussions was to adjust data on staff levels. The Vermont models were all rerun with the new data, and the results indicate that the automated system was a statistically significant factor in increasing staff levels.

4. Comparing the raw data, dollar amounts of claims, and collections, before-and-after automation is not a valid method for examining causal relationships because it does not account (control) for the influence of other factors, such as policy changes, caseload, or staffing levels. That is the reason for doing an analysis with the regression models instead of simple comparisons. Our model results suggest that automation has not significantly affected claims or collections.

5. Similarly, comparing the raw data on error rates before and after automation is not a valid method for determining the effect of automation on error rates. Vermont is correct to point out that we did not account for all rule changes in the program (although in discussions with Vermont officials, we did identify and account for major rule changes), and we did not account for other factors such as household composition. Concerning these other factors, we did not have sufficient data on them to include them in the models.

Regarding Vermont's comment questioning our assumption that higher caseloads result in higher error rates (all else including staff levels held constant), we have no specific data to support this assumption. Rather, we believe it is a rational assumption that increased workloads are likely to result in greater error rates. In any event, the assumption is not a binding constraint on the analysis, but rather a testable hypothesis.

6. Given the available data at the states we reviewed, we believe we conducted the analysis using the best available data and methodology. The model results we present are not presented as conclusive evidence, and are only one of several types of evidence presented concerning the issues of the report.

Major Contributors to This Report

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