

01. Impact of Quality Attributes of Packaging on Impulsive Buying in Supermarkets

Aminda Methsila Perera, Senior Lecturer, Department of Accountancy, Wayamba University of Sri Lanka

ABSTRACT

Impulse buying is one of the most important and least considered aspects of supermarket sales. People go to supermarkets with few items in mind, explore the items and marketing stimuli, and make their choices in real time and end-up buying more things as compared to what they planned. Research over years emphasize that consumers do make impulse buying decisions in stores and it represents 30 to 70 per cent of all the money spent on shopping, depending on the time and the situation. This research investigates how the quality attributes of product packaging persuades the consumers to buy fast-moving-consumer goods (FMCGs) impulsively.

This research presents results from a dual study based on pre and post interviews with 256 grocery shoppers at supermarkets in Sri Lanka. The shoppers were questioned to identify products that they had just purchased on impulse and to identify the major factors that influence them to purchase those products in a post shopping interview. SPSS (version 17) was used to analyze the data gathered. The study found that there is strong impulse effect in supermarket setting in Sri Lanka. The shopping basket of consumers had 33 percent of impulse products. Further, this study confirms that the most of the marketing strategies employ to attract the consumers and keep them delighted had a significant positive effect on the likelihood to purchase an impulse item. Especially, the attractive packaging of fast-moving-consumer goods is found to be more effective at getting consumers to notice the offer as long as their commutative quality attributes are strong.

Key words: Impulse Buying, Supermarkets, Quality Attributes of Packaging

Introduction

Supermarkets, multi-billion dollar industry, impulse shopping accounts have long realized the power of impulse buying, which is indeed a central point in many purchasing activities. By analyzing the supermarket consumer's activities (movement, shopping behaviour, etc.), one can reveal that it is a complex system, which has great potential to improve if one can understand consumers correctly and develop their strategies accordingly. By this research, the researcher discusses the influence of packaging on impulse buying behaviour of supermarket consumers. More specifically, the prime objective of this research is to gain in depth understanding about how quality attributes of packaging are perceived by impulse consumers when they are purchasing fast moving consumer goods (FMCGs) at supermarket setting in Sri Lanka.

Background of the Research

Consumer behaviour is a process, and purchase forms only one part of this process. Therefore, Holm (1999) emphasized that a better understanding of how consumers decide what to purchase is critical for the success of a product. There are many endogenous psychological and exogenous environmental factors, which influence consumer decision making process. According to Hawkins et al. (2001) the term 'consumer decision-making process' implies careful evaluation of attributes of a set of products, brands, or services and rational selection of one which solves clearly recognized need at the least cost. It can be ranged from extended problem solving to limited problem solving (Schiffman and Kanuk, 2000). Extended problem solving is characterized by intensive search for information and complex evaluation, whereas limited problem solving refers to far less motivation to search widely for information and engage in alternative evaluation. The conventional economic and consumer behaviour models assume an extended problem solving approach. They presume a rational, judicious, and thoughtful consumer, who gathers information strategically and buys goods according to functional cost-benefit consideration (Dittmar, 1996). Challenging this view, Bettman (1979) argues that consumers may

sometimes typically rely on simple strategies, rather than going through a series of steps or processes rationally. Sustaining this argument, some researchers found that the most consumers engage in unplanned¹ purchase at some time or another (Rook, 1987; Weiberge and Gottwald, 1995). They may simply emphasize or analyze several distinctive dimensions or characteristics that are obvious and being conscious of.

Researchers have investigated consumer decision making process by profiling consumers into different decision making styles and have identified four common types of purchasing behaviours, which are ranked according to the amount of information required in the purchase decisions (Wolfe, 2005). These are the impulse purchases, routine purchases, limited decision making purchases, and extensive decision making purchases. Further, consumer purchasing is divided into two broad categories, i.e., planned buying and unplanned buying (Kelly et al, 2000). Planned buying is a purchasing activity undertaken with a problem previously recognized and a buying intention previously formed. Unplanned buying is buying activity that occurs as a result of exposure to an advertisement or a salesperson's visit. Usually customers do not always buy just what they had planned to buy. Therefore, Sheth *et al.*, (1999) described unplanned purchases as purchases that the customer did not intend to buy before entering the store.

An impulse purchase is identified as a typical unplanned purchase of consumer. It is the least complex form of limited problem solving (Blackwell et al., 2001). Thus, impulse purchase is simply defined as purchases made in a store that are different from those of planned prior to entering the store. As it is an unplanned spontaneous decision, impulse purchasing implies a lack of rationality or alternative evaluation (Iyer, 1989; Spiggle, 1987). Davis (2006) recognized impulse purchasing as a problematic concept to explain in

¹ Some researchers characterized unplanned purchases as non-list usage consumers. In a recent article by Tjøstheim and Haugland (2005) declare that what is on the shopping list is one part of what the customer has planned to buy, but it also include what the shopper has memorized. Considering Tjøstheim and Haugland (2005) findings, the items purchased that are not in the list or the memory were considered as unplanned (i.e. impulse) buying for this study.

consumer behaviour. It is believed that impulse buying² takes place when consumer gets caught up in the type of a situation and buys something without thinking much about it. Consequently, the concept of unplanned purchasing has raised much interest among researchers as it involves experiencing an urge to buy (Rook, 1987) and further it is increasingly identified as a major issue in the market.

The phenomenon of impulse purchasing has been studied in consumer research since 1950s (Koski, 2004). Marketers and retailers tend to take advantage of impulses, which are tied to the basic need for instant satisfaction. In grocery stores, retailers strategically place low-cost hedonic items³, such as gum, candy, and magazines at the checkout. A consumer in a supermarket might not specifically be shopping for candy. However, candy is prominently displayed at the checkout aisles to trigger impulse buyers to buy what they might not have otherwise considered. Therefore, marketers and retailers recognized the significance of impulse-buying at bricks-and-mortar⁴ stores and have used various psychological strategies and techniques to increase sales in their organizations.

