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## Household's Coupon Usage Behavior: Influence of In-Store Search

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HOUSEHOLD'S COUPON USAGE BEHAVIOR:  
INFLUENCE OF IN-STORE SEARCH

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# **HOUSEHOLD'S COUPON USAGE BEHAVIOR: INFLUENCE OF IN-STORE SEARCH**

## **ABSTRACT**

A two-stage model is proposed to investigate household coupon usage: coupon collection and redemption moderated by in-store shopping activity. A cost-benefit framework is employed to explain coupon collection. Specific research hypotheses are offered and the model is tested in its entirety using PLS. The findings indicate that brand loyalty, financial pressure and product innovativeness influence benefits derived from coupon collection. Opportunity cost of time and perceived benefits from coupons influence coupon collection. The effect of coupon collection on redemption was found to be moderated by in-store shopping activities.

# **HOUSEHOLD'S COUPON USAGE BEHAVIOR: INFLUENCE OF IN-STORE SEARCH**

## **INTRODUCTION**

Coupons continue in its popularity as an important element of marketing mix in the United States: 1988 coupon distribution increased 35% over 1984 to a record total of 221.7 billions (Manufacturers Coupon Control Center, 1989). The average coupon value during this period also increased by 26%. According to a survey conducted by Donnelley Marketing Services in 1987, 96% of the packaged goods manufacturers used direct couponing to promote their products. A national survey conducted by Frankel & Co. (Teinowitz, 1988) indicates that fully 98% of the households used coupons within the past year and 97% within the past 30 days. As the number of coupons distributed and their use has grown, a number of researchers have sought to understand household deal usage behavior.<sup>1</sup> Some of these studies have consisted of identifying/profiling the households most likely to use deals/coupons (e.g., Webster, 1965; Montgomery, 1971; Frank and Massy, 1971; Blattberg, Buesing, Peacock, and Sen, 1978; Cotton and Babb, 1978; Teel, Williams, and Bearden, 1980; Thompson and Tat, 1981; Bawa and Shoemaker, 1987; Babakus, Tat, and Cunningham, 1988) while others have linked coupon usage to different aspects of household shopping style. For example, Dodson, Tybout and Sternthal (1978) have examined the impact of withdrawing coupons on brand loyalty of households.

Blattberg, et al., (1978) have proposed a household inventory model based on Becker's (1965) household production model to identify deal prone households, whereas Narasimhan (1984) has developed a price theoretic model to show that coupon users are more price elastic than nonusers. In addition, two comprehensive models of household coupon proneness have been offered by marketing scholars to explain household deal usage. Shimp and Kavas (1984) have applied the Theory of Reasoned Action to coupon usage, while Bawa and Shoemaker (1987) have incorporated the dollar savings resulting from the coupon usage and costs of such usage in their model. A household is assumed to maximize its net utility (i.e., benefit-cost) when deciding the extent of coupon usage.

A related issue is the impact of in-store search on consumer response to coupons. In conjunction with couponing, manufacturers organize in-store promotional activities designed to persuade shoppers to buy their brand. Marketing literature suggests that interaction of displays (Chevalier, 1975), advertising (Sunoo and Lin, 1978; Woodside and Waddle, 1975; Eskin and Baron, 1977) and price (Prasad and Ring, 1976; Wilkinson, Mason and Parksoy, 1982) effects sales. However, no attempt has been made to conceptualize and test the behavioral mechanisms which can explain the interactions of coupons and other elements of promotion on an individual basis. Presence of such interactions have significant managerial implications. A household holding a coupon for a particular brand may be prompted to engage in search due to the in-store promotions such as special prices, displays, etc. The information gathered at the point-of-purchase (POP) may strengthen the shoppers resolve to buy the promoted brand. Consequently, the coupon is more likely to be redeemed due to the availability of additional information reinforcing the earlier decision to collect coupons. However, if manufacturers overlook

the presence of this mechanism they may overemphasize the importance of household precommitment to buy a product (i.e., coupon collection) at the expense of in-store promotional activities and thereby reduce the overall effectiveness of couponing.

The objective of this investigation is to present and empirically test a model of household coupon usage which explicitly incorporates the interactions at the POP level. In so doing we provide additional insight into what factors contribute to household coupon usage behavior. We have expanded the traditional definition of coupon proneness and provide rationale for the various constructs and linkages proposed in the model. The model is empirically specified and tested in its entirety using survey data.

### A MODEL

In Figure 1 we conceptualize household coupon usage as a two-stage process: coupon collection and redemption moderated by in-store shopping activity of the households. To redeem, the household must have coupons at the time of purchase. This will require them to search through the promotional media to find coupons, separate them from other promotional information, organize the coupons by product categories for ease of search at the time of redemption, and actually take the relevant coupons along on the shopping trip. Once such a precommitment is made, the presence of coupons may wed the household to a particular brand irrespective of competitive offerings (Henderson, 1988). Hence, collection of coupons is shown to positively influence their redemption ( $H_1$ ).

