Store Format Choice in an Evolving Market – A TPB Approach

Kamaljit Singh Anand
Piyush Kumar Sinha

W.P. No.2008-12-02
December 2008

INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD-380 015
INDIA

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Kamaljit Singh Anand
Doctoral Student
Indian Institute of Management Ahmedabad, India

Piyush Kumar Sinha
Professor of Marketing and Chairperson, Centre for Retailing
Indian Institute of Management Ahmedabad, India

Abstract

The store choice has been studied extensively in the literature, but store format choice has had limited research attention. The store choice modeling has been primarily done in the random utility theory framework, which however is a neo-economics based view of choice decision that ignores the psychological and behavioral aspects of this planned behavior. The store format choice for bulk grocery purchase despite being a rational context has not been conceptualized in the most accepted construct in attitude behavior, the Theory of Planned Behavior (TPB). Attitude-behavior linkage has been studied extensively in literature but there is still no consensus on the components of attitude, their interrelationship and resultant impact on conation. The Theory of Reasoned Action has evolved over time to incorporate perceived behavioral control and past behavior to improve its explanatory capacity as TPB; however, it has maintained its unidimensionalist approach and has not tested affect and cognition independently for its impact on behavior. It may therefore be relevant to explore the possibility of testing the proposed Converging framework of Affect and Cognition and comment on the relationship of the structural components of attitude and its impact on format choice.

The impact of past behavior on future behavior in Theory of Planned Behavior has been ambiguous while there has not been much emphasis on the quality of past experience. The current research takes up the past experience quality and tests it in the attitude behavior relationship as an antecedent of actual behavior.

This paper conceptualizes the store format choice behavior in the Theory of Planned Behavior framework by exploring the strength of attitude-behavior relationship mediated through behavioral intention and its impact on format choice as also the independent role of affect and cognition on the format choice.

Key Words: Retailing, Theory of Planned Behaviour, Store Format Choice, Emerging Markets, India, Attitude-Behaviour Relationship**,**

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Introduction

A retailer typically aligns his business and value propositions with the selected store format (Sinha 2002). As the choice set of consumers is continuously expanding in terms of availability of newer stores and store formats, customer choices are not yet stable. Galata and Bucklin (1999) have reported store format choice as a more stable choice decision than the store choice decision. It therefore assumes academic and managerial significance to understand the dynamics of this significant choice decision from consumer as well as retailer's perspective. Apart from the retailers, store format choice is also a significant decision area for the consumers, being a relatively long term decision and may thus involve a planned choice.

One of the key questions before a marketing manager is whether the components of attitude are *affect* (feeling) based or *cognition* (evaluative) based, as that would determine the kind of persuasion attempt required (Millar and Millar 1990) and therefore whether a marketing communication should propagate a utility based campaign or an emotion laden message for promoting its product is a managerial decision. There are several reasons for attitude-behavior inconsistency and factors like referral group opinion, perceived control over the behavior and routinized habits play vital role in improving the understanding of attitude behavior linkage. A practitioner needs to control or mitigate many of these barriers to enhance the explanatory power of the attitude.

This paper aims to understand the store format choice behavior of the bulk grocery shoppers in an attitude-behavior framework and in the process conceptualize the mechanism by which the different components of the attitude impact the choice behavior. Such knowledge would strengthen the understanding of attitude behavior relationship and the role of cognitive and affective beliefs in this relationship from researcher as well as practitioner's point of view. The proposed conceptualization would be a new contribution to store format choice literature as well as attitude-behavior studies.

The grocery purchases are primarily done either in bulk or in small fill-up purchases. While the fill-up purchases are more frequent, they are largely unplanned and done on need basis primarily from nearest stores. Bulk Grocery purchase is a recurring occasion for the households and can be considered a planned behavior as it is aided by shopping list (Block and Morwitz 1999), associated with financial risk and needs a planning of purchase incidence and the frequency of

purchase. Among the various sectors in retail in India, Grocery forms a significant category[1] in terms of value. In the organized retail sector this share is less than one fourth, but is likely to grow at a fast rate. Most of the new entrants into the retail sector have also identified grocery as the driver of customer acquisition. The study focuses on store format choice by the India consumers for bulk grocery purchases. As both the format choice and bulk grocery fall in the ambit of planned behavior, the phenomenon has been studied using the Theory of Planned Behaviour (Ajzen, 2002).

Store Format Choice

Although store choice has been researched extensively in literature, the format choice has been a relatively limited area of work. The format choices have been studied for Retail format evolution by Rousey and Morganosky (1996); Price format sensitivity of shoppers and its impact on Shopping Basket Size by Bell and Lattin (1998); Bell, Bucklin et al. (2000); Stability of Format Choices through comparison of inter and intra format switching behavior and role of market conditions by Benito and Galego (2005); Galata and Bucklin (1999); Perceived shopping utility of different Price formats by Bell, Tang and Ho (2001), Effects of exogenous variables and pricing formats on store choice by Fotheringham (1988), Kahn and Schmittlein (1989); Timmermans (1997); Retail format competition by Bhatnagar and Ratchford (2004).

Majority of the store choice models have been developed in a Discrete Choice framework wherein substantial fundamental work has been done by Manski (1977) on random utility theory utilization and by Gensch (1987) on two stage choice models and. These studies have formed the basis for several later researches in this area. The primary objective of such work was to develop a deterministic and stochastic framework for choice decisions. The choice decisions have primarily been regarded as conscious economic evaluations of the options and have mostly been conceptualized in the utility framework (Bell, Tang and Ho, 1998; Messinger and Narsimhan 1997) or only as cost minimization functions (Bawa and Ghosh, 1999; Bell, Tang and Ho, 2001). The importance of value expectancy is further reflected through the price format sensitivity of shoppers which impacts the shopping basket size (Bell and Lattin 1998; Bell, Bucklin et al. 2000; Kahn and Schmittlein 1989; Timmermans 1997). The other popular work has been on state dependence dynamic models like Markov (Burnett 1973), Dirichlet (Wrigley and Dunn 1985), Market Structure (Sinha 2000) and Hazard Model (Sinha and Zimmerman 2000). This set of work has primarily aimed at predictive studies and used aggregated data for work.

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[1] Source: Edelweiss Retail Sector Report 2006

The choice models have mainly been used from the retailer's perspective to predict the market shares for new stores, their optimal location and likely impacts on choice of strategic changes to stores or centres (Craig et al , 1984, Fotheringham, 1988). In the very initial days Huff (1964), initiated aggregate level data analysis and modeling of store choice. The use of Random Utility Theory based probabilistic discrete choice models to analyze the individual choices is more recent and can be viewed as a logical extension of Huff's approach. The new Random Utility Theory based paradigm is accommodative in terms of dependent and independent variables (e.g. Hensher, Louviere and Swait, 1998). It can take several combinations of individual level perceptual variables, like price points, selection, merchandise quality etc. (also discussed by Lindquist, 1974; Arnold, Roth and Tigert 1980; Gautschi, 1981). The individual shopper differences and more detailed store specific objective measures like floor space, specific stores have been reported by Gensch and Recker (1979); Weisbrod et al (1984). Louviere (2001) used RUT Framework to predict stability of store choices using variables like location convenience, low or high prices, selection, quality, service, atmosphere, bargains, fashion, convenient parking etc. and found location convenience and merchandise quality to be the most important determinants of store choice

Theory of Planned Behaviour in Store Format Context

The conceptualization of store format choice in a planned behaviour context like bulk grocery purchase would need development of a deterministic framework that captures this planned behavior and explains the role of various underlying factors in the choice decision. Such a framework would enable the marketers take relevant actions that could influence the underlying factors for a favorable decision. Few of the accepted theoretical frameworks in the context of choice models are based on Random Utility. Some of the attitude-behavior theories have both the multi attribute components simulating the random utility maximization function as well as global factors acting like the stochastic components. Among the theoretical foundations linking attitude and behavior, the most accepted work is Theory of Planned behavior (Ajzen, 1985, 2002). According to Fishbein (1975), rational decision contexts are well suited for studying a deterministic attitude behavior relationship. A planned decision like store format choice may therefore be appropriately conceptualized in the Theory of Planned Behavior framework.

