AN ASSESSMENT OF THE SIGNIFICANCE OF IMPULSE PURCHASING FOR CONVENIENCE STORE RETAILERS

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Abstract

A study of 1014 consumers at four convenience food stores was conducted to identify the characteristics of impulse purchasing behavior and develop a methodologycally sound procedure for studying such behavior. The study found that impulse purchasing behavior is significant, varies by product line, and is not necessarily effected by in-store merchandising programs. It was also found that a pre-purchase/post-purchase study procedure can be an appropriate methodology if it is supplemented by an after-purchase interview.

Unplanned or impulse purchasing behavior has been researched for numerous years to determine its significance in retail management decision-making [Stern] [Kollat and Willett]. In fact, E. I. DuPont has conducted periodic studies on unplanned purchasing among supermarket patrons since 1935 [DuPont]. This research suggests that impulse purchasing has increased from 24.6 percent of all supermarket purchases in 1935 to 64.8 percent in 1975 [Chain Store Age].

Bellinger, et.al. recently reported on a study which identified the significance of impulse buying in retail department stores. By asking 1600 shoppers to identify when they decided to purchase the items they had in their possession upon leaving a retail store, the researchers found that 38.7 percent of purchases were impulse [Bellinger, Robertson, and Hirschman].

There are several explanations for differences in the significance of impluse purchasing as identified by DuPont and Bellinger (64.8% vs. 38.7%). First, both studies explored different methodologies. The supermarket study identified customer purchase intentions prior to entering a store, then compared those intentions to actual purchases. The extent of impulse purchasing was determined by subtracting purchase intentions from actual purchases [DuPont]. The primary problem with the methodology employed by DuPont was that consumers may be unable to identify prepurchase intentions because of the large number of items purchased in a supermarket during one visit. Bellinger's study departs from the pre-and-post questioning procedure by simply questioning customers about each purchase when they were leaving the store. Application of Bellinger's procedure, however, would be difficult in supermarket retailing because of the large number of purchases during one visit.

Differences in the significance of impulse purchasing as identified by the studies can also be attributed to differences in the institutions which were studied. The two studies strongly suggest that impulse behavior varies significantly between different types of institutions. Before this observation can be conclusively stated, however, a more valid methodology for studying shopper behavior in supermarkets must be established.

Study of Impluse Buying in Convenience Stores

Although comparing purchase intentions with actual purchases has limited applications in supermarkets, its usefulness should not be completely ignored by researchers. Among convenience store whose customers can remember which items they plan to purchase, the methodology can reveal interesting and accurate findings about impulse buying. Utilization of a pre- and post-measure approach in convenience stores can also provide additional insight into purchase behavior, in general. To identify feasibility of a pre- and post-measure and develop a better understanding of purchasing behavior, a study of convenience store shoppers was conducted. Specifically, the study was designed to accomplish the following:

Determine percentage of purchases which were unplanned or impulse;

Determine the percentage of customers that purchase at least one item on impulse;

Identify the extent of impulse purchasing by product category and demographic characteristic;

Preliminarily observe and study "planned" impulse purchasing behavior.

Measure the effect of a store design that emphasizes a fast food section on impulse buying; and

Develop a methodology that accurately measures impulse purchasing behavior in convenience stores and supermarkets.

Methodology

A survey of 1014 consumers was conducted at four convenience food stores. During a consecutive seven-day period a relatively equal number of interviews was conducted at each store. Times of interviews were varied each day so that all operating hours were represented at each store.

At each store a two-person interview team was employed. These interviewers were responsible for interviewing and subsequently observing customers in the various stores. One person, located immediately outside the entrance would ask respondents about purchase intentions, patronage, and demographic characteristics. The person located inside the store would observe actual purchasing behavior and dollar amount of purchases. Interview forms were subsequently compared to determine extent of impulse purchase (i.e., difference between purchase intention and actual purchase).