For decades, researchers have studied impulse buying in brick-and-mortar stores in order to identify influential factors that increase the likelihood of impulse purchases (Chuang, 2005; Dittmar 1996; James, 1996). Impulse buying in supermarkets has been considered a pervasive market phenomenon, that involves social and cultural aspects of consumers' lifestyles (Wong and Zhou, 2005).

This research attempts to investigate how quality attributes (i.e. *ergonomic, technical, and communicative entities*) of packaging are perceived by consumers in their impulse purchasing of fast-moving-consumer-goods (FMCGs)⁵. The quality attributes of packaging classifies into five categories:

² In this paper, the terms "impulse buying" and "impulse purchase" are used interchangeably.

³ Hedonic items are product associated with pleasurable experiences

⁴ Encarta Dictionary used the term brick-and-mortar to describe traditional business and retail outlets with premises that customers physically go to, as opposed to digital e-commerce businesses

⁵ Fast Moving Consumer Goods (FMCG), also known as Consumer Packaged Goods (CPG), are products that have a quick turnover, and relatively low cost. Consumers generally put less thought into the purchase of FMCG than they do for other products.

a) attractive quality; b) must-be quality; c) reverse quality; d) one dimensional quality; and e) indifferent quality. The 'Environmental Psychology Approach' developed by Mehrabian and Russell (M-R) (1974) which is commonly used for formative emotional and behavioral process of consumers in a physical retail environment is used in this study with slight modifications. The '*Kano Theory of Attractive Quality*' is applied to investigate how impulse consumers perceive quality attributes of packaging in purchasing FMCGs at supermarket setting.

Research Problem

Eric Arnould *et al.* (2002) described that business stays in business by attracting and retaining customers. They accomplish this through the exchanges of resources with consumers, in a way that both business and customers are benefited. Marketers use various marketing stimulus that highlight the benefits of their products to encourage buyers to purchase their products. The extents of influence of these stimuli depend on how consumers make their purchasing decisions. In the marketing literature, the consumer decision process is often depicted as a flowchart linking problem recognition to post-purchase evaluation (O'Shaughnessy, 1987) and Blackwell *et al.* (2001) found that consumer decision moves through seven stages (i.e. need recognition, search for information, pre-purchase evaluations of alternatives, purchase, consumption, post-purchase alternative evaluation, and divestment). As consumers move through these stages, marketers have opportunities to react to and influence on consumer behaviour. The effective communication and marketing strategies that address each of this stage and their variations can be used for this purpose.

Consumer decision process is influenced by several factors in terms of degree of involvement and the extent of the problem solving process that consumers undergo in different purchase situations. The determinants and the nature of the consumer behaviour are varying with the type of the decision that they make (Dholakia, 2000). Usually, the complexity of the decision process is greatly influenced by the nature of the product (i.e.

impulse or non-impulse) that the customer purchases. The decision process to purchase impulse product (i.e. impulse purchases) is comparatively less complex than the decision process of non-impulse product. Because, impulse decisions are spontaneous decisions which need not to follow all the steps in consumer decision making process.

The impulse nature of purchasing behaviour today places a greater burden on manufacturers and retailers. The extent to which shoppers buy on impulse and without a written lists puts a strong emphasis on the various kinds of in-store merchandizing and personal selling stimuli which the marketer may use (David and Albert, 2002). Impulsive or unplanned buying behavior is an extensively recognized phenomenon that accounts for 60 percent to 80 percent of all purchases in certain product categories (Wolfe, 2005; Turner, 2006). These findings have suggested that more purchases result from impulse than from planning. Therefore, retailers try to increase the number of impulse purchases through different strategies such as, product displays and package design (Jones et al., 2003) i.e., changing color in store design (Bellizzi *et al.*, 1983), manipulating store atmosphere (Donovan and Rossiter, 1982), changing fashions (Ian and Chang, 2004), and altering background music (Milliman, 1986).

Most of the researchers, the impulsive buying behavior is seen as a sudden, spontaneous act which precludes thoughtful consideration of all available information and choice alternatives (Rook, 1987; Thompson *et al.*, 1990). Commonly, impulse buying is described as more arousing, unintended, less deliberate, and more irresistible than planned buying behavior (Chuang, 2005). Hence, researchers have the same opinion that impulsive buying occurs when an individual makes an unintended, unreflective, and immediate purchase (Rook, 1987; Rook and Fisher, 1995). Thompson et al. (1990) argued that impulsive buyers are likely to be unreflective in their thinking, to be emotionally attracted to the object, and to desire immediate gratification. On the other hand, some researches on impulse buying have mainly looked at impulse buying as a self-control problem (Rook, 1987) assuming that impulsive people do not have the mental power to resist sudden urges to

buy, while others investigate other differences that distinguish impulsive people from non-impulsive people (Chuang, 2005).

Marketers believe that the most of the consumers purchase their needs just looking at the appearance of the products rather checking the quality and other features of the products. Shiffman and Kanuk (2000) supported this argument by saying that many consumers buy clothing with designer label because status of label make them feel better and urge to purchase them. Especially in present attractive supper-market setting that persuade the longer browsing encourages impulse buying of the consumer. Therefore, today the conception of impulse purchasing has identified as a decisive factor in marketing (Rook, 1987; Adelaar *et al.*, 2003; Koski, 2004). As it has been suggested that more purchases result from impulse than from planning, retailers struggle to encourage strategically the occurrence of impulse purchases in their stores. Kacen and Lee (2002), supporting these arguments, stressed that the contemporary marketing innovations, such as innovative displays, attractive and user-friendly packaging, make impulse buying even easier.

When purchasing FMCGs, the packaging could play a huge role in attracting consumers and urge them to make unplanned-buying. Therefore, the quality of packaging is considered as one of the critical success factors in marketing. The Theory of Attractive Quality has proposed twenty four (24) quality attributes of packaging (Table 1). These quality attributes were tested by the different research studies (see Kano, 2001; Berger *et al.*, 1993) and confirmed that consumers have different perceptions towards these attributes.