Simply because someone has a coupon does not mean that it will be redeemed. The shopper may compare the price of the couponed brand with others on the shelf to

determine the desirability of redeeming the coupon. Levedhal's (1984) data shows that on an individual brand basis, shoppers face higher average shelf price when using a coupon than when not using. His explanation is based upon price discrimination hypothesis: the average prices are raised in conjunction with the coupon offer because the households who do not use coupons and pay full price are less price sensitive. Furthermore, once inside the store, shoppers are exposed to additional stimuli which increase the likelihood that previously recognized but unretrieved needs will be cued. Study by Bettman and Zins (1977) indeed shows that consumers incorporate information available at the point-of-purchase (POP) when deciding which brands to buy. Further, as Park, et al., (1989) suggest, the reliance by households on external sources of memory when shopping increases the likelihood that they will encounter information at the point-of-purchase which will change the salience of certain unrecognized needs (e.g., when consumers are exposed to sales prices, new package sizes, and so on). Consequently, the household may decide to switch products/brands from the planned set and thus not redeem previously collected coupons. Park, et al., report that in their study fully one-third of all unplanned buying decisions were caused by the triggering of new needs through active processing of in-store information. The point-of-purchase information was also found to be an important factor in shopper decision to switch products/brands. Hence, we hypothesize that POP search will serve as a moderator of the effect of coupon collection on their redemption ( $H_2$ ).

We propose three broad categories of constructs that affect coupon collection. The first group represents the benefits from using coupons, while the second represents the opportunity cost of using them. Combined, these two sets of constructs correspond to the

cost-benefit framework employed by Stigler (1961) to explain consumer information search behavior. Stigler postulated that consumers search for price information as long as the marginal cost of search is less than its marginal benefits. In his model, consumers' benefits are equal to the amounts saved due to search and the cost is expressed as opportunity cost of time spent searching for the lowest price. Similarly, coupon collection may be conceived as the outcome of perceived benefits and perceived costs. Benefits will have a positive influence while costs will have a negative influence. As long as the expected marginal benefits exceed marginal costs, coupon collection should increase. When the two are equalized, the household would have arrived at the optimum level of coupon collection. We have also incorporated in the model additional behavioral variables, posited in the literature to explain household coupon proneness as the third construct.

Coupon collection requires expenditure of time. Most households have limited amount of free time which they must apportion among competing uses. Per necessity, they must balance the cost of time with likely rewards from different activities when making time allocation decisions. Research by Blattberg, et al., (1978) suggests that working women and those with young children are less likely to redeem coupons. In a related study, Narasimhan (1984) has used demographic variables such as family income, education, employment status, presence of young children in the family as proxy variables for household opportunity cost of time when estimating its impact on coupon usage. After extensive analysis of panel data from 1,000 households in 20 different product categories, Narasimhan has found that households for whom it is costlier to use coupons are less likely to use them. His findings were confirmed in a recent study by Bawa and Shoemaker (1987) who observed that coupon-prone households differed from non-prone households



with respect to the opportunity cost of time as measured through family's income and husband's education. Based on the findings of previous studies, we hypothesize that the opportunity cost of time negatively influences coupon collection (H<sub>3</sub>).

With respect to the measurement of cost of time, previous researchers have not obtained a direct measure of opportunity cost of time for households. Measures such as family income need not necessarily represent the true opportunity cost of time for a household. For example, retired household (or one receiving income through transfer payments or investments) has a greater amount of total time at its disposal than one who must work to achieve the same level of income. This difference in the total amount of time available is likely to influence the opportunity cost of time for the two households. The first household will simply have more time available at its disposal and hence may assign lower value to the marginal time than the second household. Furthermore, due to their lifestyles, two households with similar income, education and occupation may have different opportunity cost of time. Households who are socially active and have many alternative uses of time may be more hard pressed for time. Hence, they may assign greater value to their time than a more docile household. Even otherwise it seems unreasonable to assign the same value to one's "free" time as work time since the free time may have little or no value to the person (Mabry, 1970).

Coupons offer direct price reduction to households. They pay less than the list price for the product and do not have to rely on an intermediary to pass the benefit along to them. In a national study by Flair Communications (Hume, 1988), 83% of the respondents reported that coupons increase the value of shopping dollars. While direct financial benefits can be a strong force in motivating households to collect coupons (Shimp

and Kavas, 1984), shoppers may benefit from coupons in other ways. Coupons take the risk out of trying new products (Sims, 1977; Strang, 1981; Thompson and Tat, 1981). According to a study by Los Angeles Times (1975), consumers perceive coupons as enabling them to try new and different products at a substantially lower cost (c.f., Strang, 1981). Similarly, research conducted by Burke for John Blair Marketing and Donnelley Marketing indicates that between 59 and 75% coupon redeemers say coupons regularly or frequently enable them to try new products. A third benefit from the use of coupon is the pride and satisfaction achieved from receiving the discount (Schindler, 1984; Antil, 1985; Jolson, Weiner, and Rosecky, 1987). A study by Cotton and Babb (1978) reports that consumers' response to promotional deals is substantially greater than an equivalent price reduction. In their study, a 15% price reduction yielded an increase in sales for dairy products between 3 and 25%. However, a similar reduction through coupons generated sales increases between 20% to 70% for households buying the products on a regular basis and 28% to 400% for all households.<sup>2</sup> Similarly, in a simulated shopping game Schindler (1984) observed that the probabilities of selecting couponed brands were consistently higher than for the brands for which prices had been reduced. These findings suggest that by obtaining discount through independent judgment, the shopper may be able to take credit for the savings. The consumer can thus feel having "won" or being a smart shopper. Thus, it is possible that the prospect of enjoying such feelings may increase collection of coupons.