The four stores were divided into two groups. The two-store experimental group employed a new design with emphasis on an enlarged fast food section. A traditionally limited fast food section was utilized in control stores. Customer base and store volumes were similar for control and experimental groups.

The study also attempted to provide insight into "planned" impulse purchasing behavior: During questionnaire pretesting it was observed that some shoppers intended to purchase a product from a general product category but had not made a specific product decision upon entering the store. In other words, these shoppers planned to make an impulse decision after more information on product availability, price, and quality could be processed. In order to study this phenomenon, shoppers were probed during the preliminary interview to determine if a specific product or brand decision had been made prior to entering the store.

Study Findings

Study findings indicated that 30.5 percent (446) of the items purchased were unplanned purchases. Also, 36.8 percent of the respondents purchased at least one item on impulse. The relatively slight deviation between "percent of impulse purchases" and "percent of impulse purchasers" is attributed to the fact that most people that made an impulse purchase only bought one item on impulse. Specifically, 72.4 percent of the impulse purchasers bought one item on impulse, 21.8 percent purchased two items, 4.2 percent purchased three items, and 1.7 percent purchased four items on impulse.

Products that are significantly subject to impulse purchasing (i.e., purchased on impulse more than 50% of the time) are pastries, candy, snack food chips, and gum. Items which are purchased on impulse less frequently than 50 percent of the time are identified in table 1. Although not listed in table 1 because of the relatively small sample size (18 purchases), magazines were purchased on impulse 83.3 percent of the time.

Some consumers planned the purchase of an item from a product category prior to entering the store but did not select a particular brand until in-store evaluation could be made. Study findings indicate that approximately 7.8 percent of all purchases were made in this manner. Items specifically subject to in-store evaluation include (1) pastries, (2) fast food, (3) Juice, (4) candy, (5) soft drinks, and (6) snack food chips. Since the number of "planned" impulse purchases was small for most product categories, no conclusions can be made about its significance. Future studies utilizing larger samples, however, will provide more conclusive evidence of the significance of "planned" impulse purchasing.

TABLE 1
EXTENT OF IMPULSE PURCHASING*

Item	Impulse purchases (%)	Non-impluse (%)	General decision on category-not on brands and specific product (%)
Pastries/ Cupcakes	60.7	13.1	26.2
Candy	58.5	25.5	16.0
Snack Food Chips	56.5	31.9	11.6
Gum	54.4	45.6	0
Fact Food	45.8	33.9	20.3
Health/ Beauty Aids	41.0	56.4	2.6
Ice Cream	35.0	60.0	5.0
Juice	31.4	48.6	20.0
Bread	29.4	70.6	0
Dairy Products	26.9	68.9	4.2
Coffee	22.6	75.5	1.9
Newspaper	17.0	83.1	0
Tobacco	16.6	83.0	0.4
Beer	16.4	80.0	3.6
Soft Drinks	14.4	70.4	15.1
Gas	9.8	90.2	0

*Only items with 20 or more purchases included.

Impulse vs. nonimpulse purchasing was crosstabulated with age, income, race, sex, store type (2 different store layouts), reason for shopping at a particular store, convenience store usage rate, day of the week, and time of the day. Findings of the crosstabulation are presented in table 2 and indicate that sex is the only variable for which significant variation existed. Specifically, females made significantly more impulse purchases than males (41.0 percent vs. 35.1 percent).