Table 1: Twenty Four Quality Attributes

No	Quality attribute	No	Quality attribute
01	easy to grip	13	recyclable material
02	user-friendly	14	additional functions
03	easy to open	15	hygienic
04	facilitates the sorting out of household waste	16	attractive and nice looking print
05	easy to empty completely	17	declaration of contents
06	easy to dose	18	instructions

07	fit in storage spaces	19	symbols
08	contain just the right quantity	20	communicates a certain brand
09	easy to throw in the household waste	21	communicates product family
10	protection	22	aesthetically appealing
11	leakage	23	open-dating
12	re-salability	24	appearance = content

Source: Berger *et al.*, (1993)

Wikström (2002) has divided these quality attributes into three entities as follows:

- a. **Ergonomic** - includes everything that has to do with adaptations to the human physique and behavior when using the product (i.e. easy to grip, user-friendly, easy to open, facilitates the sorting out of household waste, easy to empty completely, easy to dose, fit in storage spaces, contain just the right quantity, easy to throw in the household waste).
- b. **Technical** - the product's technical function, construction, and production (i.e. protection, leakage, re-salability, recyclable material, additional functions, attractive and nice looking print, hygienic).
- c. **Communicative** - the product's ability to communicate with humans (i.e. declaration of contents, instructions, symbols, open-dating, aesthetically appealing, communicates product family category, communicates a certain brand, appearance = content).

Based on the above discussion, the research problem is: *What factors enhancing the moral urge for impulse purchase and how ergonomic, technical, and communicative quality attributes of packaging are perceived by impulsive consumers when purchasing fast-moving-consumer goods at supermarket setting in Sri Lanka?*

Hypothesis of the Study

H₁: Packaging is more potent than the symbolic properties, price, brand, and the perceived value of goods, among the product-related factors, in impulse buying behaviour of consumers in supermarket settings.

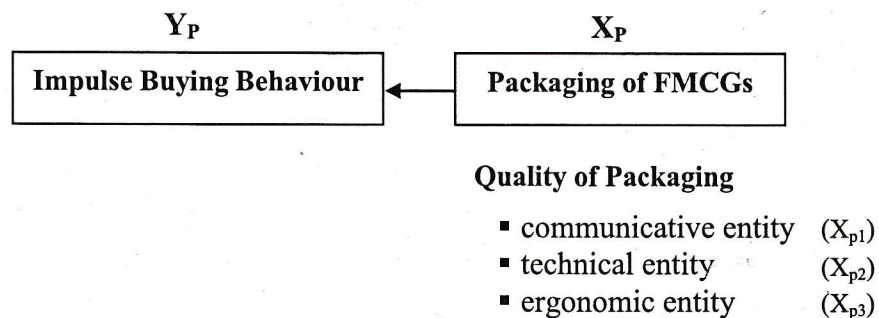
H₂: Individuals, who are exposed to 'communicative entity' (*i.e. declaration of contents, instructions, symbols, open-dating, aesthetically appealing, communicates product family category, communicates a certain brand, appearance*) of packaging experience a more positive impulse buying styles than, who are exposed to 'technical entity, or 'ergonomic entity'.

Methodology

Causal studies seek to discover the effect that a variable(s) has on another (or others) or why certain outcomes are obtained (Cooper and Schindler, 2000). Therefore, the impulse buying behaviour is defined as the dependent variable (Y_{PIB}) of this research while the role of packaging (X_p) is defined as the independent variable (Figure 1).

A stratified random sampling technique is used for this research. FMCG shoppers were approached at random at three supermarkets located at Kurunegala, Kandy and Anuradhapura districts in high-to-middle socioeconomic consumer-segment. All these districts are randomly selected by excluding the war affected-districts in North and East Provinces. Consumers, who had not visited the store in the past three weeks, were selected for the study, because if they are too much familiar to the retail environment it might influence their impulse buying behaviour.

Figure 1: Influence of Packaging on Impulse buying



$$Y_{PIB} = f(X_{p1}, X_{p2}, X_{p3})$$

A total of 300 shoppers, 100 at each supermarket were interviewed. Out of the total sample, 44 questionnaires were eliminated on the grounds of uncompleted information. Therefore, a total of 256 consumers were interviewed. The sample was slightly dominated by female shoppers (55%). In terms of age distribution, nearly 72 percent of the respondents were between 20 and 40 years old. 75 percent of them were married, and overall they were familiar with the supermarket (44 % had visited the supermarket 1-2 times during the past 30 days). A structured and pre-tested questionnaire was used to gather empirical data from the eligible consumers.

The questionnaire was divided into four parts, namely: questions to be asked before entering the super market, an influential factors-ranking section, back-ground questions, and Kano pair questions. The first part contains three (03) main questions that used to get some information, such as *frequency of visiting supermarket (Q₁)*, *whether he/she makes impulse buying in shopping (Q₂)*, and *what he/she intended to purchase and quantity of FMCGs he/she decided to buy (Q₃)*, when the consumer entering to the supermarket. The Kano⁶ questionnaire contained pairs of customer requirement questions (Kano et al, 1984), and each question had two parts (Martin and Lars, 2005) i.e. '*How do you feel if that feature is present in the product*' (this is the functional question.) and '*How do you feel if that feature is not present in the product*' (this is the dysfunctional question.) (Berger et al., 1993)

A calculation of an average (better and worse), without losing the quality dimension's attractive, one-dimensional, and must-be attributes, was carried out as suggested by Berger et al. (1993). These averages state whether customer satisfaction can be increased by meeting a certain quality attribute

⁶ Inspired by Herzberg's Motivator-Hygiene theory (Martin and Lars, 2005), Professor Kano and his co-workers developed the 'Theory of Attractive Quality' (Kano et al., 1984). This theory helps to understand how consumers evaluate quality attributes and it classified the quality attributes into five categories of perceived quality: a) attractive quality [A]; b) must-be quality [M]; c) reverse quality [R]; d) one dimensional quality [O]; and e) indifferent quality [O]

or whether fulfilling this quality attribute merely prevents the customer from being dissatisfied (Berger et al. 1993).

$$\text{Better} = \frac{A + O}{A + O + M + I} \quad \text{Worse} = - \frac{O + M}{A + O + M + I}$$

The positive better numbers indicate that customer satisfaction will increase by providing a quality attribute and the negative worse numbers indicate that customer satisfaction will decrease by not providing a quality attribute (Berger et al. 1993).