The Theory of Planned Behavior is based on the attitude behavior linkage, which describes behavior to be an outcome of the individual's attitude towards the object or act. This linkage has been of interest to the psychology and social behavior scientists since the late nineteenth century, as they attempted to conceptualize the reasons for typical and atypical behavior of humans. The attitude behavior consistency was however disregarded for a brief period when pronounced

researchers like LaPiere (1934); and Wicker (1969) reported low correspondence between attitude and behavior. The academic and marketing interest in attitude-behavior relationship had decreased in this period. Later researchers shifted the focus of research from attitude object to the act (Fishbein 1967; Ryan and Bonfield 1975), and emphasized on the importance of measurement (Mischel 1968), scaling, specificity (Fishbein 1967) and context definition (Doob 1947; Fishbein 1967) that proved successful in establishing a better attitude behavior relationship. Attitude is currently recognized as the antecedent of intention and behavior; however, there is still no conclusion on the structure of attitude components. The earliest understanding of Attitude is that of a three component structure, which comprises *Cognition* (beliefs based evaluative component)*, Affect* (feelings based component) and *Conation* (the behavior or intention to perform a behavior), without any preset hierarchy or relationship structure. This tripartite view has been dimensionalized by the later researchers wherein they consider *affect* to be the only attitude component. *Cognition* is suggested to be its antecedent and *conation* a consequence. This view is supported widely by the Theory of Planned Behavior, which is an extension of the Theory of Reasoned Action (Fishbein and Ajzen 1975), and Fazio's (1986) Process model of attitude behavior relation. However, newer research in the mechanics of brain functioning and experimental psychology has indicated *cognition* to be an independent operator. Such scientific findings are increasingly questioning the overemphasized role of belief based complex attitude components and are propelling a need to reexamine the attitude structure and to assess how the different components of attitude translate into intent or behavior.

Ajzen (1985) brought forward Theory of Planned behavior (**Figure – 1**) as an extension of TRA to counter limitations of the model in dealing with behaviors where the subject had incomplete volitional control because of factors such as availability of requisite opportunities and resources (like time, money, skills and cooperation of others). Despite receiving criticism for using a multiplicative attitude construct to predict a simple variable like intention (Evans 1991), temporal instability (Epstein 1979) and Immediately after Fishbein and Ajzen's work, researchers like Bentler and Speckart (1977); not suitable for capturing habituated actions not falling under conscious processing continuum (Triandis 1977; Bearden and Woodside 1977; Fazio 1979), the Theory of Planned Behavior provides one of the most accepted frameworks of attitude and behavior relationship.

Figure 1: Theory of Planned Behavior
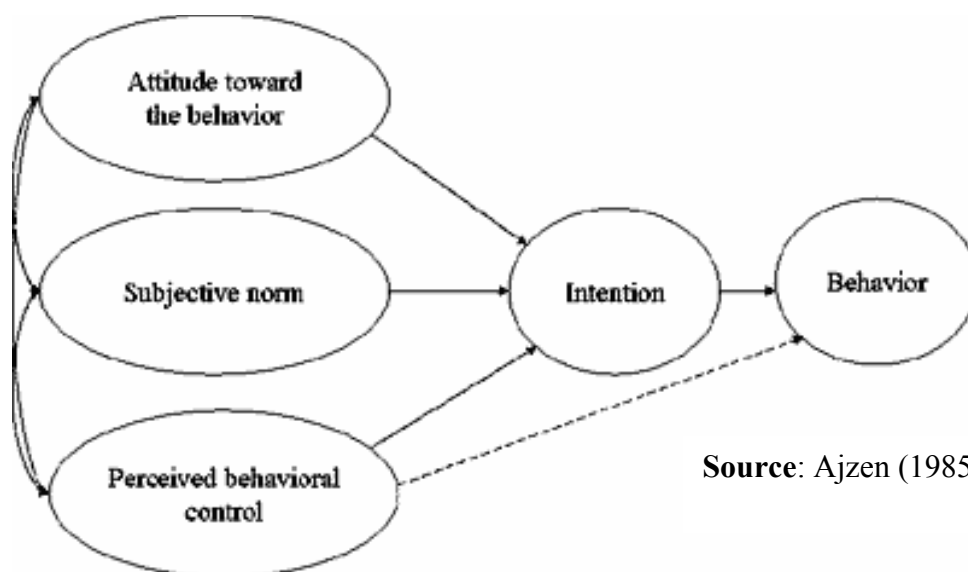
Source: Ajzen (1985)

Exploring interrelationship of Affect, Cognition and Conation

Several recent advances in neurosciences as reported by Ledoux (1998, 2003) have indicated that emotional decision making is faster than rational processing. Affect may precede cognition or the two may operate independently in certain kinds of decisions. Zajonc (1980) published a revolutionary paper on attitude behavior relationship that initially received criticism from the unidimensionalist view proponents (Epstein 1983, Lazarus 1984) but eventually many researchers came up with evidence in his support. His experiments demonstrated that reliable affective distinctions (like-dislike ratings) could be made without any interpolation of recognition memory (old-new judgments). This was called as the *affective primacy hypothesis.* He concluded that affect and cognition were under the control of separate and partially independent systems that could impact each other in several ways. Later experimental studies by Murphy and Zajonc (1993) supported the affective primacy hypothesis. Other researchers (Abelson et al. 1982; Breckler and Wiggins, 1991; Edwards, 1990; Millar and Millar, 1990, Lavine et al., 1998, Farley and Stasson, 2003) in post Zajonc period have also demonstrated that affect and cognition are distinct components of attitude with differential impact on conation.

Abelson et al. (1982) found that the affective measure was a significantly better predictor of global attitude than the cognitive measure. Millar and Millar (1990) asserted that the salience of affect or cognition to an individual determined the attitude change process or its

operationalization. They suggested that attitudes rooted in emotions were more susceptible to cognitive persuasion attempts, while cognition rooted attitudes were more susceptible to emotional attempts.

Edwards (1990) also suggested that the dominance of attitude component depended on how the attitudes were formed. She found that attitudes rooted in affect were influenced more by affective persuasion attempts while the attitudes formed through cognitive route were impacted by both cognitive and affective persuasion. Breckler and Wiggins (1991) found that subject's pre-persuasion conative responses were primarily affect driven while the post-persuasion responses were mainly thoughts related.