A final consumer benefit is the information provided by the coupon. As Ward and Davis (1978) suggest, coupons are a tangible reminder to the consumers about the availability of a particular product in the market place. In effect, coupons as a potent

means of sales promotion serve the same role as advertisements directed at households to draw their attention towards the advertised product. Schindler (1984) has shown that coupons influence consumers' decision process first through the information about the existence of new brand (referred as "awareness mechanism"), and then through the information about a discount from "regular" price (labeled as "discount information mechanism"). Lin (1986) has used signaling theory to show that coupons serve as signals of quality when there is informational asymmetry between buyer and seller in the market place. Benefits from coupons, therefore, were hypothesized to be related positively to coupon collection (H<sub>4</sub>).

Our model hypothesizes three constructs which affect the cost-benefit framework for coupon collection. **Financial Pressure** and **Product Innovativeness** are hypothesized to positively influence benefits households perceive from coupon collection (H<sub>5</sub> and H<sub>6</sub>). Benefits from using coupons are likely to be influenced by the financial situation of households. Families under greater pressure to meet a budget are likely to see greater benefit from the use of coupons. Coupons can be used by them to stretch their family budget by being able to buy items they would otherwise not be able to afford, cut total food-related expenses, and fight against the negative impact of inflation on their shopping basket. Studies by Progressive Grocer (1979), report that 63% of the households in its survey use cents-off coupons to reduce the impact of inflation. In a similar survey in four western cities by the Food Marketing Program at the University of Southern California (1979) 40% of the respondents reported using coupons to cut cost. A study by the Los Angeles Times reported that coupons are "sometimes used to give the family a treat by applying the savings toward the purchase of an item which would normally be a luxury,

or by only buying certain products when they had an applicable coupon" (Strang, 1981). This financial pressure is different from family income used by earlier researchers (e.g., Blattberg, et al., 1978) as a proxy measure for household's opportunity cost of time. Instead, the proposed construct is a measure of constraints on the family budget and recognizes that decision situations of families differ. Families with unequal members but similar income are unlikely to experience similar constraints. The family with larger number of household members would per necessity need to devote a higher proportion of funds on groceries and as such would be under greater financial pressure. They would also perceive greater benefit from coupon redemption.

A major objective of the use of cents-off coupons is to introduce new or improved product or services in the market (Simms, 1977). Studies at P&G show that coupons are seven times more effective in attracting new customers than special low prices marked on the package (Strang, 1981). In economic terms, coupons are a form of subsidy from the manufacturer to potential adopter. Instead of paying the full price, the shopper pays a lower price and thereby reduces the potential financial loss in the event the product is not found to be satisfactory upon consumption. This benefit is more likely to be valued by households who exhibit greater interest in buying new and different products. Coupons enable them to experiment with newer products without the concomitant exposure to the financial risk inherent in paying full price for a new or unknown product/brand.

The third construct, **Brand Loyalty**, has been hypothesized to negatively influence perceived benefits from coupons (H<sub>7</sub>). Two primary dimensions of loyalty have been identified by Jacoby: brand loyalty behavior and brand loyalty attitude. The brand loyal behavior manifests itself through the repeated purchase of a specific brand while the brand

loyal attitude is exhibited through households' predispositions to behave in a "selected fashion." Consequently, a brand loyal shopper is likely to ignore cents-off coupons for dispreferred brands. While occasionally a brand loyal household may indeed find coupons for the preferred brands, since a vast majority of coupons are issued to promote adoption of new or improved products (Aycrigg, 1981; Matosian, 1982), its yield from such a search is likely to be much less than that of a non-brand loyal household. Hence, relatively, stronger the brand loyalty lower the benefit a household should receive from coupon collection and consequently less interested they should be in collecting coupons. Several studies -- Cunningham (1961), Tate (1961), Massy and Frank (1965), Day (1969), Montgomery (1971), Bawa and Shoemaker (1987), and Jain, Pinson, and Malhotra (1987) - - have investigated the relationship between loyalty and deal proneness in a variety of domains. Except for the study of Massy and Frank, strong statistically significant relationship between loyalty and deal proneness has been found in the hypothesized directions.