Impulse Buying

"Impulse purchase" or "impulse buying" describes any purchase, which a shopper makes, but has not planned in advance (Stern, 1962). These decisions are considered as unexplained decisions because impulse purchasing generally occurs spontaneously without conscious planning. As the term implies, the purchase was not specially planned, generally it involves only the first step of the purchasing behaviour process - problem recognition or a 'need recognition' (Morawski and Pugacewicz, 2004). The concept of impulse buying becomes a very popular area under discussion among researcher as the percentage of impulse buying shows continuous upward trend during past few decades. Impulse buys are a key means of boosting the volume of sales from the shoppers, who make most of the buying. There are some studies, which have indicated the significant and growing trend towards impulse purchasing. For instance, between 1945 and 1959 impulse purchases ranged from 38.2 percent to 50.9 percent of the total purchase in supermarkets (Stern, 1962). In the late 1970s impulse purchases accounted for between 27 and 62 percent of purchases in department stores (Bellenger and Robertson, 1978). One estimate shows that only three out of ten purchases are decided upon in advance, while about half of all purchases in grocery stores are made completely on impulse (Turner, 2006). By one of the latest study conducted by Wolfe (2005) in Georgia found that approximately 60 percent of sales of the retail establishments are impulse purchases. A more extreme result was found by POPAI (Point Of Purchase Advertising International), which indicates that 75

percent of buying decisions are made in-store (Miller, 2002). Table 2 presents some of the conclusions on the extent of impulse buying

Table 2: The Extent of Impulse Buying

	Research	Conclusion
01	Doreen Zavada, (2000), How Important is Impulse buying to the Floral Industry, The NPD Group	Nearly one-third of floral transactions and one-fifth of the sales are impulse purchases.
02	Inman J. Jeffrey & Russell Winer (1999), 'Impulse Buying, <i>The Wall Street Journal</i> , A-2 (April)	68 percent of items bought during major shopping and 54 percent on smaller trips are unplanned.
03	Tjostheim Ingvar & Haugland Bjorn, (2005), Impulse Buying in Grocery Stores, ESOMAR Conference Budapest, (April)	74 percent of the fruit and vegetables purchases in grocery stores are on impulse.
04	Prasad, V. Kanthi, (1975), Unplanned Buying in Two Retail Settings, <i>Journal of Retailing</i> , 51	39 percent of all department store shoppers and 62 percent of all discount store shoppers purchased at least one item on an unplanned basis.
05	Consumer Buying Habits Studies, (1965), E.I. Du Pont de Nemours & Co., Wilmington, DE,	One-half of the buying decisions in supermarkets are unplanned.
06	Clover T. V. (1950), Relative Importance of Impulse Buying in Retail Stores, <i>Journal of Marketing</i> , 15 (July)	More than 33 percent of all purchases in variety and drugstores are unplanned.

- | | |
|--|--|
| 07 Driving Impulse Shopping with a Smart Cart: Supermarkets could soon turn to monitoring technology to make us buy more stuff, by Duncan Graham-Rowe, November, 2006 ⁷ | Impulse buying currently accounts for about 40 percent of all supermarket purchases |
| 08 http://www.scoop.co.nz/stories/ (26 th February 2007) | Impulse supermarket buying is a major cause of New Zealanders Christmas budget blowouts, according to a nationwide survey released today, with females aged 40-49 most at risk |
| 09 Bellenger, D.N., Robertson, D.H. and Hirschman, E.C. (1978), Impulse buying varies by product. <i>Journal of Advertising Research</i> . Vol. 18. No. 6 | unplanned purchases accounted for 27-62 percent of purchases in a department store context |
| 10 Miller, R. (2002), In-Store Impact on Impulse Shoppers, <i>Journal of Marketing</i> , 27-28 | 75 percent of buying decisions are made in-store i.e. impulse buying |

Since 1950's researchers identified the impulse buying as an important and problematic concept in explaining consumer behaviour. Despite the long tradition of research into impulse buying, there still seems to be some controversy over what impulse buying conceptually is (Koski, 2004). Therefore, still many aspects of impulse buying remain largely unexplored (ESCRP, 1999). This is due in part to the long-standing absence of a compelling conceptualization of this distinctive type of purchasing behavior (Dennis, 1987). As far as retail decision maker is concerned, impulse buying can be pragmatically defined as purchasing resulting from a decision to buy

⁷ <http://www.teconologyreview.com>

after the shopper has entered the store. However, it is difficult for marketers to agree on universally accepted definition of impulse buying. For instance, American Marketing Association defines impulse purchasing as, a purchase behavior that is assumed to be made without prior planning or thought, and it is claimed, impulse buying involves an emotional reaction to the stimulus object (product, packaging, point-of-purchase display, or whatever) in addition to the simple acquisition act. Stern (1962) specifies that impulse buying is synonymous with 'unplanned buying' and Stern defines impulse buying as, *any purchase, which a shopper makes but has not planned in advance*. Following Stern's study, researchers have extended this definition beyond an uncomplicated unplanned purchase to incorporate an emotional element or an urge to make the purchase decision. Rook (1987) defines impulse buying as, *a consumer's sudden experiences, often powerful and persistent urge to buy something immediately*. Beatty and Ferrell (1998) extended Rook's definition of impulse buying to a sudden and immediate purchase and define impulse buying as, *a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task*. According to this definition the behaviour occurs after experiencing an urge to buy and it tends to be spontaneous and without a lot of reflection (i.e. it is 'impulsive'). It does not include the purchase of a simple reminder item, which is an item that is simply out-of-stock at home.

