



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



a H-21131  
.156  
Cop 2

5

# CURRENT ECONOMIC RESEARCH ON FOOD STAMP USE

William T. Boehm  
Paul E. Nelson

July 19 1953  
U.S. DEPARTMENT OF AGRICULTURE

U.S. Department of Agriculture  
Economics, Statistics, and Cooperatives Service

ESCS-37



## PREFACE

This report summarizes four selected food stamp research studies made by analysts in the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. The studies focused on the Food Stamp Program's (FSP) effect on food prices, sales by region, size, and kind of participating store, and where and on which food items the stamps are used. The studies were chosen for review because of their potential interest to consumers and food retailers. A list of the studies follows this report.

## CONTENTS

	<u>Page</u>
INTRODUCTION . . . . .	1
THE RESEARCH QUESTIONS . . . . .	2
Are Food Expenditures Increased? . . . . .	3
Where Are the Stamps Redeemed? . . . . .	4
What Foods Do Food Stamp Households Buy? . . . . .	5
CONCLUSION . . . . .	10
REFERENCES . . . . .	11



CURRENT ECONOMIC  
RESEARCH ON  
FOOD STAMP USE

*William T. Boehm*  
*Paul E. Nelson*

INTRODUCTION

The Food Stamp Program (FSP) represents this country's most basic public policy tool for raising the nutritional status of diets among the poor. The present program began as a pilot project in 1960 and was made permanent by the Food Stamp Act of 1964. The program was designed to provide low-income households with the food-buying income necessary to purchase a nutritionally adequate diet through regular market channels. Since its earliest days, the program has had farm income support as a companion goal. The most basic research issue, still largely unresolved, is whether or to what extent the FSP has been successful in achieving its dual objectives.

Answers to that question are complicated by at least two factors. First, there is no single Food Stamp Program. Each of the many important changes in the basic law since 1964 influences the potential impact this "in-kind" transfer has on the food system. Changes in the Food Stamp Act during 1977 (Public Law 95-113) which eliminate the purchase requirement are often regarded as the most far reaching in the program's history. Earlier changes which liberalized the level of assistance and eliminated the overlap with commodity distribution, however, seem more significant for the food system and poor people. At any rate, any research evidence is going to be highly reflective of the specific program rules operating when the study is undertaken.

---

\* The authors are, respectively, Leader and Agricultural Economist, Food Economics Program Area, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. The help of Donald A. West and Stephen Hiemstra, Food and Nutrition Service, is acknowledged.



Second, the research results are highly conditioned by human responses to the program rules. Stamp issuance, for example, is influenced by the attitudes of people responsible for local food stamp offices. Stamp use is influenced by retailers. For instance, stamps illegally redeemed for cash lose their potential to influence food purchases. Thus, since food stamp research is fundamentally social science (behavioral) research, the potential for developing definitive answers once and for all to important policy questions is not very high.

The issue is further complicated because the aggregate impacts may be (and likely are) different from the impacts on any one participant household.

### THE RESEARCH QUESTIONS

These complications in no way inhibit policymakers, taxpayers, or even retail merchants from asking for clear-cut definitive answers to questions about the FSP. While such research cannot be expected to provide answers to all questions, it is reasonable to expect that some evidence will be generated to improve the nature of the policy debate.

Renewed interest in economic research for policy in this general area has prompted the Economics, Statistics, and Cooperatives Service to allocate new research resources. In addition, the Food and Nutrition Service has conducted research in this area for several years.

The work reviewed in this report summarizes selected studies recently completed by analysts in the U.S. Department of Agriculture. The studies were chosen for review here because of their potential interest to both consumers and food retailers.

The specific studies reviewed were undertaken to answer three questions:

- Is the FSP effective in increasing total food expenditures?
- What store types benefit most by food stamp redemptions?
- What foods do food stamp recipients purchase?

## Are Food Expenditures Increased?

Probably the most basic of questions regarding the FSP is whether participant households actually increase food purchases as a result of the program. To many, the answer to this question seems obvious. Since all food coupons distributed must be spent for food, it seems only logical that the program influences increases in total food expenditures. The answer, however, is not that simple. While it is true that all food stamps must be spent for food, some of the aid is probably substituted for food purchases which would have been made with earned income. The research question, then, is to determine the extent of this substitution.