In summary, we have conceptualized a behavioral model which incorporates the interaction of couponing with other elements of household shopping decisions. Towards this, we have hypothesized a two-stage mechanism: coupon collection and redemption intervened by the point-of-purchase search. The proposed model incorporates both Stigler's cost-benefit framework as well as the effects of situational factors on coupon proneness. Our review reveals a body of literature examining one or more of the basic linkages in the household deal proneness. In the foregoing these linkages have been identified and posited as separate research hypotheses. One limitation of the current literature is the absence of studies which simultaneously examine the full set of

relationships among cost, benefit, coupon proneness posited in Figure 1. Our study is an attempt to fill this void in the literature.

## METHODOLOGY

### Data Collection

The model was examined through a field investigation in a large north-eastern metropolitan city in the United States during the Spring of 1988. Through the cooperation of one of the largest chain stores in the sampled city, shoppers were approached in a study about grocery shopping. They were to fill a questionnaire and return it within a week in the attached business reply envelope to qualify for participation in a cash give away. Each participant was also given a \$2 coupon redeemable against purchase of groceries worth at least \$20. A total of 570 questionnaires were distributed out of which 376 questionnaires were returned by the cut-off date. The analysis presented here is based upon data from 279 cases for whom complete model-related information was available. A comparison of the profile of the survey respondents to the internal data of the management suggests that the sample was representative of the shoppers at the sponsoring store.

### Operationalization

A sample item used to operationalize each construct of the proposed model is presented in Table 1. Also, the values of Cronbach alpha for each construct are presented in the last column of the table. The specific items included to measure each construct were selected on the basis of a review of the literature in couponing, consumer behavior,

and marketing and discussions with industry experts. A brief discussion of measures employed for each construct follows.

**Benefits from Coupons (BC):** The various benefits occurring as a result of coupon usage were grouped into four broad categories: financial ( $y_1$ ), risk reduction ( $y_2$ ), information value ( $y_3$ ), and satisfaction ( $y_4$ ). Respondents were asked to express their dis/agreement on 6-point Likert statements anchored with "definitely disagree" (1) and "definitely agree" (6). Alpha values for each dimension of perceived benefit were above the minimally acceptable level of 0.70 recommended for basic research (Nunally, 1978).

**Coupon Collection (CC):** Respondents indicated their dis/agreement using six-place Likert statements. Five items used in this scale capture the extent to which respondent searched for coupons in media ( $y_5$ ), clipped them ( $y_6$ ), organized for ease of access ( $y_7$ ), took them on shopping trip ( $y_8$ ), and consulted when buying grocery item ( $y_9$ ). The coefficient alpha for the scale was 0.84.

**Coupon Redemption (CR):** Following Shimp and Kavas (1984), retrospective self-report of coupon usage was employed to measure coupon redemption by households. The data consisted of response to 5-point scale measuring the coupon usage when buying a representative product basket. The basket included seven product categories: bread, jams/jellies, soft-drinks, potato chips, dish washing liquid, laundry detergent, and ready-to-eat cereal<sup>3</sup>. Consistent with Bawa and Shoemaker (1987), a Coupon Proneness Index (CPI) was prepared by counting the frequency with which a given household was "above median" in coupon usage across the seven product classes. Thus, our index ( $y_{10}$ ) ranged from 0 to 7; the households who were "below median" in all product categories scored a zero on the index, while those that were "above median" in all seven categories scored a seven.

**Product Innovativeness (PI):** Product Innovativeness was operationalized with questions such as "I like to buy new and different things". The scale was based on three statements ( $x_1$  to  $x_3$ ) and its coefficient of reliability was 0.78.

**Financial Pressure (FP):** The financial pressure experienced by a household was measured by the proportion of total family income spent on groceries ( $x_4$ ). The figure was arrived at by first multiplying the weekly grocery expenditure by 52 (to obtain an estimate of the annual grocery expenditure) and then dividing this amount by the annual household income. A high value would indicate that the household must devote a greater proportion of family income to feed the family.

**Brand Loyalty (BL):** Since the model proposed here explains coupon usage in general, we developed a brand loyalty construct based on household loyalties to the seven product categories used to compute CPI. For each product, respondents indicated their degree of agreement with the three statements shown at the end of Table 1 using a scale which ranged from "always" (1) to "never" (5). The alpha value for each scale ranged between 0.76 and 0.92. The summated value for each product ( $x_5$  to  $x_{11}$ ) served as alternative indices of household brand loyalty.

**Opportunity Cost of Time (OC):** The opportunity cost of respondents' time was determined by asking them to assign dollar value to one hour spent: (a) grocery shopping for someone else ( $x_{12}$ ), (b) doing work suitable to their skill ( $x_{13}$ ), and (c) grocery shopping for themselves ( $x_{14}$ ). The alpha coefficient for the scale was 0.78.

**Point-of-Purchase Search (PP):** Respondents were asked to express their dis/agreement using four Likert type statements ( $x_{15}$  to  $x_{18}$ ) designed to measure their propensity to search for information at the point-of-purchase. The alpha value for this



scale was 0.69. A sample of the items used to measure the construct is shown in Table 1.

