

CONSUMER RESPONSE TO RETAIL STOCKOUTS AND ANTECEDENTS THEREOF: A CONCEPTUAL FRAMEWORK

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Due to sudden upsurge in demand or snags in supply chain management, it is not uncommon to come across select items in a product category being out-of-stock at the retail stores at some point of time. This is especially true of the fast moving consumer goods (FMCG) category. Stockouts are inimical to the interests of retailers as well as manufacturers. By causing inconvenience and frustration to the consumers, the stockouts result in not only customer turnover, but also in colossal losses to the retailers and manufacturers, albeit differently depending upon the specific course of action resorted to by the consumers for coping with a given stockout situation. The present paper provides a theoretical framework to understand different ways in which consumers respond to stockout situations and examines various product, consumer, retailer and situation related factors that influence and shape their responses. The framework can serve as a useful mechanism for the management of retail stores and manufacturing organizations to comprehend the dynamics of consumer responses to retail stockouts and evolve strategies as capable of minimizing financial and reputational losses to their firms.

In the era of increased market competition, availability of product in the right quantity and quality at right places has assumed crucial significance for the marketers. The manufacturers as well as the retailers need to carry all the time a right assortment of products lest they should lose their customers to the competitive brands and stores. 'Presence', as it has come to be known, has emerged as an important P in the arena of marketing mix tools and the retailers quite well understand importance of being present at the right place with the right kind of merchandise and assortment (Brand Equity, 2006). Notwithstanding this recognition, it is not uncommon to come across particular items in a product category being out-of-stock (OOS) at the retail store at some point of time. With so much variety available in each product category, it is impossible for the retailers with limited shelf space and storage capacities to stock all the items of each brand all the times.

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Especially in the case of fast moving consumer goods (FMCGs), stockouts are a common phenomenon. Besides causing inconvenience and disappointment, stockouts imply additional costs to customers in terms of time and/ or money spent in searching and purchasing the desired product. These stockouts also result in reduction of the utility derived by the customer from purchase of alternate brands and product items in the event of the non-availability of the desired product item.

The stockout occurrences entail serious implications for both the retailers and manufacturers. As per ECR India study, on an average 25 per cent of FMCG sales are lost due to stockouts (Retail Biz, 2005; Business Line, 2003). In value terms, the losses are quite staggering, with organized FMCG industry as a whole estimated to be losing Rs 6,000 crore a year (Business Line, 2003). The magnitudes of losses that occur to the retailers and manufactures differ depending upon the way consumers respond to the stock out situations. Consumers can respond to stock out situations in a wide variety of ways, ranging from store switch to brand switch, purchase postponement or even abandonment of the decision to purchase the product, with each response impacting the retailers and manufactures differently. It, therefore, becomes imperative for the business firms to have a thorough understanding of different ways consumers react to stockout situations and evolving accordingly the strategies to protect their interests.

This paper is an attempt to understand as to how consumers respond to stockout situations and what factors influence their response. First, the concept of retail stockout is delineated, and then a discussion is made of various ways in which the consumers tend to respond to stock out situations at the retail outlets. Various product, consumer, store and situation related antecedentes that influence consumer response to stockouts are examined next. The last section summarizes the discussion made in the paper and point to managerial and research implications.

Retail Stockout: Meaning and Nature

In the highly competitive markets with intense brand proliferation, it is inevitable for the retail stores today to carry all the time a wide and deep assortment of goods. Availability of a wide variety of goods is important to match the varied tastes of customers who over time are becoming more discerning and demanding due to heavy media exposure and rising disposable incomes. The large and varied assortment of goods, however, substantially adds to the retailer's inventory costs. Coupled with space constraints, exorbitant charges involved in outsourcing the warehousing facilities and

accompanying higher inventory pilferage and obsolescence risks, retailers prefer maintaining only a limited stock of select variety of items at a point of time. This often results in a situation when a particular product desired or demanded by the customers is not available with the retail store. Non-availability of an item desired by a customer is what is known as stockout. According to a glossary of terms related to retailing, a stockout is a situation 'when the item that a customer wants is out of stock or not available on the sales floor' (www.risnews.com).

Temporary unavailability of goods arises due to unexpected or sudden changes in demand. The stockouts are unexpected and, hence, the consumer has to decide then and there as to how to handle the situation.

It may be pointed that the out-of-stock situation is different from the condition of permanent assortment reduction (Campo, Gijsbrechts and Nisol, 2004). Although in both the out-of-stock and permanent assortment reduction (PAR) circumstances, a particular item is unavailable to the consumers, these two situations differ in their basic nature. While stockouts are a temporary condition arising due to a mismatch between demand and supply, permanent assortment reduction is a deliberate step on the part of the retailer to achieve an efficient assortment of products, and as such results in a stockout situation which is of a permanent nature.

Implications of Stockouts

Stockouts have implications for all the three parties concerned, viz., the consumer, manufacturer and retailer. Major implications of stockout situations to these three entities in the market are discussed below.

Implications to Consumers

Out-of-stock situation is a major irritant to the consumers. Consumers feel frustrated and dissatisfied on not finding a favorite item on the store shelves (Fitzsimons, 2000). The more the value a consumer attaches to a brand, the more severely he or she feels disappointed by its non-availability at the store. Consumers with a high preference for a particular item view purchase of alternative products as a suboptimal decision for them, especially if the close substitutes are not available.

Consumers also feel inconvenienced for having already spent time in mentally selecting the (stockout) item and now making a fresh decision as to what to do or which one of the

alternative product or brand to buy. Past studies report a higher incidence of feeling of inconvenience especially among the consumers who are either brand loyal, hard pressed for time or have a negative attitude towards shopping (Campo, Gijsbrechts and Nisol, 2000; Sloot, Verhoef and Franses, 2005).

Stockouts also impinge upon customer choice of store in subsequent shopping trips. Customers who face stockouts of a favorite item at a given store are less likely to patronise that store in their future trips and might also develop an overall lower perception about the store image and quality of goods sold there (Walter and Grabner, 1975; Fitzsimons, 2000).

Implications to Manufacturers and Retailers

Out-of-stock situation is not only an irritant to the consumers, but it also entails severe financial implications for the manufacturers and retailers. The extent of financial losses due to stockouts can be understood from the figures revealed by a study conducted by ECR India for Foodworld. The study reported that on an average 37 per cent of the most important stock keeping units (SKUs) for 6 FMCG players - Nestle, Hindustan Lever Limited, Colgate, Johnson and Johnson, Cadbury and Procter and Gamble - were found to be out of stock on a particular Friday. This implied a loss of sales of Rs 12 crore per year for the Foodworld and a loss of Rs 6,000 crore for organized FMCG industry (Business Line, 2003).

A *manufacturer* loses sales if the customer cancels the purchase or switches to competitors' product. The loss is particularly severe if the consumer switches to competition permanently and starts preferring rival brands. The loss to business is less severe in situations where the consumer buys another 'low-price' or 'different pack size' item offered by the same manufacturer, or returns back to the given manufacturer's brand after a short duration switchover to a competitor's brand.

While a manufacturer may lose some sales due to stockout situation of its brand at the retail store, it may benefit at the same time if other competitors' brands are out-of-stock and their customers shift to the brand(s) of manufacturer under consideration. Since almost all the competing brands are out of stock for a certain percentage of time, a given manufacturer would gain some of the competitors' market, negating to some extent the effect of stockouts of its own brand (Peckham, 1963). However, if a manufacturer's products are out of stock more frequently compared to those of competition, this manufacturer is likely to lose more business in the long run than his competitors would do (Peckham, 1963).