Breckler and Wiggins' (1989) demonstrated that both affect and evaluation had strong correlations with the global measure of attitude and appeared to be two distinct constructs with low correlation between them. They also showed that affect was more strongly associated with the global measure of attitude or behavioral tendencies, than the beliefs using a within-subjects design capturing affect and cognition on semantic differential items. Farley and Stasson, (2003) used a between–subject design and found that affective persuasion produced significantly more positive attitudes towards blood donation than did the cognitive stimuli. However, they found that affect, cognition, global attitude and behavioral intention to be significantly correlated suggesting a convergent validity of the measures of attitude components. The models, however, could not demonstrate sufficient discriminant validity. Verplanken et al. (1998) also showed in a set of studies that affective evaluations were faster than the cognitive evaluations because of easier accessibility of attitudes formed via affective processes. Sojka et al. (2003) classified affect and cognition according to their intensity and were able to capture varying behavior in each of the affect-cognition combinations.

This group of research in the 1990s has reopened the debate of comparisons with tripartite view of attitude, but there has not been any conclusion on the directionality of the components or their precedence, especially affect and cognition. There has been no research lately supporting conation as a component of attitude and hence any attempt at relating attitude to the tripartite view would be futile. If recent neuroscientific work (Chugani, 1998; Casey, Giedd and Thomas, 2000; Goldman, 1987; Huttenlocher and Courten, 1987) and psychological research are considered in unison, attitude may be described as a *Dual Locus construct* comprising affect and cognition, which need to be treated independently. This hybrid view would be a digression from the current unidimensionalist understanding of Theory of Planned Behavior (Ajzen, 1985) and would be unique in employing affect as a global measure of attitude, independent of cognition - the beliefs based multiplicative measure of attitude. This *'Converging Framework of Affect and Cognition',*

would employ the two constructs as independent antecedents of conation with low intercorrelation expectancy.

Figure – 2: Proposed Converging Framework of Affect and Cognition
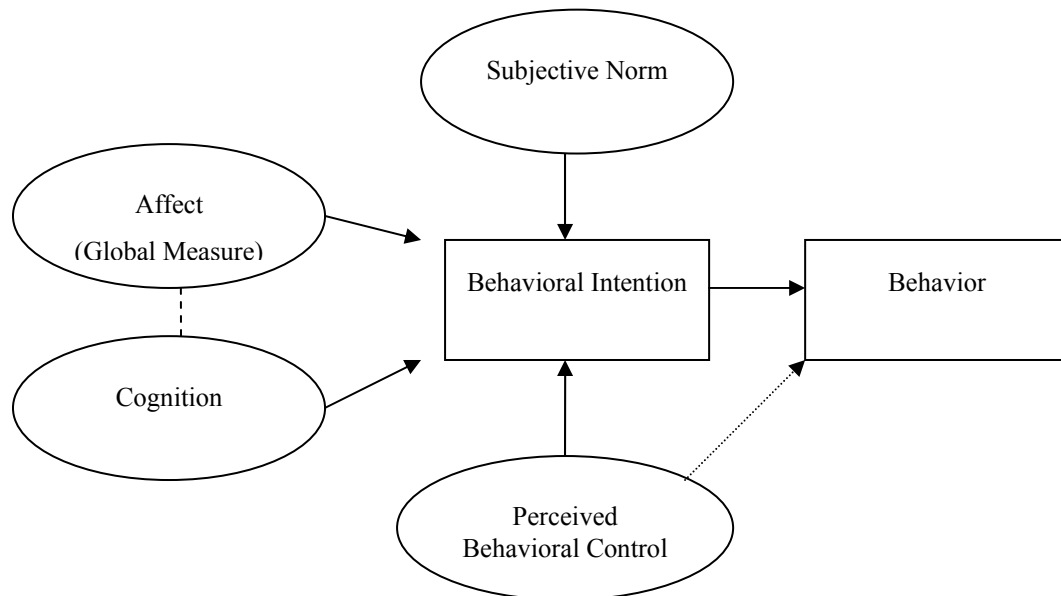
A TPB based Conceptual Model of Store Format Choice

The consumer's choice of store format is conceptualized as primarily a consequence of her *intention* to use that format. According to the *Theory of Planned behavior* (Ajzen, 2002) the consumer's past usage of that format *(past behavior)* and accessibility to all resources needed to be able to use that format *(actual behavioral control)* would also play a role in the store format choice. However, our interpretation of past behavior is different from Ajzen and several other researchers like Ouellette and Wood (1998) and Rhodes and Kourneya, (2003), who have advocated its usage as a surrogate for *Habit*, but that is possible only when habit is used as residue of past behavior, which is very difficult to separate and beyond a point has only mathematical relevance. Instead of that, we propose use of another surrogate which is the *quality of past experience* that has been used in some researches and has shown impact on behavior. There have been criticisms for using past behavior as such in explanatory models for attitude and behavior. According to Punj and Staelin (1983) satisfactory experience is an important component of useable past experience. Other researchers like Srinivasan and Ratchford (1991) have defined a positive experience as one that captures the affective quality of past experience. We therefore

define the quality of past experience as the degree of satisfactory experience derived from previous set of such choice decisions.

The *intention* to use a format in turn is primarily determined by the *attitude* consumer holds towards using that format. The traditional *Theory of Planned behavior* holds that these *attitudes* are a result of cognitive beliefs which consist of an evaluative and a strength component. According to Fishbein (1967) cognitive beliefs are a multiplicative measure of these two components. This paper, however, would explore cognitive beliefs independent from the global measure of attitude (affect). We propose that *affect* due to its generalized emphasis on 'feel' is the *locus of Permanent Beliefs,* which is mostly low or non evaluative in nature, while *cognition* due to its evaluative property is the *locus of Active Beliefs*. To an extent the interpretation of the locus concept may be related to the semiautonomous response models of human judgment (Bargh, 1989; Fazio, 1990; Smith and DeCoster, 2000; Logan and Cowan, 1984; Wegner and Bargh, 1998) which comprises *conscious deliberation* in new situations and *automatic reliance* in case of habits. However, the origin of the evaluative and non evaluative response differs completely in the two philosophies and the reason for low/non evaluative *affect* component is *permanency of set beliefs* and not mere *habit*.

The relationship between *cognition* and *affect* may not be observed at an instant but it is likely to be a prolonged process. *Affect* to *cognition* communication may be a situational impulse, but *cognition* to *affect* is most likely a long term *belief* transformation process. Artificial Intelligence literature on *Belief Revision* (Wassermann 1999; Doyle 1992) may be useful in understanding some of these transformation processes. We maintain, however, that *cognition* is likely to be a multiplicative component directly impacting *intention,* but it seems to be a complex mental task with low accessibility of *beliefs* and longer execution time. *Affect* on the other hand may have more accessible *beliefs* and hence is likely to impact *intention* in a faster and more salient manner than *cognition*. The formation of these beliefs would possibly depend on several different types of experiential and non experiential stimuli, which may play an important role in allocating *beliefs* to the two *loci of attitudes*, but currently it is beyond the scope of this thesis.

