

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

This paper seeks to provide empirical analysis of the breakfast cereals by analyzing the impact of coupons that were used in the 1990s as one of a popular strategy to increase a sale of ready-to-eat breakfast cereals. The authors explore the relationship between shelf prices and manufacturer's coupon for 25 ready-to-eat breakfast cereals. The question that this paper tries to answer is "Why do manufacturers issue coupons?". The data type that used in this study was the panel data by set a three-dimensional panel dataset with information on shelf prices and available coupons for 25 ready-to-eat breakfast cereal products in up to 65 cities for every quarter from 1989 until 1992 and they found that shelf prices are lower during period when coupons are available. The authors also evaluate the patterns of coupons across brands, cities, and time to gather some suggestive evidence on a number of possible explanations for the negative relationship between coupons and shelf price.

The authors obtained data of the cereal price data from the Information Resources, Inc. Infoscan (IRI) Data base from the university of connecticut and the coupon data was obtained from Promotion Information Management (PIM). Then the authors match price and coupon data by city, brand and quarter with altogether of 23,350 observations reflecting information on 25 brands of cereal over 16 quarters from 51 to 65 cities.

The regression model is  $SHELF\ PRICE_{bct} = \gamma_b(c) + \phi_c(t) + \delta_t(b) + \theta DOLLARS\ OFF_{bct} + \epsilon_{bct}$ . The authors used a vector auto-regressive (VAR) model to evaluate the dynamic impact of coupons. The dependent variable is SHELF PRICE<sub>bct</sub> (the average shelf price for cereal brand b in city c during quart). The independent variables are  $\theta DOLLARS\ OFF_{bct}$  (the expected value of the coupon available for cereal brand b in city c during quarter), brand-fixed effects to vary by city, the city-fixed effects to vary across quarter, and the quarter effects to vary by brand. The authors suggest that coupons do not have a positive brands, years, and cities. In addition, when observing the cross-brand effects. It shows that coupons increase intensity in competition and the dynamic effects of coupons may induce consumers to try new brands.

As a result, both the negative correlation between prices and coupons and the dynamic results suggest that neither static nor intertemporal monopoly price discrimination considerations are predominant. The coupons are driven by some combination of, firstly, strategic interactions between manufacturers. Secondly, incentives given to the people within firms who make decisions about coupons. Thirdly, the effects of coupons on repeat purchases. The fact that manufacturers seem to dislike coupons since the coupons are not jointly profit-enhancing price-discriminatory mechanism.

The question of this research paper is quite interesting. This paper make me know the relationship of cereal price and coupon. The authors explored that the price of cereal on shelf is lower when there is a coupon available which is interesting since the results still be the same even they adding a number of fixed effects to control for unobserved changes in demand and costs. The economic theory that was used in this paper is "price discrimination"

with strategic interaction effects industries in order to analyze the consideration of the manufacture that they were not monopolistic and may have the dynamic considerations to set the price for retailer.

The method adopted to answer research question is appropriate and the variables that used in econometric models is appropriate because they add estimates to allow the fixed effects to vary by city and other variables. I think the results are convincing because the results are consistent with the existing work. The authors mentioned that there were some empirical work that has uncovered patterns consistent with the price discrimination interpretation of coupons showing for instance that coupon users have more elastic demand than nonusers. Moreover, the manufacturer seem to displeasure coupons because it cannot create jointly profit-enhancing price-discriminatory mechanism.