### Estimation Procedure

Validity of the model specified in Figure 1 was tested using Wold's (1975) Partial Least Squares (PLS) technique (Fornell and Bookstein, 1982). In PLS, linear regressions are used to model relationships among variables, which can be observed either directly (manifest variables or MVS) or indirectly (latent variables or LVS) by multiple indicators. The latent variables are estimated as weighted sums of their hypothesized indicators. An iterative procedure is used to estimate the weights for the indicators and regression coefficients for MVS and LVS by the PLS algorithm (Lohmoller, 1989). Unlike the maximum likelihood estimation procedures (e.g., LISREL), the technique does not impose multinormal distribution requirements on the data. The parameters estimated by PLS are distribution free and their significance can be tested by using Tukey's jackknife technique.

Following Sharma, et al., (1981), Moderated Regression Analysis (MRA) was employed to test the role of POP as a moderator of the relationship between coupon collection and redemption. This entailed hypothesizing three causal paths that feed into the outcome variable of coupon redemption: the impact of the coupon collection ( $\beta_{CC,CR}$ ), the impact of POP search ( $\beta_{PP,CR}$ ) and the product of the two  $\beta_{CC \cdot PP,CR}$ ). Sharma, et al., describe MRA procedure in detail (1981, p. 295) and it need not be repeated here. For POP search to be a "pure" moderator, the coefficient representing the interaction term ( $\beta_{CC \cdot PP,CR}$ ) should be statistically significant while the main effect of POP search ( $\beta_{PP,CR}$ ) should not be significant. They describe a variable as a "quasi moderator"<sup>4</sup> where both

the interaction term and the main effects are found to be statistically significant. The indicators of the interaction term were the product of the indicators of coupon collection (5) and POP search (4). This yielded us with 20 indicators for the latent variable.

## RESULTS

Table 2 presents the results of the measurement model. Loadings for indicators of all the constructs are high and their signs are consistent with prior expectations. The residual variances are reasonable. Fornell and Larcker (1981) have suggested Average Shared Variance ( $\rho_{VC}$ ) as a measure to assess convergent and discriminant validity. A reasonable condition for satisfying convergence is that  $\rho_{VC}$  for a construct should exceed 0.5. The Average Shared Variance ranged between 0.68 (OC) and 0.44 (BL). The larger residual for brand loyalty is perhaps not surprising. Given the general nature of the model the construct is designed to capture multi-product loyalty of households based upon their loyalties towards individual products in a grocery basket. Although the reliability of each index of loyalty exceeds the 0.5 to 0.6 range of alpha suggested by Nunnally (1978) for exploratory research, the results indicate that additional research is needed to develop a still better measure of multi-product loyalty. To summarize, with the exception of loyalty variables, the model has adequate convergent validity. Discriminant validity is the degree to which a construct differs from other constructs. Fornell, Tellis, and Zinkhan (1982) suggest that an acceptable test of discriminant validity will be for the variance shared between any two constructs to be less than the variance shared between a construct and its measure. In all cases, this was found to be true. Hence, the results suggest that there is discriminant validity for the constructs used in this investigation.

Estimates of the structural model are presented in Table 3. t-values are from the jackknife parameter estimates and jackknife standard errors (Fenwick, 1979; Gray and Schucany, 1972). All paths were found to be statistically significant at the 0.05 level or better. Since the estimates in PLS are standardized, one can interpret coefficients between the various constructs in the same way one would interpret regression coefficients in classical Ordinary Least Squares regression. While households who collect coupons are more likely to redeem them ( $\beta_{CC,CR} = 0.16$ ), POP search serves as a significant "quasi-moderator" of their influence on coupon redemption ( $\beta_{CC \cdot PP} = 0.40$ )<sup>5</sup>. Thus, households do not automatically buy a product just because they happen to have a coupon for it. The decision to redeem a coupon is accompanied by an active search and comparison at the point-of-purchase. In terms of the decision to collect coupons as the opportunity cost of time increases, our findings suggest households are less likely to collect coupons ( $\beta_{OC,CC} = -0.11$ ). However, perceived benefits from coupons were found to influence their collection ( $\beta_{BC,CC} = 0.60$ ). Thus, those who see greater benefits from coupons are more likely to collect them. The amount of benefit derived from coupons is influenced by the individual's financial situation and interest in trying new and different products. Coefficients of both the financial pressure a family is in and household product innovativeness were found to be positive and statistically significant ( $\beta_{FP,BC} = 0.07$ ,  $\beta_{PI,BC} = 0.44$ ). Household brand loyalty indeed serves the blocking role in couponing. Once precommitted to specific brands households see less benefits from coupons ( $\beta_{BL,BC} = -0.14$ ).

In terms of the variance explained, the model seems fairly successful with 22.65% of the variance explained in coupon redemption and 38.91% in coupon collection. This

compares favorably with the low amount of variance generally explained by previous deal proneness studies. Fornell, et al., (1982) have proposed  $M^2$  as the global measure of the efficacy of the hypothesized model and its measures. Values of the index ranges between 0 and 1 and will be high when measurement error is low and a minimum number of constructs are used.  $M^2$  for the hypothesized model is 0.68 which substantially exceeds the 0.5 cut-off criterion suggested.