As a summary of the impact of attitude on intention, it can be said that a consumer's intention to use a store format is likely to be influenced by a combination of her affective and cognitive evaluation of that format. Additionally, other TPB constructs that may play a role in the choice are the approval of referral group *(subjective norm)* and *perceived behavioral control* which results from factors like lifestyle and knowledge disposition. It captures the non-volitional aspects of behavior, which encompass one's perception of the required resources and opportunities to perform a particular intended behavior. It becomes pertinent here, because the achievement of

behavioral goals is contingent upon the external and internal resources, e.g. knowledge to use a computer, lifestyle impacting the availability of leisure hours and exposure to technology.

Affect and *Cognition* in the proposed framework

Affect is proposed to be treated as the global measure of *attitude*, which would be non evaluative in nature but may comprise easily accessible beliefs captured through experiential or instrumental elements. This would be a direct determinant of *intention* and would work independent of the evaluative *cognition* construct.

Cognition is the multiplicative component of the attitude, based on the belief strength and its evaluation. In the traditional TPB framework it is operationalized as the indirect measure of attitude. However, it is proposed to utilize *cognition* as a direct evaluative measure in the proposed framework because of the supposed independent origin of cognitive beliefs. The measure of cognition is based on the Expectancy Value theory (Fishbein 1967), which in turn is a ramification of the Subjective Expected Utility domain. These decision theories are instrumentalized as risk minimizing and value maximizing functions (Bauman and Fisher, 1985) and have been seen to have a significant correlation with the behavior. *Cognition* construct can therefore be developed from the larger domain of utility based measures. In the context of bulk grocery, which is a regular purchase occasion for households, there is risk and value optimization opportunity (Bawa and Ghosh, 1999; Tang, Bell and Ho, 2001) and thus it becomes pertinent to look at cognitive evaluation as a value maximizing function.

It was found that risk perception has been studied from expected gain or loss perspective in the consumer behavior literature. In a recent study Forsythe and Bo Shi (2002) studied different types of risks involved and its impact on shopping behavior. Schiffman and Kanuk (2007); Mitchell (1992); Garner (1986) have also used different risk-return constructs based on the Net Valence Framework developed by Tarpey and Peter (1975). They identified three fundamental frameworks of consumer decision a) perceived risk framework, b) perceived benefit framework, and c) perceived value (Net Valence) – the difference of perceived benefit and perceived risk. The net gap between cost and benefit was measured across six dimensions of product or service experience viz. Financial, Social, Psychological, Convenience, Performance and Physical attributes. It was found that out of three decision strategies the highest predictive power was attained by the Net Valence framework. In this study *cognition* in the Theory of Planned Behavior has been operationalized through net valence construct would be a unique utilization of.

Exploring the role of involvement

The contemporary research in this area attempts at qualifying the various contexts in which the attitude-behavior linkage is consistent. The focus has been on the introduction of additional moderating variables in the attitude behavior framework that impacted the explanatory power of these models. Wicker (1971), has classified these factors into two categories – personal factors and situational factors. It seemed that consumer involvement with object and the process may be an interesting area to investigate for its role in the context of attitude behavior relationship.

Cooke and Sheeran (2001) studied moderators of attitude-intention and attitude-behavior relationship in the Theory of Planned Behavior context. Among other variables they found involvement as a mild moderator of attitude-behavior linkage. They reported that moderation impact of involvement on Attitude-intention relation is higher than that on attitude-behavior or intention-behavior relation. Involvement has been reported as an antecedent as well as moderator of Attitude-behavior linkage by Axsom, Yates and Chaiken (1987). Intention has been described as a set of motivation factors by Ajzen (1985) and motivation is reported to be moderated by involvement (Petty and Cacioppo, 1986). Mitchell (1979) has reported involvement as an important mediator of consumer behavior. It is evident that involvement plays a role in the attitude behavior linkage but there is ambiguity with respect to the nature of its relationship with behavior as to whether it mediates, moderates or is an antecedent to conation.

Zaichkowsky (1985) defined involvement as a person's perceived relevance of an object, based on inherent needs, values and interests. The traditional focus of researchers has been on involvement with grocery as a 'category', (Zaichkowsky 1985; Assael 1984), and it has been reported to be a low involvement category (Houston and Rothschild, 1978). Smith and Carsky (1996); Slama and Taschian (1985), however, showed that there may be intense motivations and involvement with the process of grocery shopping. They could classify the consumers on the basis of their involvement with grocery shopping and described the shopping strategies that these consumers adopt.

Knox et al. (1994) reported varying levels of involvement with the grocery products and the category. They attributed the reporting of low involvement with this category to poor application of techniques and suggested that newer adaptations of techniques had helped in studying involvement in several product classes including grocery. The exploratory study with the consumers also showed that the Indian consumers find themselves involved with grocery purchase process as well as grocery as a category. More so, when the risk association is higher for bulk purchases of grocery. It therefore seemed appropriate to conceptualize the involvement

construct as a combination of product and occasion involvement and to test its role in the attitude behavior linkage.

Figure – 3: TPB Based Conceptual Framework for Store Format Choice
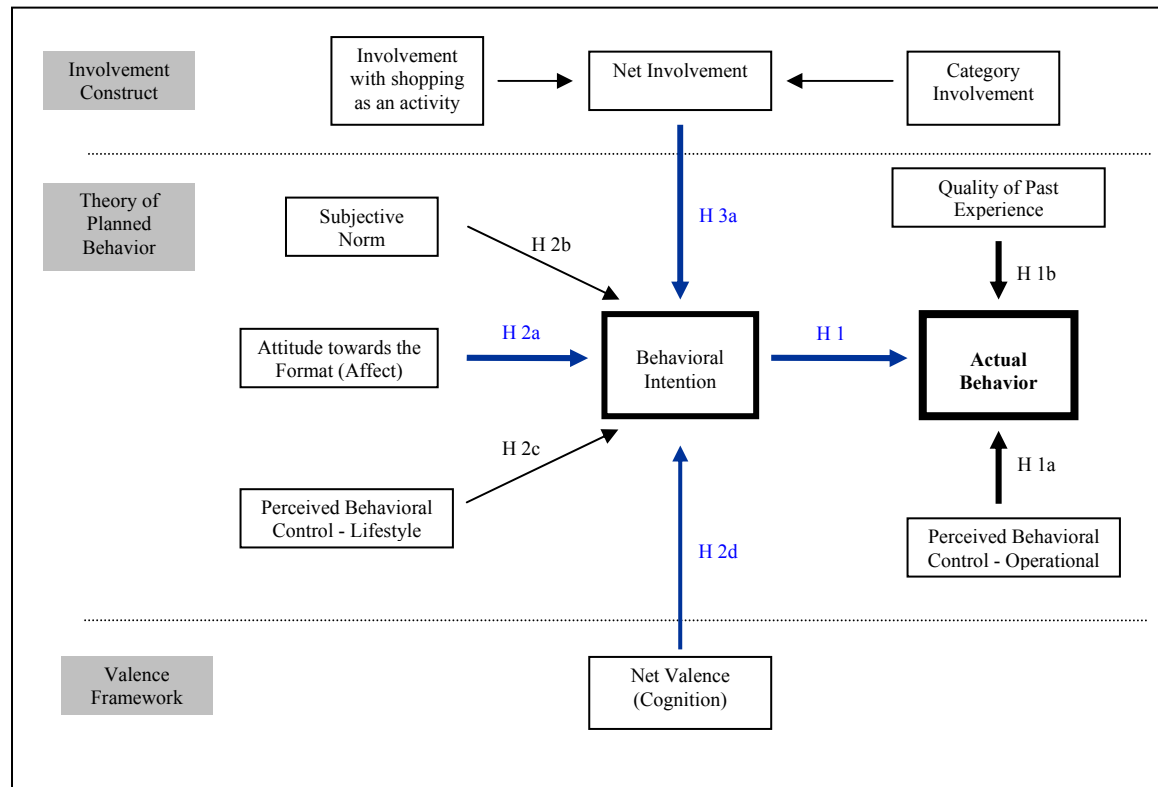
Hypotheses