From a *retailer's* perspective, stockout has different repercussions. Frequent stockouts of a preferred brand may prompt the customer to switch over to other store, referred to as a store switch. In such a situation, the retailer is the worst affected because he not only loses the sale of out-of-stock item, but also the sale of other items which the customer might have bought from the given store. But in a situation where customer does not switch to another store and purchases instead another item, brand or pack size from the same store (i.e., item, brand or size switch), the retailer is affected only to the extent of difference in the price of the intended item and the price of the item actually purchased (Walter and Grabner, 1975).

It is clear from the above discussion that the extent of loss to the manufacturer and retailers is contingent upon the customer's reaction to the out-of-stock situation. It is, therefore, imperative for the manufacturers and retailers to know as to how the customers respond to retail stockouts. The following section is devoted to a detailed discussion of various types of consumer responses to stockout situations and their implications to the manufacturers and retail stores.

Consumer Responses to Stockouts

Consumers react differently to out-of-stock situations (Peckham, 1963; Walter and Grabner, 1975; Campo, Gijsbrechts and Nisol, 2000; 2004; Sloot, Verhoef and Franses, 2005). Some consumers may choose or refuse to buy a substitute. The brand loyal customers may look for the given item in other stores (i.e., item switch) or may defer their purchase for future (i.e., purchase postponement). They may also decide to buy a different package size of the same product (i.e., package size switch). Alternatively the consumer may settle down for a substitute brand (i.e., brand switch) or an item belonging to different product category (i.e., category switch). In some circumstances, it is quite possible that the customers may cancel the purchase altogether (i.e., purchase cancellation). Figure 1 lists the major consumer responses to stockouts. The nature and implications of each of these types of consumer responses to stockout situations are discussed in the following paragraphs.

Store Switch: This is the situation when customer is extremely brand loyal and refuses to settle for any other substitute product or brand. On finding that his or her favourite brand is not available in a store, consumer visits other retail store for purchase of that brand. This situation arises when the consumer feels that the cost of switching brand is much higher than the cost of switching store (Campo, Gijsbrechts and Nisol, 2000). Store

switching results in a loss of business for the given retail store, but does not affect the manufacturer. The manufacturer continues to get the same amount of sale. As long as the sale of given brand is taking place, it is immaterial to the manufacturer as to from which store the customer has purchased the brand.

Store switch entails implications to brand as well as store loyalty (Kotler, 2002) and has been empirically examined in several past studies (Walter and Grabner, 1975; Fitzsimons, 2000; Colacchio, Tikhonova and Kisis, 2000; Campo, Gijsbrechts and Nisol, 2000, 2004; Sloot, Verhoef and Franses, 2005).

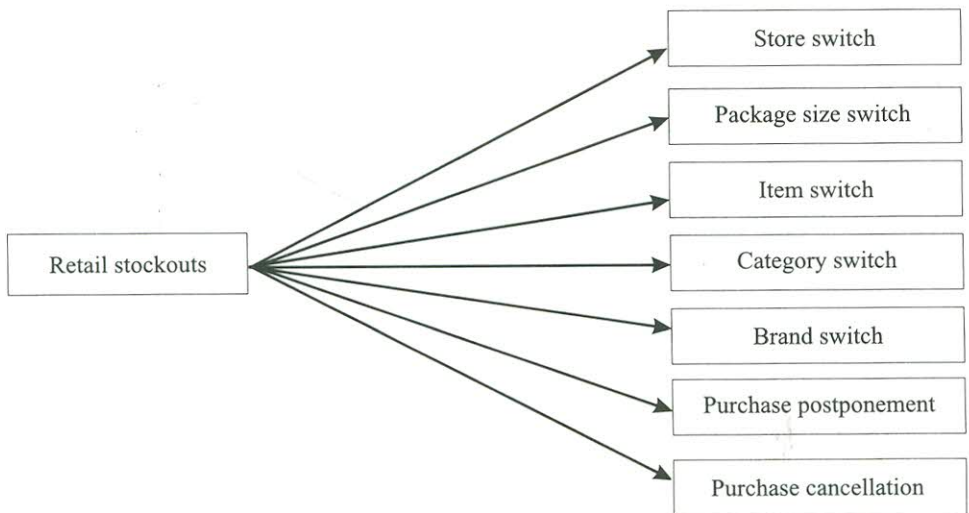


Figure 1: Consumer Responses to Stockout Situations

Package Size Switch: Consumers prefer to purchase different quantities of a product depending on their needs. A consumer who has a larger family or uses more of the product may, for instance, like to buy a larger package size than a person who lives singly or uses the product in lesser quantity. It is precisely for this reason that most of the manufacturers make their brands available in different package sizes. Buying a larger or smaller pack of the out-of-stock brand constitutes a package size switch. From the point of view of the manufacturers and retailers, sale of a larger size pack implies a gain and *vice versa*. Size substitution has been identified and examined in past studies by Peckham (1963), Walter and Grabner (1975), Campo, Gijsbrechts and Nisol (2000, 2004), and Colacchio, Tikhonova and Kisis (2003).

Item Switch: Most products come in a variety of formats, flavours, shapes and colors.

Substituting a different variety of the same brand is known as item switch. Such a switch shows brand loyalty and usually does not have any or much impact on the manufacturer and retailers because prices of different product formats are generally comparable and not much different. This type of consumer reaction has been studied by Peckham (1963), Campo, Gijsbrechts and Nisol (2000, 2004), Colacchio, Tikhonova and Kisis (2003), and Sloot, Verhoef and Franses (2005).

Category Switch: Category switch implies buying an item from a different product category if the intended item is not available at the retail store. Purchase of juice in case of non-availability of aerated beverage is an example of category switch. The issue of category switch has been empirically studied by Colacchio, Tikhonova and Kisis (2003) and Sloot, Verhoef and Franses (2005). In their study, Sloot, Verhoef and Franses (2005) pointed out that the proportion of category switch is very small and is much less a phenomenon among the consumers.

Brand Switch: Brand switch refers to buying an item of a different brand in case the item of a favored brand is out of stock. Consumer's purchase of a substitute brand points to a lower brand loyalty for the brand in question that was not available at the time of customer's visit to the store. Usually, the deal prone and variety seeking consumers engage in such a switch behavior (Trijp, Hoyer and Inman, 1996; Campo, Gijsbrechts and Nisol, 2000). Brand switching occurs when the cost of switching store is greater than switching brands (Campo, Gijsbrechts and Nisol, 2000). Brand switch has financial implications for the manufacturer. The impact on retailer depends upon the alternative item purchased. Brand switch has been an area of investigation in past several researches (Peckham, 1963; Walter and Grabner, 1975; Colacchio, Tikhonova and Kisis, 2003; Sloot, Verhoef and Franses, 2005). Campo, Gijsbrechts and Nisol, (2000) have also delved into this aspect, but they clubbed the discussion of brand switch with that of item switch.

Purchase Postponement: Deferring the purchase of the out-of-stock item till the subsequent shopping trip is called purchase postponement. This behavioural reaction is usually resorted to by those shoppers who are currently not having a pressing need for the product, have sufficient leisure time and positive shopping attitude (Campo, Gijsbrechts and Nisol, 2000). Since they frequently visit the store, they can conveniently purchase the product in near future. This type of consumer reaction has been studied by Walter and Grabner (1975), Campo, Gijsbrechts and Nisol (2000, 2004), Colacchio,

Tikhonova and Kisis (2003) and Sloot, Verhoef and Franses (2005).