## DISCUSSION

The present study was designed to study household coupon proneness. Towards this we have offered a conceptual model. We characterize coupon proneness as a multi-stage process (Neslin, Henderson, and Quelch, 1985). In the first stage, the household collects coupons. Redemption follows collection and was hypothesized to be moderated by point-of-purchase search.

Based upon the past literature, we hypothesized that propensity to collect coupons will increase as the households perceive higher levels of benefits from such coupons. Concurrently, given that coupon collection impinges on the free time of households, those with high opportunity cost of time will be less inclined to collect coupons. Brand loyalty gives marketers some protection from competition by making households less elastic to promotional activities (coupons) and thereby serves as a blocking mechanism in the marketplace. Finally, households who are under financial pressure and who are interested in newer products were hypothesized to derive greater benefit from coupons.

Except for the study by Shimp and Kavas (1984) no previous attempt has been made to simultaneously test all the hypotheses relating to coupon proneness using a causal

framework. Furthermore, single indicators instead of multiple indicators of various constructs have been the common practice. In this study we have simultaneously tested all the hypotheses using a structural equation model. With the exception of financial pressure, each construct was measured with multiple indicators with high degree of inter-item reliability. We employed a direct measure of household opportunity cost of time instead of the indirect measures of cost commonly used in previous research (e.g., income, occupation, work status of spouse, home ownership). We broadened the definition of benefits that households derive from coupons and incorporated risk reduction, informational and personal satisfaction besides financial benefits from coupon redemption in our analysis.

The PLS analysis supports the proposed model and various research hypotheses. We offer evidence that coupon redemption is moderated by the POP activities of the shopper. In designing their overall promotion strategy, the manufacturers need to recognize the impact of interactions with other elements of the total marketing program. Possibly having coupons encourages shoppers to compare prices across brands leading to better deals. This in particular is significant since coupons tend to define the choice set of shoppers and shoppers have been found to give preference to the brands for which they have coupons (Conover, 1989). Manufacturer-initiated support programs at the POP could substantially enhance the effectiveness of coupon-related programs. Further research is needed to examine the impact of other elements of in-store promotion strategy, e.g., type of displays, their length, location, shelf positioning, and intensity in stimulating coupon redemption.

The success of a coupon promotion campaign is influenced by the rate of

redemption. The management effort would be wasted if the response rate is small. However, before coupons can be redeemed it is essential that they are collected by the target population. In the study we found that the perceived benefits from coupons serve as a strong motivational factor in their collection. Hence, the marketer could benefit through the use of themes which highlight the benefits from coupon redemption as part of the overall coupon promotion program. The specific benefits could even be imprinted on the coupon to set it apart from the noise and clutter of thousands of coupons distributed in the market. The negative impact of the opportunity cost of time emphasizes the importance of the face value of coupons. Smaller the face value, lower will be the incentive to collect them. The potential savings need to be sufficiently high to motivate households to undertake the effort to collect them. This recent attempt by some manufacturers to electronically dispense coupons at the supermarkets and thereby reduce the time and effort required to clip, sort, and organize coupons is a set in the right direction. However, research is needed to examine its likely payoff when considering the cost of equipment, maintenance, and service and the type of shoppers utilizing it.

We have performed analysis at the overall level, essentially ignoring inter-product differences. The proposed model can easily be adapted to accommodate analysis of data for each product category (e.g., Narasimhan, 1984). However, such analysis will force one to make a very restrictive assumption that there is only one couponed product. As Narasimhan (1984) has pointed out, "this assumption does not hold, and a consumer simultaneously decides on the coupon usage in different product categories." We echo his concerns and have elected to work within the established research paradigm (e.g., Blattberg, et al., 1978; Dodson, et al., 1978; Bawa and Shoemaker, 1987).

## FOOTNOTES

1. Deals are defined by the past researchers as any temporary price reductions including coupons. While the focus of our paper is on coupons only, we will be referring to the dealing literature as it has some important implications for our study. During our discussion of the past literature, we will use the term "deals" and "coupons" almost interchangeably.
2. It should be acknowledged that the increase in the purchase may be influenced by the attention-gathering power of coupons.
3. Products included in this study were selected systematically. Three criteria were considered for choosing a representative sample of products. The percentage of shoppers buying various products was the first criterion. This information was obtained from the September 1988 issue of Progressive Grocer. Only products purchased by more than 50% of the population were considered. Since only a few products were going to be included in the study, they had to be the ones that were bought by a majority of the households. Frequency of purchase of these products was the second criterion. This was done to obtain the maximum number of observations from each respondent. Only products bought at least once during a typical grocery cycle (usually 4-6 weeks) were included. The last criterion was the extent of couponing in various product categories. A frequency distribution was constructed for the products for which coupons were distributed through FSI's in the Sunday edition of the local newspaper over a four-month period. Since more than 80% of the grocery coupons are distributed through FSI's in Sunday newspapers, this gave a fairly good idea of the extent of couponing for various

products. Only the products for which coupons were distributed regularly were included.