H 1:   ***Intention*** *to use a particular store format has a positive relationship with the* ***actual choice*** *(****behavior****) of that format*

H 1a: ***Perceived behavioral control*** *(****Operational****) over the use of a store format has a positive relationship with the actual choice (behavior) of that format*

H 1b: ***Satisfaction in past experience*** *with a store format has a non negative relationship with the actual choice (behavior) of that format.*

H 2a: ***Attitude*** *(affect) towards a store format would positively predict the intention of using that format*

H 2b: ***Subjective norm*** *has a positive relationship with the intention of using that format*

H 2c: ***Perceived behavioral control (lifestyle related)*** *over the use of a store format positively influences the intention of using that format.*

H 2d: *Perceived benefit to cost equation (**Net Valence - Cognition**) for a store format positively affects the intention of using that format*

H 3a: ***Net Involvement with shopping and grocery category*** *has a positive relationship with the intention of using the preferred format*

H 3b: *Involvement with grocery shopping as an 'activity' is a stronger predictor of intention than involvement with grocery as a 'category'*

Research Design

The study is divided into two phases, each using a different research design - exploratory and descriptive.

Exploratory Study

The first phase was aimed at capturing specific insights into store choice patterns among grocery purchasers in the city of Bangalore. KSA Technopak (2000) and McKinsey retailing reports, (2001) showed Bangalore and Chennai to be the most evolved retail centers in the country. They had the maximum share in organized retail with several new formats and the highest retail space. The city of Bangalore was chosen as it had almost all major store formats including the online grocery stores. The exploratory phase helped in identifying the different stores in the consideration set of the consumer and some of the variables underlying the store choice process. The respondents were selected using the customer database sourced from grocery retailers in Bangalore. According to (Patton 1990, Bernard 2000 and Green, Tull and Album 2007), the sampling units in such cases are likely to be more accessible, convenient, and easy to measure, cooperative and/or articulate. As there was no apriori knowledge of the psychographic profiles of the modern format customers in Indian context, a one-to-one in-depth interview set up was adopted. The interview was unstructured. The data here was analyzed using grounded theory approach. The findings of this study indicated that customers used many formats and used one of the them as their primary store for bulk purchase. They also showed a high level of involvement as well as planning. They used lists and would collect information before purchase as well as during shopping. It was found that telephone was used mainly as a list ordering channel and not as a shopping channel, it was decided to exclude telephone as a format from the study.

Descriptive Study

This second phase of the study was aimed at collecting data for testing relationships among variables and to test the conceptual model. This phase had two stages – pilot and main study. The pilot study was aimed to test the reliability and validity of various constructs and measures. The main study was aimed to test the model and the various hypotheses.

Sample profile

Doti and Sharir (1981) have shown that higher socio economic classes are regular purchasers from organized retail formats. Sinha (2002) also found that nearly 97% of the visitors to such stores to be SEC B and above. Therefore, only the respondents belonging to the SEC classes of B and above were considered for the study. Most of the demographic data on grocery purchase behavior (Dholakia, 1999; Sinha 2002) showed that the key shopping responsibility lay with the older members in a household. It was found during the exploratory study that mainly respondents above the age of 21 fell in such a decision making category. It was therefore decided to interview customers above the age of 21.

Some of the literature in the Indian context (Sinha, 2002), showed that majority of the visitors to the stores belong to the Monthly household income category Rs.5000 and above. It was decided to consider only the customer groups with Monthly income of more than Rs.5000. It is noticed that settlers into a new locality take a longer time to stabilize their store choice than the settlers within the same locality (Carman 1974). Most of the information sources leading to store choice are personal and they build over time in a new locality. It was also realized through the exploratory study that new settlers experiment with different stores and their choices may not represent their eventual behavior. Therefore, only those residents who had spent more than one year in a given locality were considered for the study. The bulk grocery purchase was defined as a purchase made to build a grocery stock for at least one week, which meant a month should not have had more than 4 bulk purchases to qualify. The cut off was drawn at a maximum of 3 bulk purchases per month and a minimum of 1 bulk purchase a month.

Peter and Ford (1972) have indicated that many sets of consumers fall in the category of locked-in or captive consumers (especially in-home shoppers), due to an unwanted immobility imposed on them such as Remote location of nearest grocery store, lack of transportation mode and disabled consumers. Such a choice may not be a true choice of stores. They found support from their predecessors Cox and Rich (1964). Later researchers like Gillette (1970); Berkowitz (1979), however, were of the view that in-home shoppers may be 'Captive' or 'Motivated' who shop from home on a discretionary basis in order to increase the shopping convenience or to make an

impulsive purchase. In this study, it was decided to segregate captive selection of stores from a motivated choice. The exploratory study had revealed that several stores were selected due to corporate level deals between the stores and respondent's organization. The respondents staying in remote or isolated localities were also forced into a store choice because of the unavailability of stores. All such respondents with a forced choice were not selected in the study and were screened through the preliminary questionnaire.

Data Collection and Analysis

The data for the pilot was collected through questionnaire based survey for the six prevalent store formats in the city of Bangalore. The customer groups across the six prevalent formats had a disparate representation in the population; hence a non proportional quota sampling was followed (Patton 1990). The basis of allocating the quota was behavioral i.e. store format used (most frequently used format in the last six months for bulk grocery purchases). Store interception of customers was tried initially, but due to non cooperation of the store managers, it was decided to adopt a door to door survey. The online store customers were picked from a database by an online retailer and screened through a preliminary questionnaire. For other format customers, the respondents were contacted and screened directly at their residences in a door to door survey in pre selected areas. A total of 148 customers were interviewed out of about 800 customers contacted. A structured questionnaire survey was employed to collect data in this phase. The reliability was tested through the measurement of internal consistency. The item to total correlation figure of 0.50 or above was used. Before the pilot the face validity of the exercise was attained through discussing the questionnaire items with experts in the area and administering the questionnaire on six respondents to assess their ease in understanding and interpretation of various questionnaire items.

The main study was aimed to collect data for testing the conceptual model and various hypotheses. This survey questionnaire based study was carried out in the city of Bangalore. A *multistage sampling procedure* was employed to select the sample for the study. The sample unit selection criteria varied slightly for each stage of sampling and are detailed in the following sections. A hierarchical series of sampling units was created prior to the selection of the sampling element as defined in the population.