Purchase Cancellation: If both the costs of switching brand as well as store are high, consumers go in for altogether cancelling a purchase (Campo, Gijsbrechts and Nisol, 2000) or postpone it for an indefinite period of time. Both the responses are covered under cancellation. Cancellation results in monetary loss to both the retailer and manufacturer. This reaction, however, is not found much prevalent among the consumers (Sloot, Verhoef and Franses 2005).

Cost to Consumers Due to Stock-Outs

Based upon utility maximization principle in economics, it can be said a consumer would, out of various courses available to him or her choose that option which maximizes his or her utility. All out of stock responses are associated with certain costs to the consumers. Costs can be considered as negative utility, so the consumer would opt for that behavioral response which imposes minimum overall costs. Campo, Gijsbrechts and Nisol (2000) have identified three types of costs, viz., substitution costs, transaction costs, and opportunity costs. These costs and their implications are elaborated below.

Substitution Cost: Substitution cost arises when the consumer switches to a less favored alternative (product or store). Out-of-stock item which the customer originally decided to buy can be construed as to have provided the maximum utility to the consumer. But in its absence, the consumer switches to an alternative for which he has lower preference and/or pays a higher price. This gives rise to what is termed as substitution cost (Campo, Gijsbrechts and Nisol, 2000, 2004). The substitution cost is based on the premise that other item, category or brand purchased by the consumer might be costing more and/or might not give the same quality or benefits. Similarly, an alternative store may not offer the same shopping experience. Substitution costs also arise due to psychological resistance to change (Campo, Gijsbrechts and Nisol, 2000, 2004). Thus, whenever the consumer is forced to switch item, category, brand, package size or store; his or her utility decreases due to the substitution costs.

Transaction Cost: All the money, mental effort and time which go into searching an alternative to the out-of-stock item constitute transaction cost. Transaction is comprised of costs incurred in searching a new alternative (item, package, brand or category) and also the storage costs (Campo, Gijsbrechts and Nisol, 2000, 2004). It also includes

expenses on traveling from one store to another in case of a store switch (Bell, Ho and Tang, 1998; Campo, Gijsbrechts and Nisol, 2000, 2004). Transaction costs arise in all cases except cancellation of purchase. Even when the purchase is postponed, transaction cost is not eliminated because consumer still has to plan and make next visit to the market in the near future.

Opportunity Cost: Opportunity cost is the loss arising due to consumption foregone (Campo, Gijsbrechts and Nisol, 2000, 2004). It arises in case the consumer decides to defer purchase or decides not at all to buy the given product. Here the consumer takes the risk of running short of the said item during the period of postponement.

Antecedents of Consumer Response to Out-of-Stock Situations

Consumer reactions to out-of-stock situations are driven by a number of factors. An understanding of these factors can help the retailers to predict likely consumer responses and evolve strategies as can minimize the adverse effects of such responses on the retail sales and profitability.

For the sake of better comprehension, various antecedents factors to stockout reactions can be classified into four categories: product related factors, customer related factors, store related factors and situation related factors (Campo, Gijsbrechts and Nisol, 2000, 2004; Zinn and Liu, 2001; Sloot, Verhoef and Franses, 2005). These factors are discussed below.

Product Related Factors

These are the factors which are typical to a product category under consideration (Campo, Gijsbrechts and Nisol, 2000; Sloot, Verhoef and Franses, 2005). Product related characteristics remain stable over a period of time and may or may not vary among consumers due to their interaction with the product. Various product related factors and their conceptual relationship with the specific stockout responses are shown in Figure 2 and discussed below.

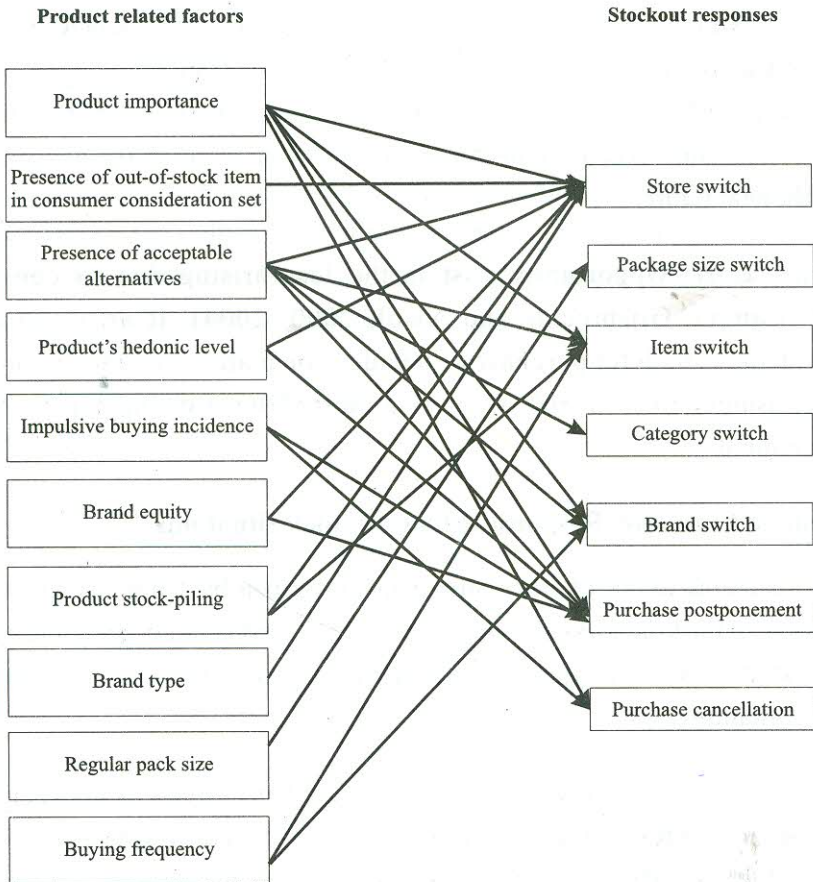


Figure 2: Product Related Factors and Their Relationship with Specific Stockout Responses

Product Importance: The opportunity cost of foregoing consumption of a product depends upon how important the given product is to the consumer. Non-availability of an important item implies a higher opportunity cost to the consumer and has a significant bearing upon the buyer's decision to postpone or cancel consumption (Campo, Gijbrecchts and Nisol, 2000, 2004). More the item is important to the consumer, the more he is likely to engage in store, item or brand switch behaviour. Postponement of purchase is more likely to take place when the product under consideration is not important to the consumer.

Presence of Out-of-stock Item in Consumer Consideration Set: Before making the final choice, consumers consider alternatives and weigh their benefits. They spend time and efforts in evaluating the items present in the consideration set. Therefore, if an item

which appears in the buyers' consideration set is out of stock, their time and energy are wasted and their response towards the retailer becomes negative. The probability of store switch increases in case the out-of-stock item appears in the consumers' consideration set as compared to the situation when the option was not considered, and hence had remote chance of being chosen (Fitzsimons, 2000).

Presence of Acceptable Alternatives: Availability of acceptable alternatives indicates the existence of close substitutes of the product in the market. In case the acceptable alternatives are available, the consumer may consider switching over to the alternative item or brand. The extent of the item or brand switch, however, depends on how close the alternative item or brand is to the consumer's favourite out-of-stock item. Higher is the similarity between the two, greater are the chances of a switch. This is because switching over to an alternative which is relatively similar to the originally contemplated item implies a lower substitution cost as the perceived risk of choosing such an alternative is less.

