PRODUCT DISPLAYED AT CHECKOUT MAY BE FRUITFUL TO INCREASE VOLUME OF SALE

Dr. Mrinalinee,

MBA, MA (Eco), Ph. D,& D.Litt.

Assistant Professor (Marketing Faculty)

L.N.Mishra College of Business Management

Muzaffarpur, Bihar, India

Abstract

This research indicates that customers pick magazines and cookbooks at the checkouts if they have forgotten to make their selection at the aisles. Customers who select confectionaries and beverages from the checkouts most often forget to browse for these items in the aisle. The mix of reading material displayed at the checkout is especially sensitive in view of buyers of magazines/cookbooks from checkouts not perceiving browsing of these items at checkouts as 'nice' way of passing their time. Retailers could use this study's evidence of the 'less involved' customers at checkouts as an opportunity to sell slower moving beverage and confectionery brands, those that are close to use by dates and new flavors

FULL PAPER

Introduction: Checkouts are believed to be the most valuable space area in the store because customers are almost held captive in that spot (Levy *et al.*, 2004). Estimates by the Australian Retailers Association suggest that close to a quarter of a billion dollars of sales could be generated from merchandise at the checkout counters. The reason ascribed to sales of items displayed at checkouts is that their presence at these points serves to remind customers to buy what might have missed their attention when browsing in the rest of the store. Checkout counters within a supermarket represent significant sales and profit opportunities, by driving incremental purchases from *high impulse* purchase products. The types of products displayed at the checkouts are predominantly low-involvement products that spark an immediate need and desire for fulfilment. Magazines, a product category that is

endemic at checkouts, is purported to sell, as per Hart and Davies (1996), double the quantity per square meter compared to those in a main aisle display. They also claim that off-take of confectioneries at the checkouts represent close to half of supermarket confectionery sales.

Literature Review: Display of merchandise at checkouts is encouraged by a conviction that these displays generate additional sales from impulse purchases. Neal *et al.* (2004) define impulse purchases as 'purchases made in a store that are different from those the consumer planned to make prior to entering the store'. Hart and Davies (1996), define another type of unplanned purchase, as 'reminder' purchases. These reminders represent any missed sales caused by a customer's lack of memory during their shopping trip. Hart and Davies (1996) point out that merchandise location and store displays can be an effective tool for boosting slow selling line. However, mere exposure at the checkout does not guarantee that consumers will be influenced in their purchase decisions. Inman and Winer (1998) argue that time pressure, age, gender and need recognition are also factors that influence shoppers' purchases at checkouts. Granbois (1968) proposed that shoppers who spend less time in a store would be less likely to make unplanned purchases than those who spend a longer time. It can be argued that *compulsive* buying behaviour at checkouts plays a catalyst role when a need is recognised. Rook and Fisher (1995) state that buying impulsiveness is a tendency to buy spontaneously, unreflectively, and immediately.

Bayley *et al.* (1998) suggest that low-involvement products that are inexpensive and smaller in size are more likely to be purchases on impulse. Sherif (1965) asserts that the purchase of higher involvement items on the other hand, entail more information search regarding the item. They believe that consumers ascribe less tolerance, and therefore, have "low latitude of acceptance" to the performance of higher involvement items. Further, Petty and Cacioppo (1981) believe that arising from the Elaboration Likelihood model, when considering higher involvement merchandise, consumers inevitably "expand" the number of attributes that they could benefit from the item purchased. Hawkins *et al.* (1998) maintain that any study of shopper's idiosyncratic behaviour must also examine this activity in the context in which the behaviour occurs.

Research Problem:

As a consequence of customers using credit cards and reward schemes, retailers are often aware of the character of purchases made by their patrons. However, for retailers it might be

advantageous to know whether the merchandise purchased is picked from the checkout or from the normal display. A number of customers typologies like Moschis' (1976) study, while associating shopping behaviour to customer dispositions do not explain customers' specific predispositions to buy particular products at checkouts. There appears to be a gap in the literature with regard to what particular orientations and extenuating circumstances motivate customers who purchase certain items from checkouts. Retail research has not examined the relative cognition and affectation of particular shoppers who buy specific item(s) from the checkouts. This research investigation is predicated on the assumption that shoppers select items at checkouts, which they may have forgotten to pick from the aisle.

