



## The First of the Month Effect: Consumer Behavior and Store Responses

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**The issue.** The effectiveness of food stamp and other cash welfare assistance programs depends on the ability of households to make rational decisions with their benefit dollars. Consumers need to plan how to budget the benefits they receive so that they last throughout the month.

But what do we know about consumer choices in general? There is ample evidence that many people make poor decisions in contexts such as health care and saving for retirement. This is particularly true for those from low-income backgrounds, and this often hinders policies intended to help those most in need. What do we know about how beneficiaries spend their supplemental nutrition (SNAP, or food stamps) dollars? And what does this tell us about whether or not food stamp programs are designed to best help families in financial need?

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### ***Why don't benefit recipients spread their budget and avoid food insecurity at the end of the month? Are they impatient in the short-run – overspending immediately and regretting it later?***

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A growing line of research has shown that benefit households spend heavily right after receiving their monthly SNAP funds, but their purchases and consumption then drop off sharply and continue to decline throughout the rest of the month for all sorts of foods, from perishable to storable items.

Over consumption at “the first of the month” goes against rational models of consumption. Why don't benefit recipients spread their budget and avoid food insecurity at the end of the month? Are they impatient in the short run – overspending immediately and regretting it later?

One possible explanation is that individuals have a preference for variety; they may prefer to buy high-quality products first and lower-quality products afterwards, preferring to eat some “wealthy meals” at the cost of having to “eat poor” later. For example, a steak and wine meal with a beans and rice meals later

in the month, may be preferable to chicken all month long.

Another reason could be that food prices change during the month. Perhaps stores lower prices at the beginning of the month to attract more big-basket-buying customers. A similar phenomenon occurs with holiday sales – perhaps stores run “black Friday” sales at the start of each month when most of their clients are on SNAP. If so, rational customers should buy more at the start of the month to save money.

Alternatively, the consumption changes may be driven by short-run impatience. SNAP recipients are tempted to buy more and consume more today, even if they regret it when they are food insecure later. If this is the case, there are simple changes to SNAP benefits that can help households manage their budgets, making the program more effective.

**Investigation.** In “The First of the Month Effect: Consumer Behavior and Store Response,” Hastings and Washington tackle these questions using detailed scanner-level data from three stores in Nevada that belong to a national supermarket chain. The authors characterize benefit households' behavior and assess whether it is driven by a desire for variety, by changes in store prices, or by adjustments in quantity implying short-run impatience.

The authors focus on stores in Nevada because it distributes all benefits at the first of the month, making for a clean analysis using scanner data. This concentrated delivery schedule is important for identifying the start of the benefit recipients' income month and for tracking patterns of expenditures. This timing also means that grocery stores face a predictable increase in demand for the goods most heavily purchased by benefit recipients every month.

Second, their database allows the authors to move beyond the findings of previous studies, which only dealt with daily data on food consumption. The authors' database includes detailed features of each item purchased; ranging from price and any discounts (was it on sale?), to characteristics like weight, and quality (was it brand name or generic?), and the date of purchase. Importantly, it includes the customer loyalty card number and the method of payment for each transaction. This means that customers paying

with their benefits can be distinguished from customers paying by other means, and allows for the construction of alternative quality measures and a price index.

While the study focuses on Nevada, on a national level the majority of food stamps are redeemed at supermarkets, and half of all food stamp recipients spend their benefits exclusively in supermarkets. Therefore, the authors' findings are relevant for the majority of benefit recipients nationwide.

**Conclusions.** In line with previous findings, Hastings and Washington conclude that benefit and non-benefit recipients exhibit different behaviors during the month. While non-benefit customers' food expenditures remain almost constant; benefit recipients decrease their food purchases throughout the month; purchases fall nearly 20 percent from the first to the second week of the month, and continue to decline through the remainder of the month.

They find overwhelming evidence that these purchase patterns are driven by changes in quantities consumed. From week one to week four, benefit households reduce the quantities of items purchased by 32 percent. This decline does not vary by specific food categories. There is a steep decrease in both storable and perishable items, and a slightly less steep decline in splurge items, like alcohol and tobacco. This suggests that benefit recipients are not storing food for later consumption or just buying fewer quantities of non-essential items.

The authors also find that the desire for variation in food quality consumption cannot explain the results either. Throughout the month, benefit households do very little substitution away from premium products towards generic items, or from non-sale to sale items. The authors' alternative measure of product quality

also indicates very small declines in the quality of items purchased by benefit households.

Finally, food products are not cheaper when households receive their benefits. In fact, the authors show that the increase in aggregate demand results in increases in food prices. While the pricing response is small, prices fall three percent as quantities purchased fall 32 percent.

This rules out the desire to purchase food when it is relatively cheaper as an explanation for beneficiaries' behavior. The fact that prices rise with demand (albeit slightly) provides additional support for impatience as the best explanation of the benefit households' behavior.

**Policy Problems.** Government program transfers count on beneficiaries making rational choices. In the context studied, food stamp and cash welfare recipients decide when, what, and how much to buy. The authors' findings point to short-run impatience as the underlying cause of the monthly food expenditure cycle. Is there a way to design a Smarter SNAP – one which helps beneficiaries smooth their expenditures and avoid a cycle of over-then-under consumption?

**Simple Solution.** There is an obvious and simple solution: to stagger smaller transfers out over the course of the month, rather than providing a single large transfer. This would not only help individuals smooth out their consumption over the course the month, but additionally would likely cut down on the variation in food prices as well.

This solution would not only help consumers budget their benefits and reduce price variation, but would also be easy and inexpensive to implement as well, since the transfers are electronically distributed and managed on EBT cards.

## Take away points

- ▶ Benefit households have high expenditures the first days after they receive the transfer, but shortly afterwards purchases drop sharply and continue to fall throughout the month.
- ▶ This is due to reductions in quantity and not to changes in quality or prices, meaning beneficiaries and their families are consuming less at the end of the month due to short-run impatience.
- ▶ Stores slightly increase prices in response to increased demand when benefits are paid out. Households could save money if they delayed their purchases until later in the month.

## the fine print

technical information

### Data

Detailed item-level scanner data from 3 Nevada stores belonging to a national supermarket chain, from January 2006 to February 2008.

### Methods

Regression analysis of expenditures and retail price responses. McDonald and Moffit decomposition. Price index construction.