Availability of acceptable alternatives is thus negatively related to substitution cost of an item, brand or category switch. This negative relationship between the availability of acceptable alternatives and substitution cost implies that more the number of close alternatives available, the greater is the possibility of a brand, item, category switch (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003). In case the more preferred or close alternatives do not exist, the substitution cost would be high, and hence the consumer might not be that much inclined to go in for item or brand switch. Instead, the consumer might opt for purchase postponement. Consumer might develop a negative attitude towards the store and decide switching over to another store in response to the unavailability of a highly preferred option (Fitzsimons, 2000).

Product's Hedonic Level: One way to categorize consumer products is on the basis of primary benefit they provide. Those goods which provide primarily the functional and instrumental benefits to the consumers are known as utilitarian goods. On the other hands, products which provide emotional and experiential benefits and consumed for the sake of fun and pleasure are referred to as hedonic goods (Hirschman and Holbrook 1982; Dhar and Wertenbroch, 2000). Since a hedonic product provides emotional value, consumers are less likely to buy its substitute (item or brand) and would search for the item in other stores or defer the purchase till the next shopping trip (Sloot, Verhoef and Franses, 2005).

Impulsive Buying Incidence: Impulsive buying is the unplanned and spontaneous purchase of a product (Beatty and Ferrell, 1998). In case of impulsive buying, if a product is out of stock, the consumer is likely to postpone or cancel the purchase rather than switch stores (Sloot, Verhoef and Franses, 2005) because he has spent less time and effort in selecting the item and, hence, purchase of such a product is less important.

Brand Equity: Various brands in a product category have different values in the eyes of the consumers. These differences in values are due to varied beliefs consumers hold about the brands. If these beliefs are based on favorable and unique associations with a brand instead of any real tangible benefits provided by the brand, the brand is said to possess equity. More specifically, brand equity is defined as the differential effect of brand knowledge on the consumer response to marketing of the brand (Keller, 1993; Kotler, 2002). Having high brand equity enables the marketer to charge a higher price for the product, while brands with low equity are usually purchased because they are cheaper (Chandon, Wansink and Laurent, 2000). An important implication of a product's high brand equity in a stockout situation is that it makes the consumers more inclined to search for other retail outlets to obtain the given brand (i.e., store switch) or postpone the purchase (i.e., purchase postponement) rather than going for item or brand switch (Simonson, Huber and Payne, 1988; Sloot, Verhoef and Franses, 2005).

Product Stock-piling: Stock piling refers to stock of a product maintained at home by the consumer. Level of stock that consumers keep in their house before making another purchase is an important factor influencing their response to stockout situations (Narsimhan, Neslin and Sen, 1996, Campo, Gijsbrechts and Nisol, 2000). For items which cannot be stored for a long time (e.g., perishable food products), no or little stocks of such items are available with the consumers at a given point of time. In the event of out-of-stock situation at a retail store, consumers usually resort to store or even item and brand switch behavior rather than resorting to purchase postponement (Sloot, Verhoef and Franses 2005).

Brand Type: Type of brand that a consumer usually buys is a factor relevant for the store switch. If the buyer purchases a national brand, he is likely to find it in most retail stores because a national brand has a wide distribution network. This encourages store switch. On the other hand, if a consumer buys retailer's private label, the availability of such a brand is limited to that store or chain of outlets of that store. Since the consumer is less likely to find the same brand in the independently owned competing stores, this implies

higher substitution cost to the consumer. Thus a buyer of a private label is less likely to switch stores (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003).

Regular Pack Size: This refers to the package size of a product that the consumer usually buys. In case of a pack size switch, the substitution and transaction costs depend on the regular package size which the consumer normally buys (Campo, Gijsbrechts and Nisol, 2000). If the pack size regularly purchased by the consumers is small, buying a larger pack due to stockout increases storage (transaction) cost. This also results in increased substitution risk for the small pack size buyers if the larger pack does not turn out to be of acceptable quality (Blattberg, Buesing, Peacock and Sen, 1978; Campo, Gijsbrechts and Nisol, 2000). For the large pack buyers, the reverse is true and their storage cost decreases on switching over to small size packs. Other things remaining the same, such consumers can comfortably switch over to a smaller pack for the time being if the large one is not available (Campo, Gijsbrechts and Nisol, 2000, 2004).

Buying Frequency: A product that is replenished quite often by the consumers is generally characterized by high degree of brand or item switch rather than purchase postponement in the event of its non-availability at a retail store. Product is purchased even if it is not up to the customer's standards because the unpleasant consumption experience is not expected to last long and the customer can purchase the new (desired) product later (Bawa and Shoemaker, 1987). Thus greater the buying frequency, the lesser are the chances that the consumer will postpone purchase or switch store. A brand or item switch is more probable in case of more frequently purchased product (Sloot, Verhoef and Franses, 2005).

Consumer Related Factors

Various consumer characteristics and their influence on consumer response to out-of-stock situation are schematically presented in Figure 3 and discussed in the succeeding paragraphs.

Brand/Item Loyalty: Kotler (2002) defines brand loyalty as commitment of the consumers to repurchase a preferred product alternative. Loyalty implies that the consumers stay with a particular item or brand and do not seek alternatives (Campo, Gijsbrechts and Nisol, 2000). Since loyal customers only purchase their favorite product, their exposure to other brands and varieties is limited. In case of stockout, they would have to incur high search costs to find out acceptable alternatives. Thus, higher the loyalty, higher would be the transaction costs. Hence, a loyal customer is less likely to switch over to another item or brand and is more

likely to switch store in the event when it is out of stock (Peckham, 1963; Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003; Sloot, Verhoef and Franses, 2005).

It is, however, a contentious issue whether brand loyalty should be treated as a consumer or product related factor. While Campo, Gijsbrechts and Nisol (2000) and Sloot, Verhoef and Franses (2005) view brand loyalty as a consumer related factor, Zinn and Liu (2001) consider it a consumer related factor. Colacchio, Tikhonova and Kisis (2003) view it both as a product and consumer related factor. Since loyalty is a consumer based phenomenon, we are of the opinion that brand loyalty be treated as a consumer related rather than a product related factor.

Time Constraint: Time constraint refers to the paucity of free time with the consumers. In present day situation, most working people are short of free time. For such people going to a different store to buy an out of stock item involves high transaction costs because more time, costs and efforts needed in visiting an alternate store. Similarly, rescheduling the purchase to buy the product at a later point of time involves wastage of time already spent in visiting a particular store. Therefore, people with a time constraint would prefer item or brand switch over store switch (Campo, Gijsbrechts and Nisol, 2000).