Steps Followed in Sample Selection

| Levels	Sampling Hierarchy	Description
1	Primary Sampling Unit (PSU)	Store Catchment Area
2	Secondary Sampling Unit (SSU)	Polling Booths
3	Tertiary Sampling Unit (TSU)	Household
4	Element	Adult as defined in the population

The city of Bangalore was mapped for all stores across different store formats (**Figure – 4**) except for regular kirana as it was homogeneously spread across the city and had a small catchment area. The catchment area of other stores was determined on the basis of inputs from the managers of stores from different formats. It was generally understood that Hypermarkets had a radial catchment area up to 15 kms, while supermarkets and discounters had a radial catchment area of about 3 kms. As internet store followed a home delivery system, the entire city constituted the catchment area for the format. The catchment areas for the hypermarkets and discounters did not overlap. However, the catchment areas of supermarkets overlapped significantly. Also, supermarket concentration varied in different areas of the city (**Figure – 5**). It was decided to divide the city map into 156 contiguous squares of 9 sq. km area each. There were 41 squares that contained up to 4 supermarkets. Each square along with its immediately adjacent squares formed the catchment areas for the supermarket. Each square was assigned a weight for selection depending upon the supermarket concentration.

Figure – 4: Store Map Developed for Bangalore (All Formats)
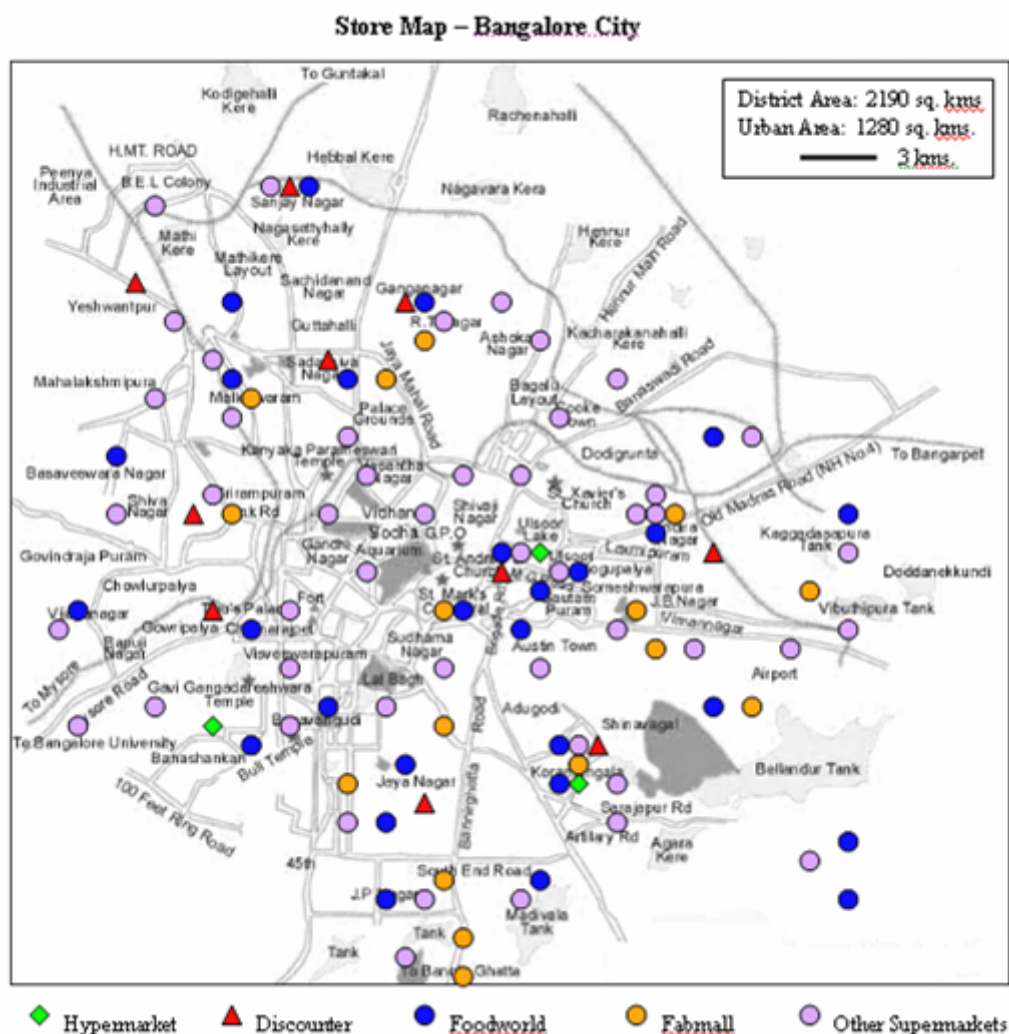
Figure – 5: Store Map Developed for Bangalore (Supermarkets with Grid mapping)
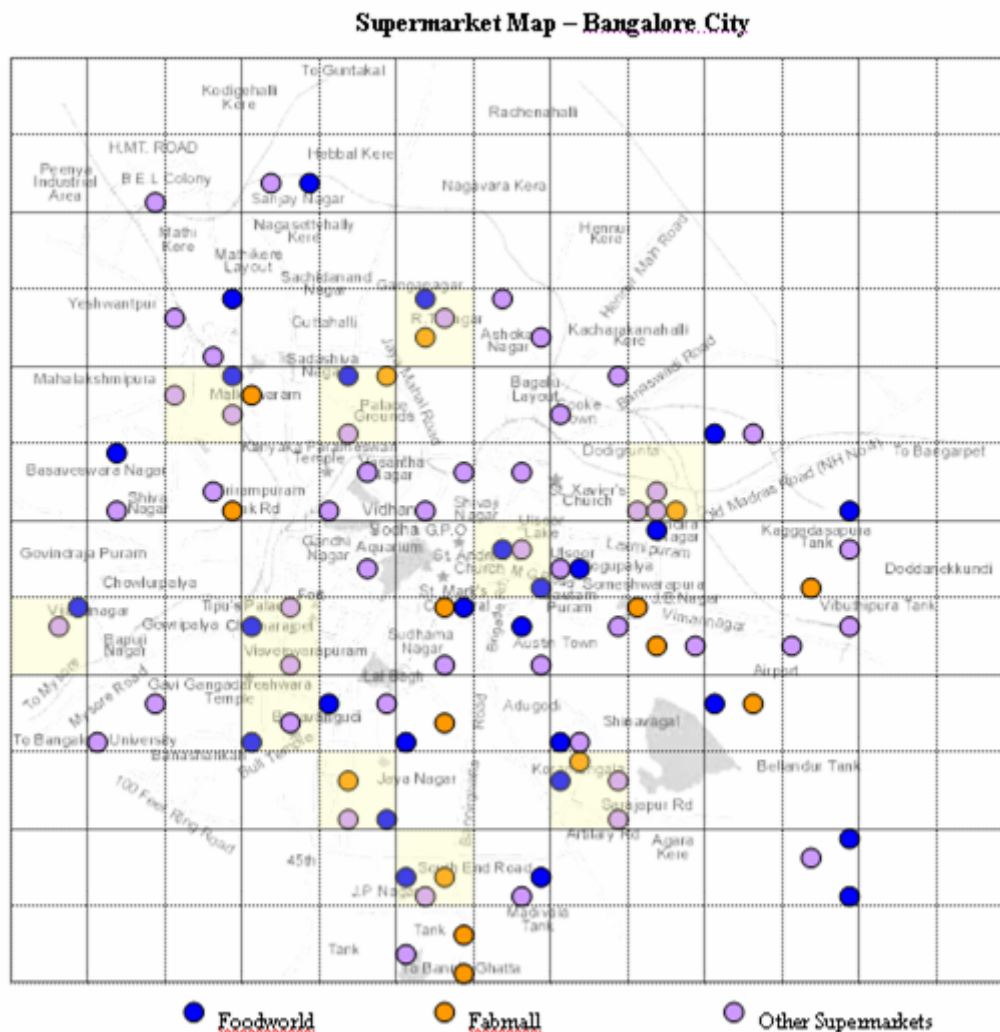
The data was collected through a door to door survey in pre-identified areas using a structured questionnaire. The respondents were contacted and screened for main interview at their residences. A total of 1205 customers were contacted, out of which 445 qualified for the main interview. The face to face interview was scheduled for the same day or later through an appointment. The internet store customers were selected from a given database and were screened through a preliminary questionnaire. If the respondent qualified for the main interview, she was contacted at her residence through a scheduled appointment. Out of 445 main interviews, 438 had valid responses. 25% of the data (110 random cases) was checked for accuracy by manually comparing the entered data with data recorded on the questionnaire (Chapman 2003) and after back checks with the customers, 417 responses conformed to the data reliability requirements.