TABLE 2
IMPULSE PURCHASING BEHAVIOR BY CUSTOMER CATEGORY

Category	Significance
Age	Not significant
Income	Not significant
Race	Not significant
Sex	Significant (.025)
Store Type	Not significant
Reason for Stopping at Store	Not significant
Usage Rate (# of trips in week)	Not significant
Day of Week	Not significant
Time of Day	Not significant

TABLE 3
IMPULSE VS. NONIMPULSE PURCHASES BY STORE TYPE AND CUSTOMER CHARACTERISTIC*

Product Category	Store Type	Age	Sex	Race
Gum	N.S.	N.S.	N.S.	N.S.
Candy	N.S.	N.S.	N.S.	S(.10)
Dairy Products	N.S.	N.S.	S(.01)	N.S.
Tobacco	N.S.	N.S.	N.S.	N.S.
Bread	N.S.	N.S.	N.S.	N.S.
Coffee	N.S.	N.S.	N.S.	S(.10)
Snack Food Chips	N.S.	N.S.	S(.10)	N.S.
Soft Drinks	S(.02)	N.S.	N.S.	N.S.
Beer	N.S.	N.S.	N.S.	N.S.
Newspaper	N.S.	N.S.	N.S.	N.S.
Health/Beauty Aid	N.S.	S.(.05)	N.S.	N.S.
Fast Food	S(.05)	N.S.	N.S.	N.S.
Ice Cream	S(.05)	N.S.	N.S.	S(.10)
Pastry/Cup Cake	N.S.	S(.10)	N.S.	S(.10)
Juice	N.S.	N.S.	N.S.	N.S.
Gas	N.S.	N.S.	N.S.	N.S.

*Only items with 20 or more purchases included.

For each merchandise line that was purchased 20 or more times, impulse purchasing behavior was crosstabulated with store type, age, sex, and race. Table 3 shows that store type impacted on the impulse purchasing of soft drinks, fast food, and ice cream. For each of the three products, impulse purchasing was more prevalent in the traditional convenience store (i.e., control stores) layout than in stores that gave additional space to the fast food section (i.e., experimental stores) (see table 4). However, more soft drinks, fast food items, and ice cream were purchased in experimental stores than in control stores.

Age impacts on purchasing health/beauty aid products and pastry items. People under 35 are more likely to purchase health/beauty aid items on impulse than people over 35 years of age (47.1% vs. 0%). Also, 67.4 percent of pastry purchases made by people under 35 were impulse purchases while 44.4 percent of such purchases made by people over 35 were impulse.

There is also a significant relationship between sex and purchasing behavior and snack food chips. Although females make a higher percent of impulse purchases than males, males are significantly more impulsive when purchasing dairy products (35.1% of purchases by males were on impulse vs. 11.9% for females) and snack food chips (66.7% for males vs. 33.3% for females).

TABLE 4
PURCHASING BEHAVIOR BY STORE TYPE

Product Category	Impulse Control Stores	Impulse Experimental Stores	Non-Impulse Control	Non-Impulse Experi.
Soft Drinks	18.1%	11.5%	65.4%	74.5%
Fast Food	65.4	30.3	23.1	42.4
Ice Cream	62.5	16.7	37.5	75.0

Product Category	General Idea No Specific Decision Control	Experi.
Soft Drinks	16.5%	14.0%
Fast Food	11.5	27.3
Ice Crean	0	8.3

Finally, white people are more likely to purchase candy, coffee, ice cream, and pastry items on impulse than non-white people. Purchase behavior of whites vs. non-whites is presented in **table 5**.

TABLE 5
PURCHASE BEHAVIOR BY RACE

Product Category	Impulse White	Impulse Non-White	Non-Impulse White	Non-Impulse Non-White
Candy	62.0%	54.5%	25.3%	36.4%
Coffee	23.4	16.7	74.5	83.3
Ice Cream	41.2	0	58.8	66.7
Pastry	62.5	53.8	8.3	30.8

Product Category	Genral Idea No Specific Product Decision White	Non-White
Candy	12.7%	9.1%
Coffee	2.1	0
Ice Cream	0	33.3
Pastry	29.2	15.4

Discussion and Conclusions

The purpose of the study was to identify the significance of impulse purchasing and "planned" impulse purchasing in convenience food stores, and determine if any variations such as store design impacted significantly on purchasing behavior. Similar to studies of department store and supermarket purchasing behavior, the amount of impulse purchasing in convenience stores is significant. Retailers should, therefore continue to develop in-store promotions that concentrate on high impulse items.