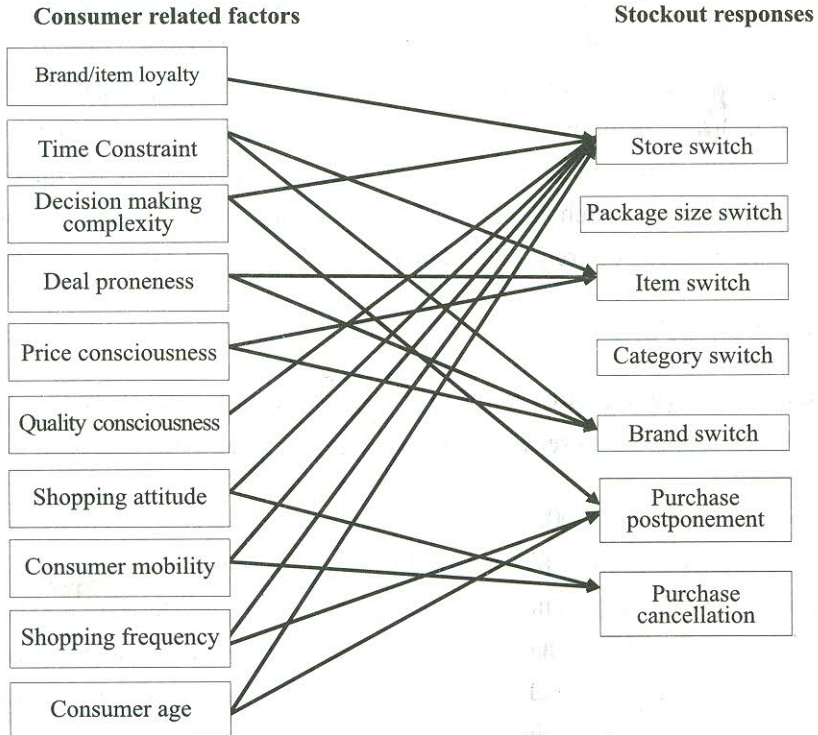


Figure 3: Consumer Related Factors and Their Relationship with Specific Stockout Responses

Decision Making Complexity: Sometimes the items under consideration have different attractions, causing difficulty in decision making. The more the number of alternatives present in the consumer's purchase consideration set, the more the number of comparisons have to be made between them. Larger number of comparisons not only requires the consumers to think more and spend more time, but also makes the decision making process more difficult (Shugan, 1980). In a situation where the preferred brand is out of stock and too many brands with wide variations among them are available in the market, the consumers might prefer to respond to out-of-stock situation by sticking to their tried and preferred brand, thus resulting in either a store switch or purchase postponement. However, situations where other alternative items of the same brand are available, the consumer might resort to purchase of other item of the same brand (i.e., item switch). The brand switch is less likely to take place in a complex decision making situation.

Deal Proneness: Deal proneness is the extent to which a consumer will switch over to a brand or item within a product category to take advantage of promotional schemes and offers. Since the deal prone consumers frequently switch the brand or item to take advantage of lower prices or gain some benefits from the sales promotion schemes, they have exposure to a wide range of products. Hence, their transaction (search) costs are lower. This implies that the deal prone consumers are more likely to opt for brand or item switch (Trijp, Hoyer and Inman, 1996; Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003).

Price Consciousness: It refers to the importance that a consumer attaches to price of the product while shopping and is a very important variable in shopping decisions (Lichtenstein, Ridgeway and Netemeyer, 1993). Price conscious consumers try to take benefit of the promotional schemes and are not loyal to any brand. They are more likely to switch brand or item and less likely to switch store or defer purchase (Sloot, Verhoef and Franses, 2005).

Quality Consciousness: Unlike price conscious buyers, these consumers like to buy high quality products even at a higher price. Since popular brands are associated with good quality, the buyers who are brand loyal may go to other stores in search of a preferred brand. They are less likely to switch brands (Sloot, Verhoef and Franses, 2005).

Shopping Attitude: Shopping attitude refers to whether the buyer enjoys shopping (positive attitude) or views it as a tedious work (negative attitude). Whereas the former is

said to be holding a positive shopping attitude, the latter one is characterized as holding negative attitude towards shopping (Spiegle and Sewall, 1987; Babin, Darden and Griffin, 1994). Those who shop for fun buy products of varying value and are also more likely to shop in new format stores (Sinha, 2003). Furthermore, a person who has a positive attitude towards shopping is more likely to look for the item in other stores (i.e., store switch) or to return in near future to buy the product (i.e., purchase postponement) since shopping for him is a rewarding experience (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003). On the other hand, a person who has negative attitude towards shopping is unlikely to exhibit such a behavior.

Consumer Mobility: A consumer is said to possess mobility if he owns a vehicle (Campo, Gijsbrechts and Nisol, 2000). Also a consumer will be said to be mobile if he walks to the stores located nearby. A more mobile consumer can easily visit other stores or make another shopping trip to buy the out of stock products. High mobility decreases traveling costs (transaction cost) and increases the chances of store switch or postponement (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003).

Shopping Frequency: It refers to how often a consumer makes shopping trips in a given period of time. A consumer who often shops can easily defer his purchase and buy the item in subsequent shopping trip. He may also visit a different shop on his next trip. So a frequent shopper is more likely to switch stores or postpone purchase (Campo, Gijsbrechts and Nisol, 2000, Colacchio, Tikhonova and Kisis, 2003).

Consumer Age: Previous studies show relationship of a person's age with his/her income, lifestyle and type of products which the person buys (Lewis and Trevitt, 1996). Age as a factor affecting out-of-stock response is linked to the time constraint. Older and retired people generally have more free time and, therefore, can visit more stores to buy a favorite item. Hence, age is posited to be positively related to store switching behaviour (Sloot, Verhoef and Franses, 2005). Since these people have time, they can also afford to revisit the store to purchase their favourite brand (i.e., purchase postponement).

Store Related Factors

This category consists of factors which are peculiar to a given store or retail chain. The relationship of store related factors is provided in Figure 4 and discussed below.

Store Loyalty: Consumers usually develop loyalty towards particular store and buy from that store which reduces their search cost. Since store loyal buyers are in the habit of

buying goods from a particular store, they have limited knowledge and experience of other stores. Therefore, in case of a stockout, they would prefer to buy a substitute item or brand from the same store rather than searching for a specific item in a different store. Store loyalty is, therefore, positively linked with item and brand switch, whereas it is negatively related with store switch (Campo, Gijsbrechts and Nisol, 2000, 2004; Sloot, Verhoef and Franses, 2005).

Availability of Acceptable Alternative Stores: Each store offers unique shopping environment, facilities and services. In case of a stockout, therefore, if the consumer opts for store switching; it results in loss of utility. However, if close alternative stores are available within the vicinity, substitution cost is low and the consumer is more likely to engage in store switch (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003; Sloot, Verhoef and Franses, 2005).

Store Distance: Distance of the store from the consumer's house (or place of work) determines the traveling cost to consumer which is a fixed shopping cost (Bell, Ho and Tang 1998) for being independent of items listed in the shopping list. Greater distance between two alternative stores would increase the transportation (transaction) cost. Thus, if the stores are distant from each other, the consumer would be discouraged from switching stores and would adopt other courses of action like postponement (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003) or even brand or item switch.

Type of Store: Stores which carry a large variety of items provide opportunity to the consumers to select a substitute item or brand if the preferred one is out of stock. However, those stores which do not provide a wide range of items restrict the consumer choice and the customer may switch store in the face of stockout (Sloot, Verhoef and Franses, 2005).