Piron (1991) carried out a methodical review of literature on impulse buying and suggests a more precise and widespread definition. According to Piron, the impulse buying is, *an unplanned, spur-of-the-moment action triggered by product display or point-of-sale promotion*. Piron's (1991) definition comprises four components of impulse buying: it is unplanned, it the result of an exposure to stimulus, it is decided 'on-the-spot', and it involves an emotional and/or cognitive reaction. Rook and Gardner, (1993) add another two characteristic by saying 'impulse buying is an unplanned purchase characterized by (a) relatively rapid decision-making, and (b) a subjective bias in favor of immediate possession'.

Early research used the terms 'impulse buying' and 'unplanned buying' synonymously. This conceptualization led researchers to classify products in terms of whether they were likely to be purchased impulsively. By 1970s, however, researchers had begun to question whether products could reasonably be classified as impulse items and concluded that all products could be purchased impulsively. In the 1980s, important works by Rook (1987) clarified the nature of impulse buying. Rook and Hoch aptly noted, '*it is the individuals, not the products, who experience the impulse to consume*' (1985, p. 23). This statement led to a redefinition of impulse buying as a sudden and powerful urge that arises within the consumer to buy immediately. Impulsive purchasing was now defined as involving spontaneous and unreflective desires to buy, without thoughtful consideration of why and for what reason a person should have the product (Rook 1987; Rook and Fisher 1995).

Product Packaging and Impulse Buying

Packaging is commonly defined as the *enclosing of a physical object, characteristically a product that requires protection from tampering*. It relates to the activities of designing and producing container and / or wrapper for the product (ICA, 1999). The supremacy of high-quality packaging lies with its ability to make instant recognition of the company or brand. Conventionally, packaging had the primary function of containing and protecting the product. At present, a numerous factors have made packaging an imperative marketing tool which can enhance consumer impulse buying potentiality.

A recent study on American wine purchasing shows that glass wine bottles play a key role in determining which wine is purchased. According to the study at least for 28 percent of American wine consumers, packaging is a decisive factor, perhaps the determining factor, in the purchasing decision. Further, it emphasizes that if wine is being purchased as a gift, the influence of packaging on the purchasing decision shoots up to 67 percent (Miyares, 1997). A study conducted by The New York Times' marketing research

department discovered that when given a choice between two similar food or beverage products, 81 percent of consumers would choose one they could smell and see over one they could only see⁸. Therefore, it is believed that packages often influence consumer purchase decisions more than the product does. A distinctive packaging ensures that a product consistently draws buyers' consideration and drives impulse purchases. Great packages communicate so effectively on a sensual and emotional level that a consumer cannot help, but pick them up. They lend the product inside a special beauty its own, so that consumers are drawn to the product because the package has made that entire product aesthetically pleasing⁹.

Results and Discussion

To determine the level of influence of packaging on consumer unplanned purchasing, researcher has run a multiple regression defining Products related influential factors (PRRF) as dependent variable and product price (X_{p-1}), packaging (X_{p-2}), perceived value (X_{p-3}), brand (X_{p-4}), and symbolic properties (X_{p-5}) as independent variables. The stepwise-multi-regression model summary provides particulars on the relationship between the PRRF and standardized predictors.

Table 3: Correlations between Z-PRRF and its Independent Variables

		zPRR F	Price	Packagin g	Perceiv e value	Brand	Symboli c property
zPRR F	Pearson Correlatio n	1	.600(**)	.789(**)	.738(**)	.723(**)	.676(**)
	Sig. (2- tailed)		.000	.000	.000	.000	.000

** Correlation is significant at the 0.01 level (2-tailed)

⁸ <http://www.scientisphere.com/application.htm>

⁹ Method and apparatus for impulse purchasing of packaged information services United States Patent 5671276, <http://www.freepatentsonline.com/5671276.html>

The stepwise algorithm selects the z-score of product packaging (ZPAC) as the first predictor of the model and the multiple-correlation coefficient between PRRF and ZPAC found to be strongly and linearly ($R_{Adjusted}=0.622$) correlated. When the remaining predictors are added to the model at the next steps, the multiple-correlation coefficient shows an increasing trend. The error of the estimate is considerably lower. This implies that the product packaging is the most correlated predictor with PRRF. The Pearson correlation between the PRRF and the product packaging is found to be 0.789 ($p<0.01$).

After standardizing the controllable variables, the eigenvalues for all the indicators are found to be close to one, consequently, these independent variables become independent. Further, all the condition indexes are now found to be lesser than 15 and, therefore, there are no possible problem with collinearity.

Table 4: Coefficients of the Standardized Product-Related Factors

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	ZPA	.789	.038	.790	20.51	.00	1.000	1.00
	C				5	0		
2	ZPA	.573	.034	.574	16.68	.00	.761	1.31
	C				7	0		
	ZATT	.442	.034	.442	12.86	.00		
					8	0		4
3	ZPA	.396	.030	.396	13.40	.00	.606	1.64
	C				0	0		
	ZATT	.386	.027	.386	14.47	.00		
					2	0		
	ZNA	.373	.028	.372	13.34	.00	.679	1.47
	T				0	0		

towards the product brand (ZATT), and the z-score of consumer perceived value (ZNAT) are added to the model, the standardized beta for ZPAC is reduced to 0.574 and to 0.396 respectively. Once the ZPRI is added to the stepwise analysis, it gives 0.321 beta value for ZPAC and 0.368 beta value for ZATT. Accordingly, until the z-score of product price is inserted to the stepwise-regression model the product packaging contains the highest beta coefficient and, hence, it seems to be the most influential factor among the other predictors of PRRF