The study also suggests, however, that consumer behavior toward some high impulse items may not be effected by in-store merchandising methods. Specifically, fast food items were purchased on impulse 45.8 percent of the time. The modification of several store layouts to give additional exposure to fast foods did not significantly affect impulse behavior (i.e., impulse purchasing of fast food was higher in traditional stores than in experimental stores).* This would indicate that retailers should monitor the impact of merchandising programs on impulse behavior. Although an item may be subject to extensive impulse purchasing, efforts to stimulate that behavior may be unproductive--the item may be frequently purchased on impulse irregardless of what is done be retailers. In this instance, attractive, high profit space should be allocated to items that are impacted more significantly by in-store promotional efforts.

The study preliminarily suggests that "planned" impulse purchasing may be significant for some items. In fact, in excess of 15 percent of final purchase decisions for soft drinks, juices, fast foods, candies, and pastries were not made until in-store product evaluation could be conducted. For items that are subject to in-store evaluation, unit profit should be a primary consideration for space allocation. More research should be conducted to extensively study the profit impact of merchandising techniques which are based on "planned" impulse purchasing behavior.

When analyzed by merchandise line impulse purchasing varies by age, sex, and race. Retailers should, therefore, consider these demographic factors when allocating space to various lines. In predominately young markets, for example, in-store merchandising of health/beauty aids and pastries should reflect the market's tendency toward impulse purchasing.

Toward a New Methodology

Although impulse purchasing has been studied for numerous years, more controversy has been generated than productive research activity. Much of the controversy relates to the inadequacy of methodologies to deal with the complexities of impulse purchasing. One of the primary purposes of this study was to observe consumer behavioral patterns in convenience stores and develop a procedure that provides retailers with information that can appropriately be utilized to make more optimal in-store layout and promotional decisions.

Although there were no mechanical or administrative problems associated with the "pre-purchase/post-purchase observation" procedure, there was a theoretical problem. Even though the purchase size was usually small and intentions were normally well known, it was observed by interviewers that some customers overlooked several intended purchases during the preliminary interview. Such an oversight could, of course, result in an overestimation of the significance of impulse purchasing behavior. In future studies, therefore, it is necessary to not only observe actual purchase behavior but interview respondents about the legitimacy of purchases that appear to be impulsive.

A "pre-purchase interview/post-purchase interview" procedure involves the following steps and provides the following information: First, a pre-purchase interview is conducted to identify (1) specific purchase intentions and (2) "planned" impulse purchase intentions (i.e., a decision about general product category has been made but no specific product or brand has been selected). Second, a post-purchase interview is designed to (1) observe deviations from purchase intentions

* Since the control stores and experimental stores were not selected at random, but were selected because of their size, location, and clientel, this conclusion is tentative.

(i.e., impulse purchases) and identify product categories that are sensitive to impulse purchasing behavior, (2) identify the significance of "planned" impulse purchasing behavior and specific product lines and brands that are purchased after in-store evaluation, and (3) determine the percent of impulse purchases that were actually planned but were overlooked during the pre-purchase interview.

References

Bellinger, Danny N., Dan H. Robertson, and Elizabeth C. Herschman, "Impulse Buying Varies by Product," Journal of Advertising Research, Vol. 18 (December, 1978), pp. 16-17.

DuPont de Nemours', E.I., Consumer Buying Habits Studies, 1935, 1945, 1950, 1955, 1960, 1965, 1977.

Kollat, David T. and Ronald P. Willett, "Is Impulse Purchasing Really a Useful Concept for Marketing Decisions?" Journal of Marketing, Vol. 33 (January, 1969), p. 81

Stern, Hawkins, "The Significance of Impulse Buying Today," Journal of Marketing, Vol. 26 (April, 1962) p. 59.

"A Chronicle of Consumer Buying Habits," Chain Store Age (December, 1978), pp. 43-44.