This research seeks to examine for different products chosen from the checkout, the relative consumer cognition and affectation that they attract. Knowledge about customer's predispositions to items displayed at the checkouts is valuable for the retailer's merchandise planning efforts.

Research Methodology

The research methodology included the personal administration of a structured questionnaire seeking the attitude and behaviour towards their checkout purchases among 734 randomly selected biggest grocery shoppers across Patna and Lucknow, exiting two of India's biggest metropolitan city. The respondents were asked to check the items (magazines, recipe books, CDs/DVDs, batteries, memory cards, beverages and confectioneries) that they purchased at the checkout counters, their level of satisfaction with the waiting time at the checkouts, what influenced their decision to pick the item (s) at the checkouts, the frequency with which they used the express line and whether they were buying the item (s) from the checkout on instruction. The questionnaire also sought information about shopper behaviour and selected demographics.

Data Analysis

Almost 36% of respondents claimed to buy at the checkout more than one item category at a time. In order to accommodate a larger number of degrees of freedom, we restricted our analysis to those respondents who only bought one item category, i.e. 400 respondents. Each shopper is exemplified by the item category that they have purchased at the checkout. Given below are the groupings of products that ostensibly satisfy a generic need (in parenthesis):

1. Magazines/cookbooks (information)

2. Confectioneries/beverages (gastronomic)
3. Batteries/memory cards (utilitarian)
4. CD/DVDs (entertainment).

This research seeks to examine the relative consumer cognition and affectation that different products chosen from the checkout attract. The focus is on the binary variable:

We have modelled this dichotomous dependent variable (FORGAIS) with a Binary Logit regression model (see e.g. Hair *et al.* 2006, Ch. 5). Thus, the coefficients would reflect the impact of the independent variables on the likelihood of the shopper browsing merchandise at a checkout because he/she forgot to select the item from the aisle. The theoretical model is presented below.

Model

We model the probability of observing a value one of the dependent variable as:

$$y_i^* = \beta_0 + \beta_1 x_{1,i} + \beta_2 x_{2,i} + ... + \beta_K x_{K,i} + \varepsilon_i = \mathbf{X}_i\boldsymbol{\beta} + \varepsilon_i \qquad (1)$$

The dependent variable y^*, is assumed to be linearly related to a set of explanatory variables, x_1, x_2, …, x_K.

Where $\mathbf{X}_i$ is an $n \times K$ matrix of n observations on the K explanatory variables, $\boldsymbol{\beta}$ is a $(K+1) \times 1$ vector of the coefficients, and ε_i is a stochastic error term.

The unknown parameters of this model are estimated by the Maximum Likelihood procedure that maximises the likelihood that an event (FORGAIS) will occur. While the estimated coefficients cannot be interpreted as the marginal effect of the explanatory variables on the dependent variable, the signs of the coefficients determine the directions of these effects. A positive value implies that the probability of FORGAIS = 1 is an increasing function of the corresponding explanatory variable, while a negative parameter estimate implies the opposite.

Findings

A Binary Logit model was estimated for the dichotomous dependent variable, FORGAIS. Initially, the 'unrestricted' specification of the model was estimated. Using a stepwise regression, the independent variables that were insignificant were subsequently dropped from the model. The maximum likelihood parameter estimates of the final, 'restricted' specification are reported in Table 1. The variables that emerged as significant at 1% or 5% level in influencing the likelihood of selecting the merchandise at the checkout counters, due

to the shopper *having forgotten to select the item from the aisle* (FORGAIS) were from the following group of variables (see Table 1 for the specific significant variables):

Frequency of shopping

Frequency of selecting merchandise at a checkout

Frequency of using 'express line' checkout

Reason for selecting merchandise at a checkout

The average size of the weekly grocery bill

Satisfaction with the waiting time at the checkout

The goodness-of-fit for the model is indicated by the log likelihood value and Cox & Snell R^2 provided in a standard SPSS output. As it is evident from Table 1, the quality of models for individual categories of products is not very high, but is considered acceptable for field data.

