

**Nevo and Wolfram (2002)**

**Why do manufacturers issue coupons? An empirical analysis of breakfast cereals**

**Part1:**

The question of this paper that try to answer is that the shelf prices are generally lower when there is a coupon available. They obtained data from two main sources. Note that the data that used was panel data set. The cereal price data were obtained from the IRI Infoscan Data Base at the University of Connecticut. These data were collected by Information Resources, Inc. (IRI), a marketing firm in Chicago, using scanning devices in a national random sample of supermarkets in metropolitan areas and rural towns. Weekly data for UPC-coded products are drawn from a sample, which represents the universe of supermarkets with annual sales of more than \$2 million, accounting for 82% of grocery sales in the United Stat. The coupon data were obtained from Promotion Information Management (PIM), a research company that tracked coupons and other promotional strategies. (For example, General Mills might have hired PIM to keep track of Kellogg's couponing and vice versa.) PIM collected data on coupons issued in 69 major metropolitan areas, including all 65 of the IRI areas. For each region, PIM obtained information on coupon free-standing inserts in the local newspapers, on coupons run in the newspapers themselves (run-of-press), and on coupons in magazines.

$$SHELF PRICE_{bct} = \gamma_{b(c)} + \phi_{c(t)} + \delta_{t(b)} + \theta DOLLARS OFF_{bct} + \varepsilon_{bct},$$

To estimate the relationship between prices and coupons, they used the following regression. Each variables refer as SHELF PRICE<sub>bct</sub> is the average shelf price for cereal brand b in city c during quarter t and DOLLARS OFF<sub>bct</sub> is the expected value of the coupon available for cereal brand b in city c during quarter t. DOLLARS OFF<sub>bct</sub> takes on a value of zero when there is no coupon available. We also estimate versions of equation (1) in which we substitute PROB OF COUPON<sub>bct</sub>, which reflects the probability that there is a coupon for a given city, brand, and quarter. Y<sub>b</sub> and &c capture brand- and city-specific factors that affect demand or the cost of selling cereal. S<sub>t</sub> is included to capture the trend in cereal prices over the time period we consider. We also present estimates that allow the brand-fixed effects to vary by city (we estimate Y<sub>bc</sub>), the city-fixed effects to vary across quarters (we estimate O<sub>ct</sub>), and the quarter effects to vary by brand. They also applied the Hausman Test to their model on six sets of fixed effects: city, quarter, brand, city-brand, city- quarter, and brand-quarter as well as VAR model.

The results suggest that coupons are driven by some combination of (1) strategic interactions between manufacturers, (2) incentives given to the people within firms who make decisions about coupons, and (3) the effects of coupons on repeat purchases. The shelf prices are generally lower when there is a coupon available as they add a number of fixed effects to control for unobserved changes in demand and costs.

**Part2:**

In my point of view, it is interesting in terms of supplier as the coupons can be used to induce repurchasing of consumer. Nevertheless, my position is a consumer and I am not convinced by the coupons that much due to my consumption behavior. This paper uses economic theories including price discrimination and econometric. The results of their study (Nevo and Wolfram) suggest that seller decisions about prices and coupons are inconsistent with the simple textbook view of coupons as a price-discrimination tool, there is scope for more theoretical work on the rationales for coupons.