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WIC and the Retail Price of Infant Formula

Victor Oliveira, Mark Prell, David Smallwood, and Elizabeth Frazão

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is an influential agent in the infant formula market. WIC is a Federal program, administered by the U.S. Department of Agriculture's Food and Nutrition Service, that provides a package of supplemental foods (including infant formula), nutrition education, and health care referrals to low-income, nutritionally at-risk pregnant women, infants, and children up to age 5. The Economic Research Service (ERS) estimates that almost half of all infants in the United States are WIC participants, and they consume about 54 percent of all formula sold in this country.

Since 1989, State agencies that administer WIC have been required to operate an infant formula rebate program as a means of containing WIC costs. Under the rebate agreement, a WIC State agency receives significant discounts from a formula manufacturer in the form of rebates for each can of infant formula purchased by WIC participants. In exchange, a manufacturer receives the exclusive right to provide its formula products to WIC participants in a State. In fiscal 2000, infant formula rebates nationwide totaled \$1.4 billion.

What Is the Issue?

Some observers have hypothesized that WIC and its rebate program may increase significantly the retail infant formula prices faced by non-WIC consumers, either through an impact on wholesale prices, or through an effect on the retail markup. In 2000, Congress directed ERS to report on how WIC and its rebate program have affected the infant formula market. *WIC and the Retail Price of Infant Formula* builds upon the resulting congressional report and takes a more in-depth look at the effects of WIC and WIC's rebate program on infant formula retail prices.

What Did the Study Find?

Retail prices of infant formula vary widely by brand and by geographic area. For example, the average price of 26 ounces of reconstituted milk-based powder formula marketed by PBM Products in 2000 was \$1.56 compared with \$2.63 for the Ross brand. The average price of Mead Johnson's milk-based formula was less than \$2 in Albany, NY, and greater than \$3 in Chicago, IL.

Infant formula prices have increased faster than inflation in recent years. Increases in retail prices of infant formula from 1994 to 2000 varied by manufacturer and type of formula. In nearly all cases, the average annual increase in the retail price of formula exceeded inflation. In addition, in every case the annual rate of increase in retail prices exceeded the annual rate of increase in wholesale prices.

ERS is the main source of research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

There is no evidence that WIC's infant formula rebate program has resulted in a reduction of the number of infant formula manufacturers, and thereby lessened price competition. In 1987, before the rebate programs were widely implemented, three manufacturers—Ross, Mead Johnson, and Wyeth—accounted for 99 percent of the infant formula market. In 2000, three manufacturers—Ross, Mead Johnson, and Carnation—accounted for 99 percent of the infant formula market.

If an infant formula brand is the WIC contract brand, its retail price tends to be higher. A multivariate regression analysis found that if a manufacturer's formula was the WIC contract brand, the product had a modestly higher retail price, holding other factors constant, such as wholesale prices. An event-study analysis of retail prices before and after a change in the WIC contract brand showed that after such a change, the retail price of the new contract brand of formula increased more than that of the old contract holder.

The size of a WIC program affected retail infant formula prices. The greater the relative size of the WIC program in a State, as measured by the ratio of WIC formula-fed infants to non-WIC formula-fed infants, the greater the retail price of both the WIC contract and the noncontract brands of formula, holding other factors constant. Accordingly, States with a high percentage of formula-fed infants in WIC had higher prices (other factors equal), with the extent of the difference depending on type and brand of formula consumed. For example, when moving from an area where WIC infants account for half of all formula-fed infants to an area where they account for two-thirds, a non-WIC family with a typical 12-pound, formula-fed infant finds its monthly expenditures (for milk-based formula) increase by about \$3 to \$5 for contract brands of formula and by about \$1 to \$4 for noncontract brands.

Although WIC and its infant formula rebate program increased infant formula retail prices modestly, a full discussion of the price effects should consider the following:

- Over one out of every four participants in the WIC program (i.e., almost 2 million people per month in fiscal 2000) is able to do so because of State agencies' use of rebate money to run their WIC programs.
- Recent legislative changes provide USDA's Food and Nutrition Service with enhanced control of the prices WIC vendors charge for the contract brand of infant formula.
- WIC encourages mothers to breastfeed if possible, but most of the infants in WIC receive infant formula through the program. Increasing the prevalence of breastfeeding among WIC mothers would lower consumer demand and result in lower retail prices of infant formula.
- In most areas of the country, lower priced infant formulas are now available to non-WIC consumers, and the number of these lower priced alternatives is increasing over time.

How Was the Study Conducted?

The primary source of data on the retail prices of infant formula was scanner information from a sample of supermarkets located across the country (1994-2000). By using the scanner-based retail sales data, it was possible to directly examine the infant formula prices available to non-WIC consumers. Supermarket prices of infant formula in a given geographic area depend on a number of economic, demographic, and WIC program factors. Both an event study methodology and a multivariate regression methodology were used in order to isolate WIC-related price effects. The two different analytical approaches produced comparable findings, making the results stronger and more credible.