Table 5a: An Overview of the Quality Attributes of Packaging

Quality attribute	Classification	CA	CS	TS	Q	p-value	BT	WS	SI
Technical									
Protection	Must-be	47.7	40.2	88.7	0	p < 0.01	0.42	- 0.78	3.17
Leakage	Must-be	31.6	12.3	50.2	2.4	p < 0.01	0.26	- 0.59	1.97
Re-salability	Indifference	48.8	40.0	50.4	0	p < 0.01	0.45	- 0.21	1.80
Recyclable material	Attractive	43.0	31.8	61.7	0	p < 0.01	0.48	- 0.21	1.94
Additional functions	Indifference	40.2	29.1	57.0	1.2	p < 0.01	0.52	- 0.29	1.94
Attractive & nice looking	Indifference	60.9	77.6	37.1	0	p < 0.01	0.26	- 0.24	1.74
Hygienic	One-dimensional	37.5	28.1	75.0	0	p < 0.01	0.51	- 0.69	2.67
Economic									
Easy to grip	Indifference	52.7	59.3	43.8	0	p < 0.01	0.39	- 0.23	1.72
User-friendly	Indifference	48.4	58.1	48.4	0	p < 0.01	0.33	- 0.29	1.95
Easy to open	Attractive	37.9	17.5	62.9	1.6	p < 0.01	0.60	- 0.27	1.93
Facilitates the sorting	Indifference	44.9	64.0	48.0	0	p < 0.01	0.42	- 0.27	1.79

out of household waste									
Easy to empty completely	Must-be	33.6	16.3	62.5	0.8	p < 0.01	0.32	- 0.55	2.42
Easy to dose	Indifference	48.0	54.5	44.1	0	p < 0.01	0.41	- 0.24	1.69
Fit in storage spaces	Combination	30.5 -A 30.1 -O	1.3	71.9	0	n.s.	0.65	- 0.44	2.23
Contain the right quantity	Must-be	41.0	15.2	62.5	0	p < 0.01	0.22	- 0.61	2.66
Easy to through to the household waste	Combination	37.1 -I 37.9 -O	2.1	58.6	0	n.s.	0.55	- 0.46	2.09

a Dependent Variable: zPRRF

By the stepwise analysis, the highest standardized beta value is recorded for ZPAC (0.790: $t > +2$, $p < 0.01$). When the z-score of consumer attitudes

These findings propose that, once the multicollinearity problem is eradicated, the PRRF is mostly influenced by the product-packaging. Based on these statistics, the first hypothesis (H_1) of the research is proven.

Therefore, it is found to be that the packaging is more persuasive than the product price, brand, symbolic properties, and the perceived value, among the product-related factors, in impulse buying behaviour of consumers in supermarket settings in Sri Lanka. It can be concluded that the consumers' unplanned buying is urged by the attractive and nice looking packaging of FMCGs at supermarket settings. The possible reason for this is the most of the irrational

Quality attribute	Classification	CA	CS	TS	Q	p-value	BT	WS	SI
COMMUNICATIVE									
Declaration of contents	Must-be	40.2	14.6	62.1	0	p < 0.01	0.23	-0.54	2.57
Instructions	Must-be	41.0	9.5	55.5	2.0	p < 0.01	0.16	-0.55	2.46
Symbols	Must-be	49.6	44.1	66.8	0	p < 0.01	0.18	-0.64	2.78
Open-dating	One-dimensional	36.3	17.2	62.9	0	p < 0.01	0.58	-0.48	2.14
Aesthetically appealing	Attractive	34.8	12.4	62.1	0	p < 0.01	0.53	-0.30	2.00
Communicates product family category	Attractive	37.9	11.3	61.3	0	p < 0.01	0.56	-0.25	1.93
Communicates certain brands	Combination	29.7 -A 29.3 -I	1.3	68.0	0.8	n.s.	0.50	-0.39	2.28
Appearance = content	Must-be	29.7	15.8	71.9	0	p < 0.01	0.44	-0.50	2.53

Quality attribute	Classification	CA	CS	TS	Q	p-value	BT	WS	SI
COMMUNICATIVE									
Declaration of contents	Must-be	40.2	14.6	62.1	0	p < 0.01	0.23	-0.54	2.57
Instructions	Must-be	41.0	9.5	55.5	2.0	p < 0.01	0.16	-0.55	2.46
Symbols	Must-be	49.6	44.1	66.8	0	p < 0.01	0.18	-0.64	2.78
Open-dating	One-dimensional	36.3	17.2	62.9	0	p < 0.01	0.58	-0.48	2.14

Aesthetically appealing	Attractive	34.8	12.4	62.1	0	p < 0.01	0.53	-0.30	2.00
Communicates product family category	Attractive	37.9	11.3	61.3	0	p < 0.01	0.56	-0.25	1.93
Communicates certain brands	Combination	29.7 -A 29.3 -I	1.3	68.0	0.8	n.s.	0.50	-0.39	2.28
Appearance = content	Must-be	29.7	15.8	71.9	0	p < 0.01	0.44	-0.50	2.53

As presented in Table 5 (*a* and *b*), on the basis of the category strength, a definitive classification of 21 of the 24 quality attributes was possible. The classification of these attributes is statistically significant ($p < 0.01$). To get an overview of the 24 quality attributes of packaging, these values were plotted in a better and worse diagram (figure 2). The classification of quality attributes discloses that a greater part of the attributes were classified as must-be (08 out of 24) and indifferent (07 out of 24). Four quality-attributes of packaging are experienced by consumers as attractive quality

CA - Classification Agreement¹⁰

CS - Category Strength¹¹

TS - Total Strength

Q - Number of

Questionable answers

BT - Better

WS - Worse

SI - Stated Importance

¹⁰ Matzler *et al.* (1996) present a rule of classification for when a certain quality attribute cannot be evidently assigned to the different categories. The evaluation rule is "M > O > A > I". Lee and Newcomb (1997) use a classification called "combination" to deal with such situations. In a case where a quality attribute is classified as a combination, a definite classification was not possible.

¹¹ Lee and Newcomb (1997) established two measurements to aid in the classification of quality attributes: category strength and total strength. Category strength is defined as the percent difference of the highest category above the next-highest category. Total strength is defined as the total percentage of attractive, one-dimensional, and must-be responses.