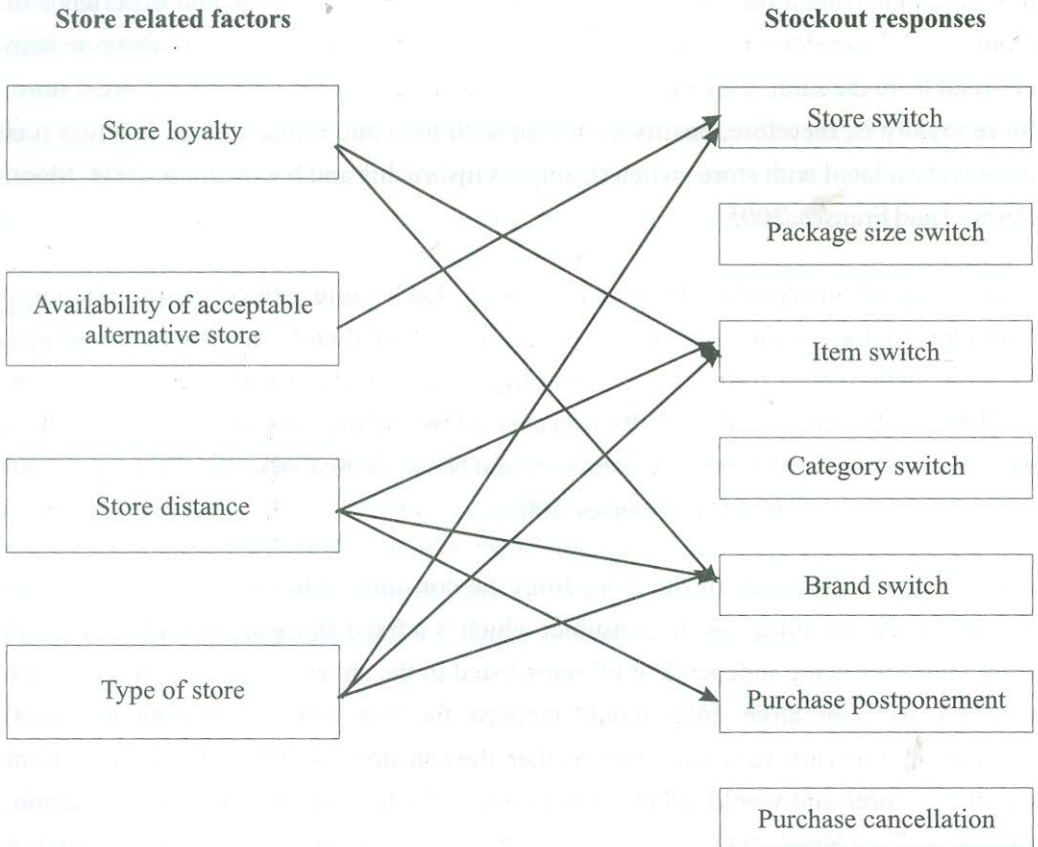


Figure 4: Store Related Factors and Their Conceptual Relationship with Specific Stockout Responses

Situation Related Factors

These are the factors which are specific to a purchase occasion or shopping trip. Unlike other factors, situational factors change from time to time. The impact of situational factors on the consumers' stockout responses is depicted in Figure 5 and discussed below:

Part of Week: All stores in each area generally close once a week on a specific day. Part of the week means the time of the week when the shopping trip is made. If the time of the trip is close to the stores' weekly closing day, the consumer would not like to postpone their purchase and would rather prefer going in for store, item or even brand switch. This is due to the fear of running out of the product at home during the time when the stores are not open (Sloot, Verhoef and Franses, 2005).

Required Purchase Quantity: Required purchase quantity is the amount of good a person needs to avoid the risk of running out of it before the next shopping trip. The larger the required quantity, greater is the risk of running short; hence more is the opportunity cost of postponement and cancellation and lesser the probability of choosing these options (Campo, Gijsbrechts and Nisol, 2000; Colacchio, Tikhonova and Kisis, 2003). Customer in such a situation is more likely to resort to store, item or brand switch.

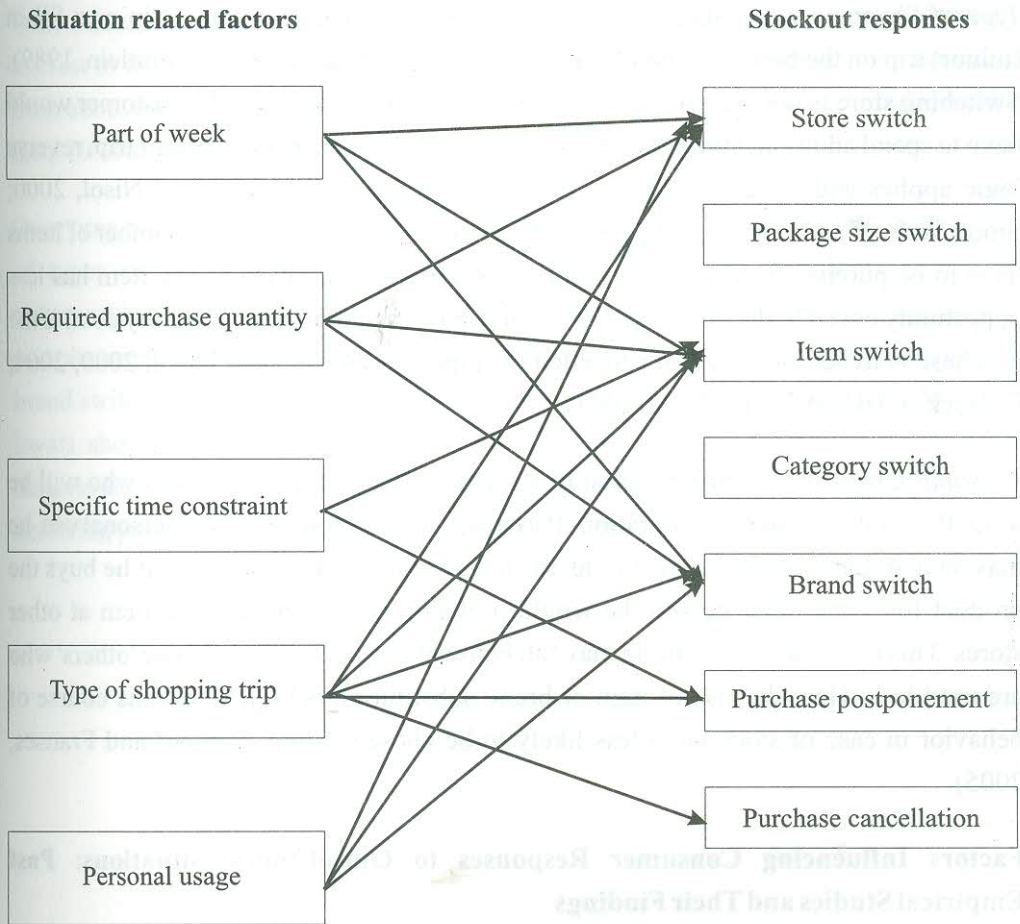


Figure 5: Situation Related Factors and Their Conceptual Relationship with Specific Stockout

Specific Time Constraint: It may so happen that an individual who generally has leisure time at hand may be pressed for time on that particular day. This unavailability

of time on the shopping day is called specific time constraint (Beatty and Ferrell, 1998). Time pressure on shopping occasion makes it difficult to spend time in travelling to other store on facing a stockout (Campo, Gijsbrechts and Nisol, 2000). Paucity of time imposes restriction on the extent to which an individual can process the in-store stimuli and information. Due to time constraints, the consumer may not be able to look for his usual product item and may settle for substitutes (Park, Iyer and Smith, 1989).

Type of Shopping Trip: Shopping trip is considered as either a major trip or a fill-in (minor) trip on the basis of expenditure made on that trip (Kahn and Schmittlein, 1989). Switching store is not preferred during a major shopping trip since the customer would have to spend additional time and effort on an already long trip. For a minor trip, reverse logic applies and store switching is probable (Campo, Gijsbrechts and Nisol, 2000; Sloot, Verhoef and Franses, 2005). Further, on a major shopping trip, a number of items have to be purchased; therefore, canceling or deferring purchase of one item has less opportunity cost. On the other hand, a minor trip is wasted (high opportunity cost) if the purchase is to be postponed or cancelled (Campo, Gijsbrechts and Nisol, 2000, 2004; Colacchio, Tikhonova and Kisis, 2003).

