Food Stamp Plan

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# BONUS FOOD STAMPS, CASH SUPPLEMENTS AND FOOD DEMAND
## REMARKS FOR AAEA SYMPOSIUM



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Food stamps are more effective than cash supplements in increasing the demand for food. This proposition will be argued in two parts - first, consumer demand theory will be used to demonstrate why this result should be expected and, second, empirical studies will then be used to verify the hypothesis.

Whether or not we should increase the demand for food is a separate question that we may wish to discuss. For my assignment I am assessing the evidence as to whether or not food demand is affected and, if so, in which direction. Such information can then be used in connection with normative data to arrive at policy conclusions.

Theoretical Basis

Conventional economic theory of consumer behavior utilizes a budget constraint imposed on an indifference map to derive expected purchases. If we simplify to a two-good world with food as one commodity and all other goods as the other commodity, we can use a two dimensional diagram. In Fig. A.1 we introduce the budget line without imposing the indifference map. The original budget line is CAD.

Now consider introducing a food stamp program with bonus stamps equal in value to $AB_1$ with a cost CM. The new budget line is CABE reflecting a rightward shift of the budget line at A to B.

This construction assumes that the consumer must purchase the full allotment of stamps. If we introduce the possibility of partial purchases,

either by variable purchases in a given time frame or over time, then the effective budget constraint is illustrated by the sawtooth area within CAB. With complete flexibility to adjust purchases, the budget line becomes CBA, a kinked budget line.

In order to compare food demand we need to introduce the indifference map. The indifference map will reflect relative utilities of food and non-food. Since food is a composite commodity we cannot expect that satiation has occurred. While the consumer may purchase a nutritionally adequate diet without food stamps, a more palatable diet is preferred whenever more income or food stamps become available. Thus, we expect a normal indifference map such as in Fig. A.2. To compare the effect of a cash supplement of value AB with food stamps requires a budget line for the cash supplement situation. The dashed line BF indicates the budget line FBE that would be obtained if cash equivalent to the bonus stamp value AB had been provided.

With normal goods the purchases of food will be greatest with food stamps, less with a cash supplement and less still with neither. Stamps increase food purchases relative to the equal cash supplement because of the changed slope of the budget line. Indifference curve I illustrates the type of consumer not constrained to increase food purchases by the stamp program - the type who spends more on food than is provided by the stamp allotment - bonus plus purchased stamps. This consumers' equilibrium is to the right of B. All others are constrained because the slope of the relevant budget line has been affected. [McDonald has demonstrated how one might calculate the cash equivalent value of food stamps, i.e., what food stamps would sell for if a legal market existed and consumers wanted to find a budget line parallel to $B_2B_2$ that could provide equal utility to that afforded by the existence of bonus stamps.]

Empirical Evidence

There is now a substantial body of empirical evidence that consistently indicates a positive net effect on the demand for food with the introduction of food stamps. There is also a consistent pattern indicating greater increase in food demand with stamps than with cash equivalent to the value of the bonus stamps. This empirical evidence substantiates the hypothesis based on our theoretical analysis. Let me cite a few specific studies.

Saul Hymans and Harold Shapiro estimated the marginal propensities to consume food out of bonus food stamp income for a sample of all households with the same head and spouse during the five years of the Michigan Panel Study of Income Dynamics (1967-1972). Their general conclusion is that the food stamps lead to roughly 20 percent more food consumption than cash transfer payments taking the form of welfare income.

In a study conducted by ERS, Reese found that bonus food stamps were twice as effective as a cash income supplement in expanding demand for food. A number of other studies could be cited, all of which will lead to the same general conclusion.

MacDonald summarized his view of the empirical findings as follows:

> "In summary, there appears to be general agreement among available findings that food stamps do not greatly constrain the average recipient households' consumption behavior. These same studies also indicate that households of smaller size and relatively lower income do tend to be more constrained than on the average." [MacDonald, p. 141] (Emphasis added.)

Thus, while the empirical evidence does not indicate that all of the bonus stamps go to food consumption or food purchases, there is consistent evidence that a greater percentage or at least an equal percentage goes for food purchase as compared with what would happen with a cash income supplement.

Beyond the general increase in food demand and food purchases, there is a shift within the food purchase pattern. This is not as well documented as total demand for food. There is evidence, however, in several studies that a relatively large proportion of the increased demand goes to the more palatable items in the diet, namely red meats, bakery products and milk. Indeed, there may be a lowered purchase of certain of the less palatable items, such as corn meal, wheat flour and dried beans. In an earlier study I estimated that expansion of the food stamp program during the 1969-72 period increased beef prices by 5 to 8 percent. AEI cited by Benjamin, p. 11.