A fair amount of research has been done to determine the food buying effectiveness of the bonus food stamps. Unfortunately, none of the studies have been conducted since the FSP became truly national in scope. All were conducted while the FSP was operated under program rules quite different from those used today.

The available studies indicate that bonus stamps increase food expenditures by about 40 to 60 cents per dollar. The studies also indicate that, over time, as the proportion of bonus stamps to total stamps has increased, the effectiveness of each dollar of bonus stamps in increasing food expenditures has fallen. Thus, we expect that the FSP without a purchase requirement will be less effective in increasing food expenditures than the program with such a requirement.

Using the available evidence to make an estimate, the current FSP of \$5 billion plus adds approximately \$2.5 billion to the retail food purchases by low-income households. Such an increase means that the FSP increases food expenditures by low-income households by about 8 percent.

To develop an estimate of the net increase in retail food expenditures which occur as a result of the FSP, it is necessary to subtract from the \$2.5 billion the reduced food expenditures by higher income households which are taxed to pay for the program. These reduced expenditures are estimated at about \$500 million, based on data indicating that higher income households allocate about 10 cents out of each dollar of earned income to food.

In the absence of the program, then, total food sales could fall by as much as \$2 billion. While this is a large amount of money, and is particularly important for some retailers, it does represent less than 1 percent of total personal consumption expenditure for food (\$219 billion in 1977).

## Where Are the Stamps Redeemed?

A major effort to identify and analyze the distribution of food stamp redemptions by store type and by geographic region is now underway. Plans are also in the making for a later study investigating the extent to which stamps are redeemed in the market area where issued. These studies are being conducted cooperatively by ESCS with the U.S. Department of Agriculture's Food and Nutrition Service.

In a further study, food stamp redemptions from July 1975 to June 1976 were analyzed by region, kind, and size of store (2). 1/ Analysts calculated two distributions for each category--one for food stamp redemptions and one for all other cash/check receipts. Together they equal total food sales in stores accepting food stamps for the entire fiscal year.

Stores in the mid-Atlantic, Southeast, and Southwest regions redeemed a larger proportion of total food stamps than they had of total food sales (table 1). All other regions had a higher percentage of total food sales than they had of food stamp redemptions.

These data were also used to analyze food stamp redemptions by kind and size of store. Independents received a greater share of food stamp redemptions than of total food sales. Large chains received 51.5 percent of the total food sales and 44.4 percent of all food stamp redemptions (table 2). The smaller chains also received a smaller proportion of the food stamp redemptions than they did of total food sales.

But redemptions by store type alone do not tell the story. The real impact of the FSP on the potential structure of the food retailing sector is shown when these data were analyzed by store size regardless of kind (table 3). Stores with less than \$50,000 in gross sales accounted for less than 1 percent of total food sales but redeemed 3.5 percent of all food stamps. All stores with less than \$1 million in sales redeemed a higher proportion of total food stamps than they had of total food sales. Thus, while the data clearly show that the larger stores (that is those with sales exceeding \$1 million annually) dominate both stamp redemptions and total food sales, the smaller stores benefit proportionately more by the FSP in terms of absolute dollars. This conclusion is further supported when the stamps redeemed by independent stores were analyzed by the size of store.

---

1/ Underscored numbers in parentheses refer to literature listed in the references section at the end of this report.

Table 1--Regional shares of food stamp redemptions, cash/  
check receipts for food, and total food sales,  
fiscal 1976 1/

Region	Food stamp redemptions	Cash/check receipts for food	Total food sales
		<u>Percent</u>	
New England	5.9	6.0	6.0
Mid-Atlantic	28.6	23.6	24.0
Midwest	17.4	20.8	20.6
Mountain Plains	4.4	8.1	7.8
Southeast	20.1	15.2	15.5
Southwest	11.0	10.2	10.2
Western	12.6	16.1	15.9
Total	100.0	100.0	100.0
		<u>Billion dollars</u>	
Total food sales	8.2	99.8	108.0

1/ Includes only stores that participated in the program throughout the year. Stores participating for only a part of FY 76 accounted for an additional \$500 million in food stamp redemptions.

The proximity of many small independent stores to areas with large numbers of participating food stamp households likely explains why these store types benefit proportionately more from food stamp redemptions. The extent to which food stamp redemptions are actually made in stores within the area where the stamps are issued, however, has not been determined. Nor is it known if there are differences among the recipient households with respect to the size or kind of store used most frequently. Answers to these questions should help shed additional light on the question of whether or not the poor pay more for food.