4. The apparent reason for restricting this definition of moderator variable is to obviate the ambiguity about which of the predictors is the moderator. However, the authors suggest that "this ambiguity can be minimized if justification for a particular variable being a moderator can be provided on theoretical grounds."
5. A review of Table 3 will show that POP search also had a significant main effect ( $\alpha < 0.05$ ) on coupon redemption. Hence, POP search is not a pure moderator (Sharma, et al., 1981).



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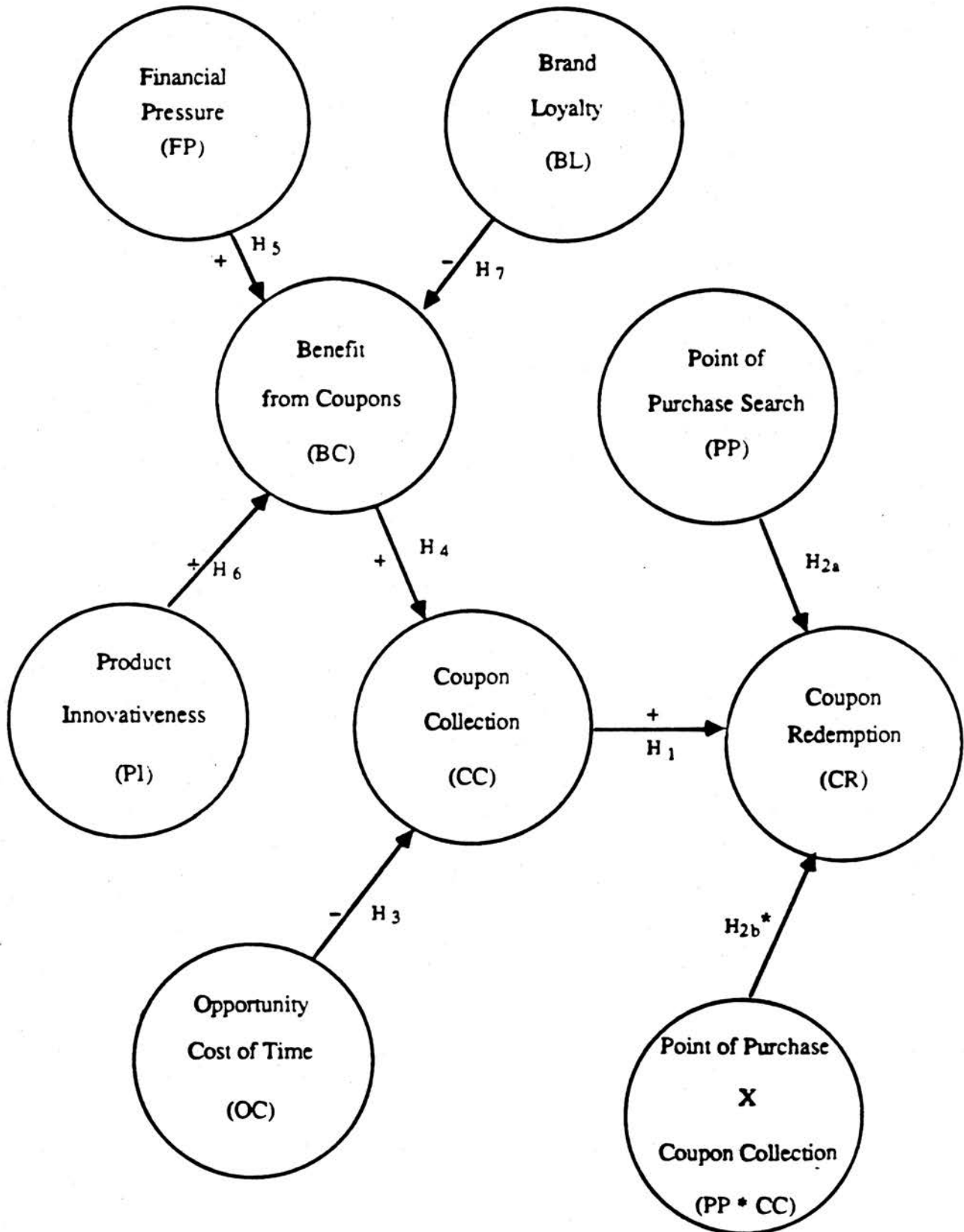
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**FIGURE 1**  
**A Conceptual Model of Household Coupon Proneness**



\*Hypothesized to be statistically significant.