Data was entered in a SPSS 10.0 file format with 417 final data points. The sample details are given in **Annexure - 1**.

The data was organized to analyze at overall as well as format level. The main analytical technique utilized was Multiple Linear Regression Analysis and hierarchical regression for testing mediation. The hypotheses were tested using t tests for significance of standardized beta values. The goodness of the model was tested through coefficient of correlation, F-ratio test, Durbin Watson test and RMSE. The model was also tested for multicollinearity. The constructs were also tested for convergent and discriminant validity.

The data for different measures used in the study (**Table – 1**) was prepared by combining items through aggregation, averaging and sum product. The two dependent variables used in the model – Behavior and Behavioral Intention were captured through direct items. The independent variables comprising Attitude, Subjective Norm, Involvement, and Perceived behavioral control (Operational and lifestyle) and past experience satisfaction were mostly captured through constructs using summated scales. Behavioral intention was also used as an independent variable as it has been described in the literature as the mediator of the relationship between attitude and behavior.

Table – 1: Conversion of Questionnaire Items into Model Variables

Model Variables	Type of Measure	No. of Measures	Variable operation
Actual Behavior	Direct	3	Score Average
Behavioral Intention	Direct	3	Score Average
Attitude (Affect)	Item Scale	1	Item Summation
Subjective Norm	Belief/Weight	1	Sum product
Perceived Behavioral Control (Lifestyle)	Belief/Weight	2	Sum product
Perceived Behavioral Control (Operational)	Belief/Weight	1	Sum product
Quality of Past experience	Direct	1	Direct Score
Net Involvement	Item Scale	2	Item Summation and averaging
Net Valence (Cognition)	Belief/Weight	2	Sum product

RESULTS AND ANALYSIS

The model was built into two parts as it had a mediating variable and as a result two dependent variables which were required to be modeled independently. The first part had behavior as dependent variable and behavioral intention, perceived behavioral intention – operational and past experience satisfaction as the independent variables. The second part had behavioral intention as the dependent variable and attitude, subjective norm, perceived behavioral control – lifestyle factors, net involvement and net valence as independent variables. Model so developed helped in testing the hypotheses at an aggregate as well format level results.

The aggregated models were tested through combined regression (with fixed effects) for any significant differences among the intercepts of the formats that were inserted as dummy variables. The t-test results showed that inter format differences were not significant. It was concluded that the formats could be pooled together for an overall analysis through multiple regression method. The Model fit statistics for all the models are provided in **Table – 2**.

Table – 2: Summary of Model fit statistics

Model Type	N	Model Part 1 (Dep Var – Behavior)				Model Part 2 (Dep Var – Behavioral Intention)			
		Adj R-square	F-Ratio	DW stat	RMSE*	Adj R-square	F-Ratio	DW stat	RMSE*
Aggregated	417	0.628	235.3	1.88	0.202	0.632	140.9	2.01	0.198
Hypermarket	92	0.448	25.7	1.65	0.206	0.520	20.7	1.99	0.202
Supermarket	95	0.672	65.2	2.14	0.180	0.652	36.2	2.27	0.165
Discounter	96	0.685	69.7	2.06	0.185	0.504	20.3	1.83	0.230
Kirana	95	0.530	36.3	1.67	0.216	0.719	47.9	2.26	0.183
Internet	39	0.844	69.3	1.82	0.179	0.692	14.5	2.17	0.158

*PRMSE varied between 2.7% to 3.3% for all models in Part 1 and 2.4% to 3.5% for all models in Part 2

The pooled model showed a moderate Adjusted R-square (Part 1: 0.628, Part 2: 0.632) in both the parts of the model and had a high F-ratio (Part 1: 235.3, Part 2: 140.9) as well. The autocorrelation in error terms was also found to be low as suggested by a Durbin-Watson Statistic of greater than 1.8. A low Root Mean Square Error statistic (RMSE <0.5) indicated an insignificant error in model estimation.

The regular kirana model depicted a good explanation for behavioral intention (Adj. R-square Part 1: 0.530, Part 2: 0.719), while discounter (Adj. R-square Part 1: 0.685, Part 2: 0.504) and supermarket models depicted a good explanation for behavior (Adj. R-square Part 1: 0.672, Part 2: 0.652). Hypermarket, which is a new evolving format, had somewhat low explanation in both parts (Adj. R-square Part 1: 0.448, Part 2: 0.520). The Durbin-Watson Statistic (>1.8) and RMSE (<0.5) for format specific models was also within standard limits. The format specific model for internet had a high adjusted r-square (Adj. R-square Part 1: 0.844, Part 2: 0.692) even though it had a low sample size. In the case of internet, a single store existed within the format, whereas other formats comprised varying number of stores that got represented in the study.

The multicollinearity tests (**Table – 3**) were carried out to look for any unrealistic linear association among the independent variables that could affect the interpretations of results. The moderate R-square and low standard errors indicated low probability of multicollinearity. The confirmatory testing was done by interpreting the variance inflation factors (a function of residual r-square). The exogenous variables were found to be within the standard limits (< 5) prescribed for VIF statistic (Snee, 1973, Mansfield and Helms, 1982), indicating that the individual variables used in the model were not collinear and could be retained in the model.

Table – 3: Test for Multicollinearity (Variance Inflation Factor across Models)

	Aggregated	HM	SM	Disc	Kirana	Internet
Model Part 1						
Intent	1.18	1.12	1.44	1.08	1.31	1.11
Past Experience	1.26	1.27	1.54	1.09	1.38	1.15
PBC- Operational	1.17	1.14	1.69	1.13	1.19	1.08
Model Part 2						
Attitude	1.31	1.40	1.31	1.64	1.27	1.17
Subjective Norm	1.09	1.16	1.79	1.03	1.64	1.15
PBC - Lifestyle	1.25	1.41	1.86	1.29	1.69	1.21
Net Involvement	1.28	1.14	1.40	1.41	1.25	1.13
Net Valence	1.14	1.15	1.06	1.68	1.26	1.13

The Pearson correlation matrix (**Table – 4**) was used to test for any abnormal correlation or spurious relationship between two unrelated variables or constructs to rule out any contraindication of validity. Some degree of correlation was noted among the different measures used in the study but as shown by the multicollinearity statistic, it was not significant to cause interference in the models. The correlations across measures were also compared against the average variance extracted for a measure. The results confirmed discriminant validity in constructs.