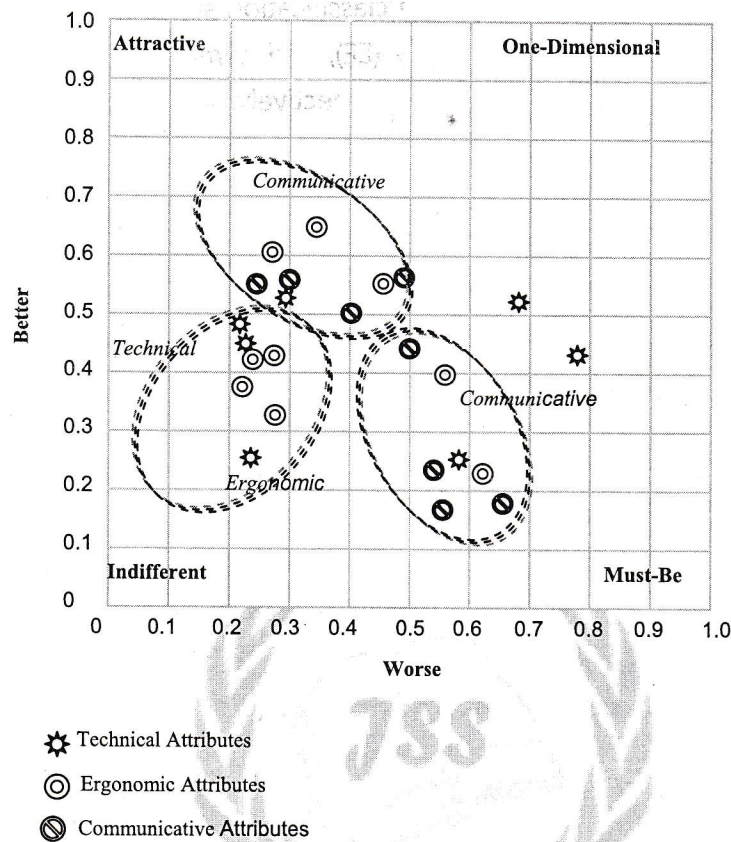


Figure 2: An Overview of the Quality attributes in a Better-Worse Diagram

The attributes that are perceived as must-be are: protection, leakage, easy to empty completely, contain the right quantity, declaration of contents, instructions, providing symbols, and appearance = content. The four attractive quality attributes are: recyclable material, easy to open, aesthetically appealing, and communicates products family category. None of the quality attributes was identified as reverse quality. Four quality attributes were classified as combinations as they could not be undoubtedly classified into one group.

According to the Better-Worse diagram, the most of the communicative attributes are identified as must-be (50%) and attractive (50%) quality attributes, while technical and ergonomic quality attributes are categorized

as indifferent. In addition, the average classification strength (CS) values for technical entity (TE), ergonomic entity (EE), and communicative entity (CE) were found to be 37.0, 32.0, and 15.8 respectively. As a result, the percent difference of the highest category above the next highest category of communicative entity is comparatively smaller. Further, the highest average total strength (TS) value is recorded for communicative entity (63.8). The average total strength of TE and EE was reported as 37.0 and 32.0 respectively.

Further, a calculation of better and worse was performed as recommended by Berger et al. (1993). The maximum value of better (BT) and worse (WS) is 1. The positive better numbers indicate that customer satisfaction will increase by providing a quality attribute and the negative worse numbers indicate that customer satisfaction will decrease by not providing a quality attribute (Berger et al. 1993). The average better values for TE, EE, and CE were found to be 0.41, 0.43, and 0.40 respectively. As the better value of ergonomic entity found to be the highest, EE is more influential in increasing consumer satisfaction. In contrast the average worse values for technical entity, ergonomic entity, and communicative entity were found to be -0.43, -0.37, -0.46 respectively. These averages state that by fulfilling these quality attributes merely prevents the customer from being dissatisfied. Since the worse value of communicative entity is closer to 0.5, it moderately influences on consumer satisfaction. These findings support the second hypothesis of the research.

Conclusion

The results indicate that the likelihood of an impulse buying is positively related with the most of the marketing stimuli use by the contemporary marketers. Thus, the more marketers invest on those stimuli the more likely consumers are to make an impulse buying. However, the degree of influence on impulse buying by those stimuli might vary. Results indicate that all the predictors are significant and the product brand carries the highest beta value indicating that it is the most powerful PRRF stimuli which, in-turn, can

persuade consumers' impulse buying. However, in this analysis also, the collinearity diagnostics verify that there are some possible problems with multicollinearity. Consequently, the stepwise-multi-regression model is applied converting all predictors to z-scores to fix the collinearity problems. The stepwise algorithm chooses the product packaging as the first predictor implying that it is more potent than the other factors in impulse buying behaviour. Therefore, it can be concluded that the innovative and eye-catching packaging attracts consumers and persuade them to purchase FMCGs in an unplanned manner. These empirical findings support for the first hypothesis of the research.

Further, it can be concluded that the most of the communicative quality attributes of FMCGs-packaging are generally taken for granted when fulfilled but result in dissatisfaction when not fulfilled. It gives the impression that the product's ability to communicate with humans - declaration of content, instructions, symbols, open-dating, aesthetic appealing, communicates product family category, communicates certain brands, and appearance - are much imperative concerns for FMCGs-packaging mostly bought as impulse purchases, overall then, support for the second hypothesis of the study.

References

Adelaar Thomas, Chang Susan, Lancendorfer Karen, Lee B., and Morimoto Markio, (2003), Effect of Media Formats on Emotions and Impulse Buying Intent, *Journal of Information Technology* (December)

Beatty, S.E., and Ferrel, M.E. (1998), Impulsive Buying: Modeling Its Precursors, *Journal of Retailing*, Vol.74. No. 2, 169-191

Bellenger, D.N., Robertson, D.H., and Hirschman, E.C., (1978), Impulse Buying Varies by Product, *Journal of Advertising Research*, Vol.18.(6), 15-18

Bellizzi A. Joseph, Ayn E. Crowley and Ronald W. Hasty (1983), The Effects of Color in Store Design, *Journal of Retailing*, 59 (Spring)

Berger C., Blauth R., Boger D., Bolster C., Burchill G., DuMouchel W., Pouliot F., Richter R., Rubinoff A., Shen D., Timko M., and Walden D., (1993), Kano's Methods for Understanding Customer-Defined Quality, *The Center for Quality Management Journal*, 2, no. 4

Bettman James R. and C. Whan Park (1980), Effects of Prior Knowledge and Experience and Phase of the Choice Process on Consumer Decision Processes: A Protocol Analysis, *Journal of Consumer Research*, Vol. 7, No. 3 pp. 234-248

Blackwell, R., *et al.* (2001), *Consumer Behavior*, 9th ed. Orlando: arcourt.