TABLE 1

Construct	Dimension	Total # of Items	Typical Statements	Coefficient Alpha
Benefit from Coupon	Financial Gain	7	I can save a lot of money by using coupons	0.83
	Risk Reduction	3	Coupons reduce the risk of trying unfamiliar products	0.71
	Information Value	3	Coupons make me aware of new products	0.71
	Pride and Satisfaction	7	I get personal satisfaction from using coupons	0.89
Coupon Collection		5	I like to clip coupons for grocery products	0.84
Product Innovativeness		3	I like to buy new and different things	0.78
Brand* Loyalty	Jams and Jellies	3		0.81
	Bread	3		0.76
	Soft-drinks	3		0.81
	Dish washing Liquid	3		0.92
	Laundry Detergent	3		0.91
	Ready-to-eat Cereal	3		0.83
	Chips	3		0.88

TABLE 1 (Continued)

Construct	Dimension	Total # of Items	Typical Statements	Coefficient Alpha
Opportunity Cost of Time		3	Suppose someone offers you an extra hour of work suitable to your skills, at what wage rate will you be willing to work?	0.78
Point of Purchase Search		4	Before buying a product, I always check the unit price	0.69

\*For all products, same items were used with product name substituted at appropriate places. The specific items used were:

1. I buy the same brand of \_\_\_\_\_.
2. If I were to notice a lower price on one of the brands of \_\_\_\_\_ that I normally do not buy, I will buy it.
3. If I had a coupon for one of the brands of \_\_\_\_\_ that I normally do not buy, I would buy it.

The responses were on a scale of (1) - (5) "Always" - "Never". The response to item 1 was transformed so that a high value of item sums reflects high brand loyalty.



**TABLE 2**  
**Measurement Model Parameter Estimates**

Constructs and Observed Variables	Loadings	Error variance	$R^2$
<b>Benefit from Coupons (BC)</b>			<b>.67</b>
$y_1$	.88	.22	
$y_2$	.70	.51	
$y_3$	.78	.39	
$y_4$	.89	.20	
<b>Coupon Collection (CC)</b>			<b>.60</b>
$y_5$	.83	.31	
$y_6$	.72	.48	
$y_7$	.81	.34	
$y_8$	.71	.49	
$y_9$	.80	.36	
<b>Coupon Redemption (CR)</b>			
$y_{10}$	1.00	0.00 <sup>a</sup>	
<b>Product Innovativeness (PI)</b>			<b>.66</b>
$x_1$	.89	.20	
$x_2$	.80	.36	
$x_3$	.73	.47	
<b>Financial Pressure (FP)</b>			
$x_4$	1.00	0.00 <sup>a</sup>	
<b>Brand Loyalty (BL)</b>			<b>.44</b>
$x_5$	.58	.66	
$x_6$	.70	.51	
$x_7$	.66	.56	
$x_8$	.64	.58	
$x_9$	.72	.47	
$x_{10}$	.57	.68	
$x_{11}$	.75	.44	
<b>Opportunity Cost of Time (OC)</b>			<b>.68</b>
$x_{12}$	.83	.31	
$x_{13}$	.93	.14	
$x_{14}$	.69	.52	

TABLE 2 (Continued)

Constructs and Observed Variables	Loadings	Error variance	$R^2$
<b>Point-of-Purchase Search (PP)</b>			<b>.51</b>
$x_{15}$	.64	.59	
$x_{16}$	.66	.57	
$x_{17}$	.80	.37	
$x_{18}$	.76	.43	
<b>Coupon Collection x Point-of-Purchase (CC*PP)</b>			<b>.59</b>
$y_5 \cdot x_{15}$	.74	.45	
$y_5 \cdot x_{16}$	.75	.43	
$y_5 \cdot x_{17}$	.83	.32	
$y_5 \cdot x_{18}$	.78	.39	
$y_6 \cdot x_{15}$	.77	.40	
$y_6 \cdot x_{16}$	.81	.35	
$y_6 \cdot x_{17}$	.83	.30	
$y_6 \cdot x_{18}$	.82	.33	
$y_7 \cdot x_{15}$	.75	.44	
$y_7 \cdot x_{16}$	.75	.44	
$y_7 \cdot x_{17}$	.76	.40	
$y_7 \cdot x_{18}$	.76	.42	
$y_8 \cdot x_{15}$	.75	.44	
$y_8 \cdot x_{16}$	.77	.41	
$y_8 \cdot x_{17}$	.81	.34	
$y_8 \cdot x_{18}$	.80	.37	
$y_9 \cdot x_{15}$	.72	.48	
$y_9 \cdot x_{16}$	.68	.54	
$y_9 \cdot x_{17}$	.74	.46	
$y_9 \cdot x_{19}$	.69	.53	

<sup>a</sup> Fixed Parameters

**TABLE 3**  
**Structural Model Parameter Estimates**

Hypothesis/Relationship	Path <sup>a</sup>	Standard Error	T-Value <sup>b</sup>
H <sub>1</sub> CC → CR	0.16	0.061	1.80
H <sub>2</sub> PP → CR	-0.13	0.036	-4.85
H <sub>3</sub> PP*CC → CR	0.40	0.082	5.74
H <sub>4</sub> OC → CC	-0.11	0.016	-6.35
H <sub>5</sub> BC → CC	0.60	0.008	68.94
H <sub>6</sub> FP → BC	0.07	0.013	6.39
H <sub>6</sub> PI → BC	0.44	0.015	29.47
H <sub>7</sub> BL → BC	-0.14	0.015	-8.1

<sup>a</sup>Standardized estimates based upon total sample.

<sup>b</sup>Jackknife estimate divided by jackknifed standard error.  
 All coefficients significant at  $\alpha < 0.05$ .