

Retail Food Price Forecasting at ERS

The Process, Methodology, and Performance from 1984 to 1997

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Introduction

The U.S. Department of Agriculture forecasts annual changes in the major categories of the Consumer Price Index (CPI) for food. These forecasts are used in the President's annual budget for designing food and agricultural programs, such as the Food Stamp Program, which cost \$19.6 billion in 1997. Other government agencies also use these forecasts. For instance, the Federal Reserve Board considers food price inflation forecasts in its deliberations about monetary policy.

Forecasting retail food prices has become increasingly important to USDA due to the changing structure of food and agricultural economies and the important signals the forecasts provide to farmers, processors, wholesalers, consumers, and policymakers. The American food system is going through fundamental structural changes. It is unclear how these changes will affect the cyclical variation of food price markups and translate into changes in retail food prices.

Along with energy prices, food prices are the most volatile consumer price category the government tracks. The only government entity that systematically examines food prices and provides food price forecasts (on an annual basis) is the Economic Research Service (ERS), an agency of the U.S. Department of Agriculture. ERS has forecast food prices in some

form since World War II. The inflationary period of the mid-1970's raised the importance of food forecasting by ERS analysts for USDA. Analysts recognized that price forecasts were increasingly affected by outside influences, and they were required to consider an increasing amount of information. Analysts introduced behavioral econometric models, which account for changing economic conditions, for forecasting some of the major food categories such as beef, pork, poultry, eggs, and dairy products. ERS's Aggregate Indicators in the Quarterly Agriculture Forecasting Model uses three-stage least squares to estimate consumer price indexes for 15 major components of the food-at-home CPI, as well as an equation for food away from home.

This study has several purposes. First, this study will make the current forecasting procedures as transparent as possible to the readers. Second, the study will evaluate past forecasting performance, with an eye toward identifying areas where improvements could be made. Third, this study creates an up-to-date set of the historical forecasts.

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