Personal Usage: Consumer reaction to stockout also depends upon as to who will be using the product under consideration. If a person buys a product for his personal use, he may switch item or brand if the product is not available at the store. But if he buys the product for some other person, he would probably search for the said item at other stores. This is because a substitute may fall below the expectations of those 'others' who are used to it. Here the risk of item or brand substitution is higher and this course of behavior in case of stockout is less likely to be chosen (Sloot, Verhoef and Franses, 2005).

Factors Influencing Consumer Responses to Out-of-Stock Situations: Past Empirical Studies and Their Findings

Though consumer response to stockout situations has been an area of immense interest to the marketers for a long time, it is only recently that a few empirical studies have been undertaken to examine how the consumers respond to situations when the item or brand preferred by them is not available in a store and what factors influence their response choice. A review of the findings of major studies is as follows and summarized in Table 1.

Study by Peckham (1963) is probably the first ever empirical attempt made in the field to measure the frequency of stockouts and identify consumer reactions to stockouts. Based on personal interviews, the study reported stockout being a commonly observed phenomenon by the consumers. Later in the mid-seventies, Walter and Grabner (1975) found that while brand switch was the dominant reaction in the case of single stockout situation, it was the store switch which dominated the consumer reactions when the desired item was repeatedly out-of-stock in the retail stores.

With increased competition among the retail stores in the nineties, the researchers' interest in the consumer reaction to stockout situations has intensified. This is evident from about a dozen of empirical studies published in a short seven-year period spanning from 1998 to 2005.

Over time, not only has the number of studies in the area has increased; but the coverage of types of switches and methodological rigor have also undergone significant metamorphosis. In their study examining brand switch as well as package size switch, postponement and store switch, Verbeke, Farris and Thurik (1998) found that though brand switch was the most common reaction among the surveyed consumers, the brand loyals showed greater inclination towards purchase postponement and store switch behaviour. Even the study by Bell and Fitzsimons (2000) found consumers to be deferring purchases in the case of stockouts of their preferred brand.

Table 1: Consumer Responses to Stockouts: Past Studies and Major Findings

Research Study	Objectives	Responses studied	Method of data collection	Major findings
Peckham (1963)	- To measure frequency of stock-outs and to identify stockout reaction and consumer satisfaction	- Brand substitution - Package size substitution - Item switch	Personal interview of 1173 consumers	- Stock-out was a commonly observed phenomenon
Walter and Grabner (1975)	- To examine cost of stock-outs to retailers	- Brand switch - Package size switch - Postponement	Questionnaire administered to 1433 consumers	- Brand switch was the dominant reaction in case of single stock-out - Store switch was the dominant reaction in case of repeated stock-out
Verbeke, Farris and Thurik (1998)	- Testing brand loyalty and its influence on consumer response	- Brand switch - Postponement - Store switch	Telephonic interviews of 590 persons	- Despite brand switch being most common reaction, brand loyals, on the whole, were more likely to postpone or switch stores. - Store loyals were most likely to switch stores. - Amount of purchase negatively influenced postponement.
Bell and Fitzsimons (2000)	- Understanding response process - Examining how consumer's view restricted choice - Describe a utility model of choice	- No reaction was studied in particular (though brand switch, size switch and deferment were observed).	Survey and experiment of 5 stores over a period of 2 years	- Consumer satisfaction was found related to decision satisfaction. - Consumers prefer variety. - Consumers defer purchase in face of stockout. - Utility is concave to the number of brands in a category.
Campo, Gijsbrechts and Nisol (2000)	- Study of consumer stockout responses and	- Item Switch - Size Switch	Structured questionnaire administered to 993	- Item switch most popular in margarine and deferment in cereals.

	<ul style="list-style-type: none"> - their relationship with product, consumer and situation related factors 	<ul style="list-style-type: none"> - Store Switch - Deferment - Cancellation 	respondents.	<ul style="list-style-type: none"> - Item switch affected by availability of acceptable alternatives (+) and item loyalty (-). - Size switch affected by preference for large pack size as regular size (+). - Store switch affected by general time constraint (+) and store loyalty (-). - Deferment affected by general time constraint (-) and shopping attitude (+). - Cancellation affected by required purchase quantity (-) and major shopping trip (+).
Fitzsimons (2000)	<ul style="list-style-type: none"> - Study of relationship between stockouts and consumption and decision satisfaction 	<ul style="list-style-type: none"> - Store switch 	Four experiments were conducted	<ul style="list-style-type: none"> - Decision satisfaction lower in case of stockout, especially if the item was in consideration set. - Stockout leads to a severe negative response. - If consideration set is very large, stockout may be desirable. - Stockouts affect decision and consumption satisfaction and leads to store switch.
Zinn and Liu (2001)	<ul style="list-style-type: none"> - Understanding perception of consumer facing a stockout. - Finding relationship between stockout response and consumer, store, situation and demographic factors 	<ul style="list-style-type: none"> - Substitute item - Delay - Leave store 	Survey through exit interview of 283 respondents.	<ul style="list-style-type: none"> - Stockout affected store image (-). - Item switch most common response to stockout. - Item switch is affected by store prices (+), urgency (+), brand loyalty (+) and upset (-) - Delay is affected by store prices (+), urgency (-), surprise (-) and pre-visit

				<p>agenda (+).</p> <ul style="list-style-type: none"> - Leaving store is affected by store prices (-) and surprises (+).
Singh and Yarso (2002)	<ul style="list-style-type: none"> - To study consumption pattern of soap and consumer behavior with respect to it. 		Structured questionnaire administered to 250 people	<ul style="list-style-type: none"> - Store switch found to be the most dominant response to stockout.
Anderson, Fitzsimons and Simester (2003)	<ul style="list-style-type: none"> - To examine effectiveness of various customer service strategies to stockouts. 	<ul style="list-style-type: none"> - Cancellation - Item switch - Backordering 	Field study and quasi-experiment	<ul style="list-style-type: none"> - Cost-benefit analysis to be performed while offering financial incentives in case of stockouts. - Over a period of time, stockouts lead to decreased satisfaction and purchase intention. - Financial incentives decrease dissatisfaction in case of a stockout. - Profit should be criteria to decide strategy in case of a stockout.
Campo, Gijsbrechts and Nisol (2004)	<ul style="list-style-type: none"> - Comparison between responses in case of stockouts and permanent assortment reduction 	<ul style="list-style-type: none"> - Item switch - Size switch - Store switch - Deferment - Cancellation 	Structured questionnaire administered to 993 respondents	<ul style="list-style-type: none"> - Consumers more prone to react in same manner in both cases if response is item or store switch than in case of size switch and cancellation. - Consumers who opted for postponement in case of OOS are more likely to switch stores or cancel purchase on facing PAR.
Anderson, Fitzsimons and Simester (2005)	<ul style="list-style-type: none"> - Measurement of short and long term opportunity costs of a stockout 	<ul style="list-style-type: none"> - Cancellation - Item switch - Backordering 	Field study and quasi-experiment	<ul style="list-style-type: none"> - Stockouts have negative influence on other current items and future orders. - Financial incentives non-viable to

				<p>encourage backordering</p> <ul style="list-style-type: none"> - Cost of stockout depends on product and order related variables.
Sloot, Verhoef and Franses (2005)	<ul style="list-style-type: none"> - To examine impact of brand equity and hedonic level on consumer response to stockout 	<ul style="list-style-type: none"> - Item switch - Brand switch - Store switch - Postponement 	Structured questionnaire administered to 749 respondents	<ul style="list-style-type: none"> - Brand switch is affected by brand equity (-), number of brands (-), brand loyalty (-), age (-) and quality consciousness (-). - Store switch is affected by brand equity (+), hedonic level (+), number brands (+), age (+), stock piling (-), impulse buying (-) and price consciousness (-). - Item switch is affected by brand equity (+), its interaction with hedonic level (+) and stock piling (-). - Postponement is affected by stock piling (+), brand loyalty (+), impulse buying (+), availability of acceptable alternative stores (-) and part of the week (-).
Campo, Gijsbrechts and Nisol (200)	<ul style="list-style-type: none"> - To analyze whether consumer purchases lesser quantity of alternative item purchased - To understand relationship between consumer response to stockout and different categories of consumers and shopping trips. 	A general study of consumer OOS responses (though brand, size, item switch, etc., were recognised).	Scanner data was collected for 198 households over a period of one year	<ul style="list-style-type: none"> - Stockouts may result in buying smaller quantity. - Stockouts lead to asymmetric choice shifts. - Stockout response is influenced by nature of shopping trip, shopping regularity, usage rate and the nature of buyers (planned/opportunistic shoppers).