Chuang, Shin-Chieh, (2005), The Effect of Individual Differences on Adolescents' Impulsive Buying Behavior, *Adolescence Magazine*, September 22

David L. Loudon, and Albert J.D. Bitta, (2002), *Consumer Behaviour: Concepts and Applications*, (4th ed.,) Tata McGraw-Hill Publishing Company Limited, New Delhi

Davis Teresa, (2006 - Work in Progress), Shattering the Diderot Unit: Impulse Products and the Creation of New Product Complements, University of Wollongong

Dholakiaa, U.M., Richard P. Bagozzia, Lisa Klein Pearo, (2000), A social influence model of consumer participation in network- and small-group-based virtual communities, *International Journal of Research in Marketing*, Vol. 21(3), pp. 241-263

Dittmar Helga, (1996), Symbolic meanings of goods as determinants of impulse buying behaviour: summary of findings, University of Sussex, Arts Building E, Falmer, Brighton,

Donovan J. Robert, and John R. Rossiter, (1982), Store Atmosphere: an Environmental Psychology Approach, *Journal of Retailing*, 58 (Spring)

Hawkins I. Del, Roger J. Best, and Kenneth A. Coney (1998), Consumer Behavior: Building Marketing Strategy, 7th ed., Boston: McGraw Hill.

Holm Ron, (1999), The Five Buying Decisions, *Accounting Today*, Max Sacks International, (June), 21

Iyer, E.S., (1989), Unplanned Purchasing, *Journal of Retailing*, Spring (40-57)

James, E. Burrough, (1996), Product Symbolism, Self Meaning and Holistic Matching: The Role of Information Processing in Impulsive Buying, *Advances in Consumer Research*, Vol. 23

Jones M.A., Reynolds K.E., Weun S., and Beatty S.E., (2003), The Product-Specific Nature of Impulse Buying Tendency, *Journal of Business Research*, Volume 56, Number 7, July, pp. 505-511(7), Elsevier Science

Kacen J. Jacqueline, and Julie Anne Lee, (2002), The Influence of Culture on Consumer Impulsive Buying Behavior, *Journal of Consumer Psychology*, Vol. 12, No. 2, Pages 163-176

Kano, N. (2001), Life Cycle and Creation of Attractive Quality, Paper presented at the 4th International QMOD Conference, Quality Management and Organizational, Development, Linköpings Universitet, Sweden.

Koski Nina, (2004), Impulse Buying on the Internet: Encouraging and Discouraging Factors, *Frontiers of E-Business Research*

Mehrabian, Albert, and James Russell, (1974), *An Approach to Environmental Psychology*, Cambridge, Mass.: MIT Press.

Miller, R. (2002), In-Store Impact on Impulse Shoppers, *Journal of Marketing*, 27-28.

Milliman Ronald E., (1986), The Influence of Background Music on the Behavior of Restaurant Patrons, *Journal of Consumer Research*, 13 (September)

Miyares Ben, (1997), Packaging Strategies, *Packaging World Magazine*, (January), p. 88

Morawski L., and Pugacewicz A., (2004), Effect of Impulse Buying Behaviour According to Multi-product Monopoly Model, *Ekonomia (Economics)*, Vol. 15 (129-35)

O'Shaughnessy John, (1987), *Why People Buy*, Oxford University Press, New York

Piron, F. (1993), A Comparison of Emotional Reactions Experienced By Planned, Unplanned and Impulse Purchasers, *Advances in Consumer Research*, Vol. 20, 341-344

Rook W. Dennis, (1987), The Buying Impulse, *Journal of Consumer Research*, Vol. 14, No. 2 (Sep.)

Rook, D. W., and Fisher, R. J., (1995), Normative Influences on Impulsive Buying Behavior, *Journal of Consumer Research*, 22(3), 305-313.

Rook, W. Dennis, and Gardner, M., (1993), In the Mood: Impulse Buying's Affective Antecedents, *Research in consumer research* (Vol. 6, pp. 1-28). Greenwich, CT: JAI Press.

Schiffman L.G., and Kanuk L. Leslie, (2000), *Consumer Behaviour*, 6th ed., Prentice-Hall of India (Pvt.) Ltd.

Sheth, Jagish N., Newman Bruce I., and Gross Barbara L., (1991), *Why We Buy What We Buy: A Theory of Consumption Values*, *Journal of Business Research* 22(1)

Spiggle S., (1987), *Grocery Shopping List*, *Advances in Consumer Research*, Association of Consumer Research (241-45)

Thompson, C., Locader, W.B., and Pollio H.R., (1990), *The lived Meaning of Free Choice; An Experimental-Phenomenological Description of Everyday Consumers Experiences of Contemporary Married Women*, *Journal of Consumer Research*, 17 (December)

Turner Jo, (2006), *Impulse Buying, Shopping Sins Series*, University of Florida IFAS, 3

Weinberg Peter, and Gottwald Wolfgang, (1995), *Normative Influences on Impulsive Buying Behaviour*, *Journal of Consumer Research* 12, (December)

Wolfe Kent, (2005), *Understanding the Consumers Purchasing Decision Process*, Center for Agribusiness and Economic Development, The University of Georgia.

Wong Amy, and Zhou Lianxi, (2005), *Consumer Impulse Buying and In-Store Stimuli in Chinese Supermarkets*, 21 *Global Newsletter: Vol 4 Issue 6* (Fri 10 June 2005) Page: 37- 53