The findings in Table 1, with respect to the signs of the coefficients, imply that the estimated probability of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle* in the category of magazines/cookbooks (READING) increases if shoppers feel that selecting merchandise from the checkout is not a nice way to keep occupied while waiting in the queue (NICE, - ve coefficient). The likelihood of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle* in this category increases with the less frequent store visits (SHMONTH, SHFORTN), more occasional use of express lines (EXPSOMET), and increasing value of the weekly grocery bills (101-150).

The estimated coefficients in the category of confectioneries/beverages (CONFBEV) suggest that the probability of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle* is an increasing function of fortnightly shopping (SHFORTN), occasional usage of express lines (EXPSOMET), failure to select the merchandise from the aisles (FORGOT).

The estimated parameters in the category of memory cards and batteries (MEMBAT) imply that the variables representing the frequency of shopping (SHFORTN, SHWEEK, SHMOREONE) have a negative effect on the probability of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle.* Similarly,

a low value of the weekly grocery bill (51-101) tends to reduce the likelihood of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle.* However, a highly significant and positive coefficient with the variable EXPSOMET (taking advantage of the 'express line', sometimes) implies a strong positive effect on the probability of that behaviour occurring.

In the category of DVDs and CDs (DVDCD an increase in the occasional usage of express lines (EXPSOMET) appears to be associated with an increase of the probability of *selecting merchandise at the checkout because the shopper may have forgotten to select the item from the aisle*. In contrast, an increase in the frequency of shopping (SHWEEK, SHMOREONE) and a low value of the grocery bill (51-100) are likely to reduce the probability of *selecting merchandise at a checkout* for the reason of our concern.

Discussions

It is evident from Table 1 that shoppers pick magazines and cookbooks at the checkouts, which they have forgotten to select at conventional stocking points in the aisles. Browsing the checkouts is not considered a surrogate to the conventional method of seeking a product among other offerings in the aisles. By implication, customers would prefer to choose from the aisle where invariably they would require to cognise with a larger selection of magazines and recipe books. Also implicit in shoppers' preference to pick the magazine or recipe book from the aisle is they believe that the item requires a considered choice. Their implied preference to "get involved" in choosing magazines or cookbooks suggest that shoppers latitude of acceptance in the choice of these products as per Petty and Cacioppo (1981) is likely to be small as it involves a fair degree of cognition.

Table 1: **Estimation Results for Logit Model**

	READINGS		CONFBEV		MEMBAT		DVDCD	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Dependent variable: FORGAIS								
SHMONTH	0.96	0.05**						
SHFORTN	1.04	0.01*	1.20	0.00	-1.04	0.07		

SHWEEK					-1.72	0.01*	-1.52	0.02**
SHMOREONE					-2.33	0.00*	-1.77	0.04**
EXPOFTEN			-0.87	0.08***	-1.27	0.06***		
EXPSOMET	2.50	0.00*	2.04	0.00*	2.76	0.00*	2.98	0.00*
NICE	-1.49	0.00*						
FORGOT			1.43	0.00*				
51to100					-1.06	0.03**	-2.31	0.00*
101to150	1.14	0.01*						
Log likelihood	-252.41		-228.73		-148.67		-92.66	
Cox Snell R^2	0.21		0.23		0.29		0.35	

*Significant at the 1% level; ** significant at the 5% level; *** significant at the 10% level.

On the other hand, shoppers somewhat concede that they consider selecting confectioneries and beverages at the checkout without the remorse of failing to inspect the aisles. Our research indicates that shoppers who habitually pick up confectionaries and beverages from the checkouts most often forget to browse for these items in the aisle (FORGOT, + ve coefficient). These "lollies" are generally priced below $ 3.00 and require relatively less outlay than most grocery items. It appears that shoppers do not put much emphasis on prospecting alternative brands or flavours of confectioneries or beverages stocked in the main aisles but find it convenient to access these items "at arms reach of desire" at the checkouts. Is fair to say that their level of involvement in the product choice is low and consequently the latitude of acceptance is high.