Colacchio, Tikhonova and Kisis (2003)	<ul style="list-style-type: none"> - To identify all consumer stockout responses. - To make a decision tree to understand various steps a consumer takes on facing stockout 	<p>Consumer response is a multilevel decision process:</p> <ul style="list-style-type: none"> - To buy a product or not. - To buy a substitute or not (delay purchase/ plan a special trip/ switch store). - To switch category/ variety/size. 	<p>No actual data collected. Only a cross-research analysis performed.</p>	<ul style="list-style-type: none"> - Importance of product (-), required purchase quantity (-), type of shopping trip (+) and shopping attitude (-) affect decision. - Postponement is affected by urgency (-), mobility (+), store distance (+), shopping attitude (+), shopping frequency (+) and perceived time value (+). - Store switch is affected by perceived time value (-), availability of acceptable alternative stores (+), store loyalty (-), private label (-), brand loyalty (+), perceived price (-), distance between stores (-) and mobility (+). - Substitution is affected by availability of acceptable alternatives (+), item loyalty (-), substitution risk (-) and deal proneness (+).
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In a study of consumer stockout responses and their relationship with product, consumer and situation related factors, Campo, Gijsbrechts and Nisol (2000) found item switch as the most popular consumer reaction in the case of margarine, and purchase deferment in the case of cereals. Item switch was found to have been affected positively by the availability of acceptable alternatives and negatively by the item loyalty. Size switch, on the other hand, was found to have been affected positively by large pack size as regular size. So far as the store switch behavior is concerned, it was found to have been positively affected by general time constraint and negatively by store loyalty factor. Two factors affecting purchase deferment were: general time constraint (-) and shopping attitude (+). Purchase cancellation was more of a function of purchase quantity (-) and major shopping trip (+).

The study by Fitzsimons (2000) reveals a lower decision satisfaction among the consumers especially in the case of stockout of an item which was in the consumers' consideration set. Stockouts were found to be affecting consumer decision and consumption satisfaction and leading them to engage in store switch behavior.

According to Campo, Gijsbrechts and Nisol (2000), stockouts might result in consumers buying smaller quantity and lead to asymmetric choice shifts. Apropos factors affecting consumer reactions to stockouts, their study finding is that stockout response is influenced by the nature of shopping trip, shopping regularity, usage rate and the nature of buyers (planned / opportunist shoppers).

Zinn and Liu (2001) found stockout to be negatively affecting store image. Item switch was observed to be most common response among the consumers to a stockout situation. The extent consumers resorted to item switch was found to be dependent upon store prices (+), urgency (+), brand loyalty (+) and upset (-). Purchase delay, on the other hand, was found to be dependent upon store prices (+), urgency (-), surprise (-) and pre-visit agenda (+). Store switch was affected by store prices (-) and surprise (+). Singh and Yarso (2002) found store switch to be the most dominant response to stockout.

Anderson, Fitzsimons and Simester (2003) found stockouts to be resulting in decreased satisfaction and purchase intention among customers over a period of time. The researchers observed that the financial incentives had the effect of decreasing the consumer dissatisfaction in case of a stockout and pointed out that profit should be criteria to decide strategy in case of a stockout. Campo, Gijsbrechts and Nisol (2004) made a comparison between responses in case of stockouts and permanent assortment

reduction and found that consumers were more prone to react in the same manner in both the cases if response was item or store switch than rather than size switch and cancellation. They furthermore reported that consumers who opted for postponement in case of out-of-stock situation were more likely to switch stores or cancel purchase on facing permanent assortment reduction.

Almost similar have been the findings of study by Colacchio, Tikhonova and Kisis (2003) who observed that importance of product (-), required purchase quantity (-), type of shopping trip (+) and shopping attitude (-) affect the first level decision, i.e., whether to buy the item or not. They further observed that the postponement is affected by urgency (-), mobility (+), store distance (+), shopping attitude (+), shopping frequency (+) and perceived time value (+). Store switch was found to be affected by perceived time value (-), availability of acceptable alternative stores (+), store loyalty (-), private label (-), brand loyalty (+), perceived price (-), distance between stores (-) and mobility (+). Decision to purchase a substitute, on the other hand, was found dependent on availability of acceptable alternatives (+), item loyalty (-), substitution risk (-) and deal proneness (+).

Study by Anderson, Fitzsimons and Simester (2005) too reveals stockout having negative influence on purchase of other current items and future orders. They also observed that financial incentives were non-viable to encourage backordering. Cost of stockout was found to be dependent on product and order related variables.

In a recent study, Sloot, Verhoef and Franses (2005) found brand switch being affected by brand equity (-), number of brands (-), brand loyalty (-), age (-) and consumer quality consciousness (-). Store switch was found to be a function of brand equity (+), hedonic level (+), number of brands (+), age (+), stock piling (-), impulse buying (-) and price consciousness (-). Item switch was affected by brand equity (+), its interaction with hedonic level (+) and stock piling (-). The factors affecting purchase postponement included: stock piling (+), brand loyalty (+), impulse buying (+), availability of acceptable alternative stores (-) and part of the week (-).

Summary and Implications

With increased competition in the market, availability of product at the retail store has assumed a critical importance for both the manufacturers and the retailers. Out-of-stock situations cause inconvenience and frustration to the consumers who on not finding the

desired product in the retail store resort to a wide variety of actions ranging from store switch to package size switch, item switch, category switch, brand switch, purchase postponement and purchase cancellation. The specific course of action they will take is governed by a large number of factors that for the sake of comprehension can be categorized into product, consumer, store and situation related antecedents. Each of the seven types of consumer responses to stockout differs in its implications to the retail stores and manufacturing firms and affects differently their sales and profits.

Since stockout situations affect not only the current sales and profitability, but also future stream of cash flows if customers decide to shift to the competing stores or brands. It, therefore, becomes imperative for both the retailing and manufacturing firms to understand consumers' varied responses to retail stockouts and take necessary steps to minimize the incidence of such stockouts and adverse consumer responses. The conceptual framework presented above can greatly help the business firms in understanding the dynamics of consumer response to stockouts and its impact to their sales revenues and profits.

In view of severe implications to the firms, stockouts have been an important area of research in other countries. Studies of this kind are conspicuously absent in India. It is high time that in India too researches in the area be initiated to ascertain the incidence of out-of-stock situations and examine the pattern of consumer responses to stockouts on the lines of the conceptual framework presented in the paper. Studies are also called for side by side to investigate underlying reasons that prompt consumers to respond differently in different situations.

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