#### What Foods Do Food Stamp Households Buy?

Perhaps one of the most controversial aspects of the present FSP relates to the food choices made by food stamp recipients. On the one hand are allegations that since the

Table 2--Shares of food stamp redemption, cash/check receipts, and total food sales, by kind of store, fiscal 1976 1/

Kind of store	Food stamp redemptions	Cash/check receipts for food	Total food sales
	<u>Percent</u>		
Large chains	44.4	51.5	51.0
Other chains	1.3	2.5	2.4
Independents	52.3	41.1	41.9
Dairy routes	.6	2.0	1.9
Bakery routes	.1	.1	.1
Other mobile	.2	.2	.2
Miscellaneous	1.1	2.6	2.5
Total	100.0	100.0	100.0
	<u>Billion dollars</u>		
Total food sales	8.2	99.8	108.0

1/ Includes only those stores that participated in the program throughout the year. Stores participating for only a part of FY 76 accounted for an additional \$500 million in food stamp redemptions.

FSP relies upon free choice purchase behavior, recipient households are likely to use the coupons in an "unwise" manner. Specifically, it is often alleged that the stamps are being used to purchase either nonnutritious foods or only the most expensive cuts of meat and other foods. People making these allegations usually argue for adoption of a set of rules allowing purchase of only "nutritious" food items with the stamps. Others argue that poor people spend their money as "wisely" as do other Americans and thus there is no need for such a restriction on stamp use.

A major effort to document just how poor people are using the stamps is currently underway. Making this information available to the public, regardless of the outcome, should improve the decisionmaking process. Three studies are underway. Preliminary data are available for two studies, and data from the third are now being analyzed.

Table 3--Shares of food stamp redemptions, cash/check receipts for food, and total food sales, by size of store, fiscal 1976

Size of store (annual sales) <u>1/</u>	Food stamp redemptions	Cash/check receipts for food	Total food sales
		<u>Percent</u>	
\$0-24,999	1.3	0.2	0.2
\$25,000-49,999	2.2	.5	.6
\$50,000-99,999	4.4	1.8	2.0
\$100,000-249,999	8.6	6.2	6.4
\$250,000-499,999	6.8	6.1	6.2
\$500,000-999,999	6.9	6.1	6.1
\$1,000,000- 9,999,999	65.3	72.6	72.1
\$10,000,000 and over	4.5	6.5	6.4
Total	100.0	100.0	100.0
		<u>Billion dollars</u>	
Total food sales	8.2	99.8	108.0

1/ Includes only stores that participated in the program throughout the year. Annual sales are measured in terms of gross sales, food plus nonfood. Stores participating for only a part of FY 76 accounted for an additional \$500 million in food stamp redemptions.

The first analysis was designed to test whether the FSP influences the price levels for various food groups (1). The idea is that if the demand for specific food groups is being expanded at a faster rate because of the purchases by FSP households, then it should be possible to isolate the existence of some upward pressure on prices for these products.

The results of the study indicated that the FSP has likely had a statistically significant but rather small positive influence on the prices for most food groups, other things remaining constant. The greatest influence was isolated for the meats and cereal and bakery products

group. Dairy prices were also influenced but not as much as for the other two groups.

The second study for which preliminary data are available makes use of data from the 1973-74 Bureau of Labor Statistics Consumer Expenditure Survey (CES)(4). Dr. Donald West from Washington State University conducted much of this work while with USDA's Food and Nutrition Service during 1977 and 1978. The preliminary results of West's study are shown in table 4. These data show the distribution of total expenditures for food at home for both food stamp recipient households and all other households.

Table 4--Distribution of food expenditures for food stamp and nonparticipant households, 1974

Food item	Food stamp households	All other households
	<u>Number</u>	
Households	553	10,007
	<u>Percent</u>	
All meat products	36.5	36.3
Beef and veal	12.2	15.4
Pork	10.8	8.7
Poultry	6.4	4.7
Other	7.1	7.5
Dairy products	13.8	13.7
Milk and cream	10.5	8.8
Other	3.3	4.9
Eggs	3.5	2.6
Fruits and vegetables	13.7	14.2
Flour and cereal products	5.2	3.2
Bakery products	7.7	8.7
Fats and oils	3.3	3.0
Sugars and sweets	2.7	3.0
Snacks	.6	1.5
Nonalcoholic beverages	7.1	7.2
All other	5.9	6.6

Source: 1974 Bureau of Labor Statistics Consumer Expenditure Survey.