The number of attributes that contribute to the significance of the selection of magazines/recipe books at a checkout because the shopper may have forgotten to select the item from the aisle (1. frequency of shopping, 2. frequency of using checkouts, 3. reasons for

buying at checkouts and 4. size of bills) is also higher than the number of attributes that contribute to the significance of the shopper's selection of other items from the check outs because the shopper may have forgotten to pick the item from the main stocking point (Elaboration Likelihood Model).

The findings of this study indicate shoppers pick utilitarian items like batteries/memory cards and DVDs/CDs from express checkouts, which they may have forgotten to select from the main display. It is logical to assume that shoppers use the express checkouts when they have fewer purchases. We also observe that batteries/memory cards and DVDs/CDs are part of this small outlay in the store ($100-$151, -ve negative coefficient). Further, this cohort is unlikely to be frequent supermarket shoppers (SHWEEK and SHMOREONE, -ve negative coefficients). The inclination to purchase batteries/memory cards and DVDs/CDs most often from *express checkout* which they may have forgotten to seek in conventional stocking points, suggest that these items do not ordinarily attract high shopper cognition. It is safe to say that shoppers are not highly involved with these items and can be considered as having high latitude of acceptance for them.

Implications

Lucey and Tom (1995) argue that by placement of merchandise like magazines at the checkouts, retailers could attempt to reduce the customer perception of waiting time in the queue and vicariously serve as a distraction from the inconvenience of having to wait in the checkout queue whilst they browse the reading items. However, our study suggests that shoppers who select magazines and cookbooks at the aisles, do not consider *random inspection* of merchandise displayed at the checkouts a nice way to keep themselves occupied in the queue.

Our study also suggests that magazines and cookbooks are higher involvement products than confectioneries and beverages. Sherif's *et al.* theory suggests that consumers are willing to try a diversity of brands in relation to low involvement products. Prudent display of particular magazines and cookbooks at the checkouts is more critical than the variety of confectioneries/beverages that are displayed at the checkouts in order to minimise the dissonance that may arise from checkout purchases. Importantly, the mix of reading material displayed at the checkout counter is especially sensitive in view of the finding in this study

that buyers of magazines/cookbooks from checkout counters are not likely to perceive browsing of these items as pleasurable.

Following Sheriff's *et al.* (1965) view that a consumer's attitude towards the product is reflected in the consumer's involvement with the product, it can be argued that the process of involvement is a reflection of consumers' evaluation of the product. Thus, more involved consumers would find fewer brands tolerable and would process information more actively, while less involved consumers would find a large number of brands acceptable and would undertake less information processing. Retailers could also use this study's evidence of the 'less involved' trait of shoppers to purchase beverages at checkouts as an opportunity to sell from these counters slower moving beverage and confectionery brands, those of which that are close to use by dates and new flavours. However Mendelson (1993) cautions that while Hart and Davies (1996) believe that merchandise location can be an effective tool for boosting slow selling lines, relocating products to checkouts only and outside conventional display points, can frustrate the more diligent shoppers who inspect conventional stocking points in the aisles and may result in the opposite effect.

For some time now supermarkets have increasingly begun to expand the range of products that they stock beyond traditional groceries. Among the increasing stock keeping units, batteries/memory cards and DVDs/CDs, which formerly were sold only in speciality stores, have in the recent past also begun to make their appearance on supermarket shelves. Our study has identified that batteries/memory cards and DVDs/CDs are being purchased from express checkouts by shoppers who do not remember to pick these items from the traditional display aisles, but are cued to include them in their shopping baskets when presumably doing their top-up shopping. Providing specific point-of sale support to these utilitarian items at express checkouts could present supermarkets with significant sales and profit opportunities, by driving incremental purchases.

Conclusion

This study identifies shopper types in terms of their level of cognition and affectation in the choice of items that they purchase at the checkout. Knowing specific orientations of shoppers inclined to pick certain merchandise at checkouts can help supermarket managers to plan the merchandise mix at checkouts that not only increase their sales potential but possibly lessen the shoppers' discomfort while waiting in the queue to be served.