Summary

In summary, we have both theoretical bases and empirical support for the proposition that food demand is increased more by the transfer of money in the form of bonus food stamps than it would be if transferred in the form of cash supplements. This does not argue that bonus food stamps and the increase in food demand are more desirable than cash supplements. A theoretical argument can be made that the recipient's utility would be increased by giving the recipient the right to choose how to expend the transfer payment just as one might argue that the taxpayer's utility is decreased less if the tax goes for food stamps instead of cash transfers. It does suggest, however, that those concerned about increasing food sales and/or diet quality cannot ignore the effects of shifting from bonus stamps to cash supplements, nor can one ignore the rules used to administer the food stamp program.

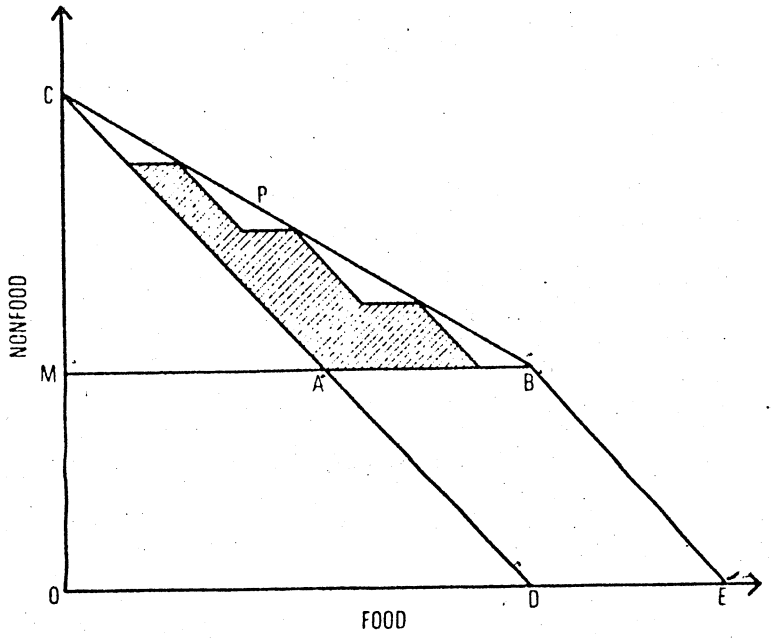


**Figure A.1.** *Pre- and poststamp budget constraints.*

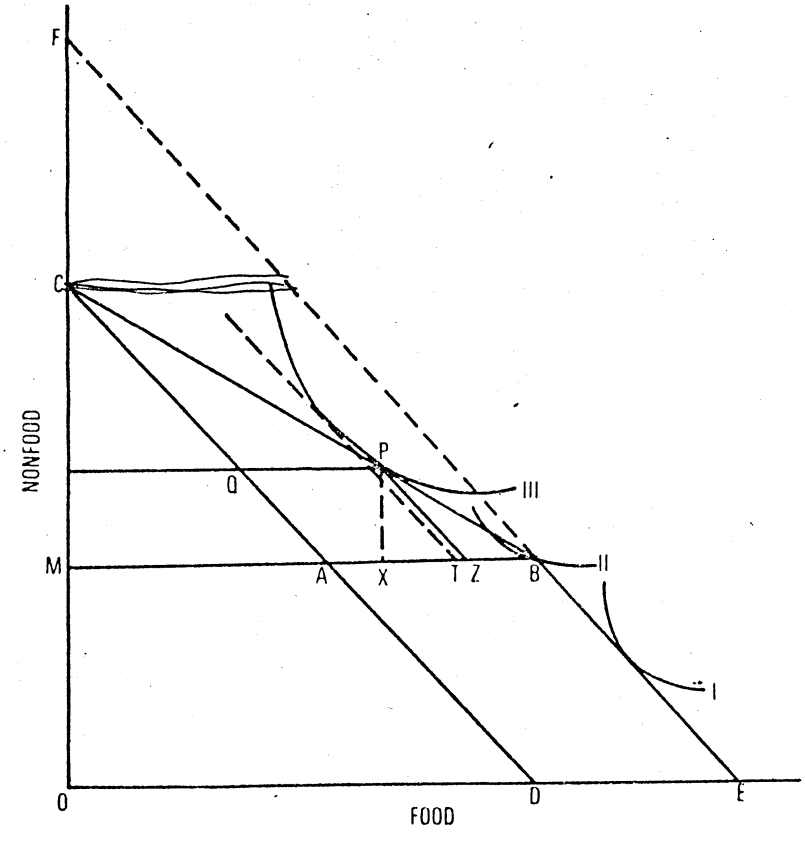


**Figure A.2.** *Deriving lower-bound cash equivalents.*

Maurice MacDonald, Food Stamps, and Income Maintenance, Academic Press, Inc., 1977, pp. 132, 133.

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