These data tend to support the conclusions of the first study on the price effect. Food stamp households in 1974 reported spending 5.2 percent of their at-home food budget on flour and cereal products; nonparticipant households allocated 3.2 percent in this same area. The food stamp households spent a slightly higher percentage of their at-home food budget for fresh milk and cream than did nonparticipant households--10.5 percent and 8.8 percent, respectively. However, for the dairy product group, which includes manufactured products, the percentage allocations were about the same, running 13.8 percent and 13.7 percent for the food stamp and nonparticipant households, respectively.

The food stamp households allocated 36.5 percent of their total at-home food budget to the meat, poultry, and fish group. Nonparticipant households allocated 36.3 percent to that group. Within the group, the differences were in the purchases of beef and veal and pork products. Food stamp households allocated less to beef and veal but more to pork and poultry products.

When these percentage distributions are compared to the expenditure allocations for low-income households during 1965-66, it is evident that food stamp recipients have allocated relatively more of their food dollar to pork and eggs. Allocations to dairy products were higher as well but not to any great extent.

The CES data do not support the allegations that food stamp households allocate disproportionate amounts to either the nonnutritious snack foods or the high priced cuts of meat. Food stamp households allocated proportionately less to the bakery products, sugars and sweets, miscellaneous prepared foods, and snacks groups.

These results are preliminary, but they do provide some insights regarding food stamp use. More definitive results must await completion of two additional studies. One, now underway, makes use of grocery store cash register tapes from eight stores using electronic scanning equipment. The preliminary data from the computer reinforce the findings from the CES data. It does appear, however, that the food stamp households may be allocating slightly more of their food dollar for soft drinks and ades than the nonparticipant households.

The eight-store study in particular is an excellent example of an important joint product obtained through



cooperation. Because of the study, American taxpayers will begin to learn more about the effectiveness of the \$5-billion FSP. In addition, the retail food industry will learn more about the shopping patterns of an important classification of its customers.

#### CONCLUSION

The study results reviewed in this report are only highlights of current research. As a result of these research efforts, however, answers to the difficult policy questions are being found. In total, the studies allow cautious conclusions about the three questions posed at the outset.

The FSP does appear to result in increased food expenditures by the participant households. While exact figures are uncertain, the available evidence indicates that in the aggregate, food expenditures by food stamp households increase by about 50 cents for each \$1 in bonus food stamps. This means that the \$5-billion program added about \$2.5 billion to total retail food expenditures by low-income households in 1977.

One may conclude that the small stores (those with less than \$1 million in sales) gain proportionately more as a result of the FSP. Stores in these size classes redeemed a higher percentage of total food stamps than they had of total food sales.

Available evidence now indicates that food stamp households allocate their food budgets in about the same way as do other households. There is no evidence that food stamp households spend disproportionate amounts on either non-nutritious foods or relatively expensive convenience foods or cuts of meat. This is not to say, however, that the FSP has not had an influence on the food buying habits of the poor. Quite possibly, the program provides low-income Americans with the flexibility to purchase more of the same types of food as does the average consumer.

REFERENCES\*

- (1) Belongia, Mike, and William T. Boehm  
"The Food Stamp Program and Its Impact on the Price of Food," Agricultural Economics Research, U.S. Dept. Agr., ESCS, forthcoming.
- (2) Nelson, Paul E.  
"Where are Food Stamps Used?" National Food Situation, NFS-161, U.S. Dept. Agr., Econ. Res. Serv., Sept. 1977, pp. 21-22.
- (3) Nelson, Paul E.  
Food Stamp Redemptions: Their Impact on Food Sales by Region, Size, and Kind of Participating Food Store--Fiscal 1976. AER-410, U.S. Dept. Agr., ESCS, Aug. 1978.
- (4) West, Donald A.  
"Food Expenditures by Food Stamp Participants and Nonparticipants," National Food Review, NFR-3, U.S. Dept. Agr., ESCS, June 1978.

---

\*Copies of these reports are available from the authors or can be obtained by writing to:

Food Economics, Room 260  
NEAD, ESCS, USDA  
500 12th Street, S. W.  
Washington, D.C. 20250

UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

---

POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF  
AGRICULTURE  
AGR 101

THIRD CLASS