Table – 4: Pearson Correlation Matrix

	Behavior	Intent	Past Exp	PBC- Op	Attitude	Sub Norm	PBC - Life	Net Invol	Net Val
Behavior	1.00								
Intent	0.59	1.00							
Past Experience	0.45	0.36	1.00						
PBC- Operational	0.65	0.25	0.35	1.00					
Attitude	0.46	0.67	0.15	0.27	1.00				
Subjective Norm	0.32	0.37	0.33	0.12	0.02	1.00			
PBC - Lifestyle	0.33	0.39	0.29	0.29	0.28	0.26	1.00		
Net Involvement	0.34	0.42	0.13	0.23	0.37	0.04	0.20	1.00	
Net Valence	0.32	0.26	0.16	0.21	0.20	0.14	0.22	0.31	1.00

Hypothesis Testing

The hypothesized model and proposed hypothesis were tested using multiple regression procedure and the significance of the Beta coefficient was measured to show the relationship between variables. One tailed t-tests were used to predict the significance of variables because of directionality in hypothesis. The results indicated that all hypotheses were supported with reasonable significance, except for the hypothesis on the relationship between Net Valence and Behavioral intention. In this case, the hypothesis was supported directionally but its significance was low. The findings are presented in two parts. In the first part, related to Hypothesis 1, the results of relationship of variables with behaviour are explained. The second part described the results of the testing of Hypothesis 2.

Format choice

In this part, the findings explain the relationship between Behavior as an independent variable and Behavioral Intention, Perceived Behavioral Control – I and Past Experience of the shoppers with that format. It was hypothesized that *Intention to use a particular store format* would have *a positive relationship with the **actual choice (behavior)** of that format.* The regression analysis showed that the hypothesis was not rejected (**Table – 5**). Behavioral intention was found to be a moderately strong antecedent of behavior (β= 0.425, $p<0.01$). The coefficient showed a higher score in Regular Kirana format (β = 0.556, $p<0.01$) and the least in case of internet format (β =0.286, $p<0.01$).

Table – 5: Results of Hypothesis testing (Model Part -1)

Model Statistics (Adjusted R-square, F and β Values)						
	Aggregated	**HM**	**SM**	**Disc**	**Kirana**	**Internet**
Adjusted r-square	0.628	0.448	0.672	0.685	0.53	0.844
F ratio	235.2**	25.6**	65.1**	69.7**	36.3**	69.31**
Predictor Variables						
Behavioral Intention	0.425**	0.450**	0.360**	0.341**	0.556**	0.286**
PBC I	0.507**	0.451**	0.547**	0.622**	0.320**	0.716**
Past Experience	0.111**	0.090	0.050	0.143*	0.031	0.252**
Dependent Variable: Behavior, * $p < 0.05$ ** $p < 0.01$						
HM – Hypermarkets, SM – Supermarkets, Disc – Discounters						

The study found that Perceived behavioral control (Operational) over a store format had a positive relationship with the actual choice (behavior) of that format.

The regression analysis showed that the hypothesis was not rejected. Perceived Behavioral Control (Operational) had a significant positive impact on behavior ($\beta = 0.507$, $p<0.01$). The highest beta weight was seen in the case of Internet format ($\beta = 0.716$, $p<0.01$) and lowest in the case of the Kirana format ($\beta = 0.320$, $p<0.01$). It can be conjectured that the operational barriers in the case of internet stores were the highest while they were the lowest for Kirana stores where store accessibility is the highest. As the impact of barriers as shown through Perceived behavioral control (Hypothesis 1a) is significant on behavior, the explanation of behavior through behavioral intention accordingly varies across the store formats.

Satisfaction in Past experience with a store format was also found to have a non negative relationship with the actual choice (behavior) of that format. The hypothesis was not rejected on the basis of the regression analysis. The relationship between satisfying past experience with a format and its actual choice was found to be significant and positive. The standardized beta coefficient for the aggregated model was significant but small in magnitude. At format level the relationship was found to be significant only in the case of internet and discount stores. The highest beta weight was found to be in the case of the internet stores.

Intention to Choose a Store Format as Dependent Variable

In this part, the findings explain the relationship between Behavior Intention as an independent variable and Attitude, Net Involvement and Net Valence of that format. The findings are given in **Table – 6.**

Table – 6: Results of Hypothesis testing (Model Part -2)

Model Statistics (Adj. r square, F and β Values)						
	Aggregated	**HM**	**SM**	**Disc.**	**Kirana**	**Internet**
Adj. r square	0.632	0.52	0.652	0.504	0.719	0.692
F ratio	140.94**	20.72**	36.23**	20.29**	47.87**	14.48**
Predictor Variables						
Attitude	0.520**	0.444**	0.502**	0.562**	0.548**	0.751**
Net Involvement	0.174**	0.272**	0.190**	0.148	0.326**	-0.073
Net Valence	0.089*	0.213**	0.037	-0.20	0.086	0.197
Subjective norm	0.304**	0.278**	0.398**	0.146*	0.330**	0.411**
PBC II	0.143**	0.090	0.187*	0.174*	-0.042	0.303*
Dependent Variable: Behavioral Intention						

* $p < 0.05$
** $p < 0.01$

The results brought out that attitude towards a store format would positively predict the intention of using that format. The regression analysis showed that the hypothesis was not rejected. Attitude was the strongest antecedent of Behavioral intention (β =0.520, p<0.01). The relationship showed the highest beta weight in the case of internet format (β = 0.751, p<0.01) while the least impact was seen in the case of hypermarket (β =0.444, p<0.01).

Behavioral intention was also tested for its mediating role in the relationship of Attitude and Behavior using Baron and Kenny Method (1986) of Hierarchical regression (**Table – 7)**. It was found that Intention was a significant mediator in the relationship.

Table – 7: Mediation of Behavioral Intention between Attitude and Behavior

	Reg1	Reg2	Reg 3
r-square	0.636	0.399	0.429
F	140.9**	53.6**	50.25**
Dependent Variable	Intention	Behavior	Behavior
Predictor Variable			
Attitude	0.520**	0.307**	0.160**
Net Involvement	0.174**	0.111*	0.062
Net Valence	0.089**	0.184**	0.159**
Subjective Norm	0.304**	0.242**	0.156**
Perceived Behavioral Control 2	0.143**	0.179**	0.139**
Behavioral Intention			**0.283****

Relationship with Subjective Norms

The results indicated that Subjective norm had a positive relationship with the intention of using that format. The regression analysis showed that the hypothesis was not rejected. The relationship was found to be significant and positive (β =0.304, p<0.01) at an aggregated level. The relationship was also found significant and positive at format level except for Discounters where the significance was slightly low (β =0.146, p=0.05). The highest beta weight was seen in the case of internet stores (β =0.411, p<0.01) indicating a strong impact of peer group's opinion on internet transactions for purchasing grocery.

Relationship with Perceived Behaviour Control

With regard to Perceived behavioral control (lifestyle related) over a store format, it was found that it positively influences the intention of using that format. The regression analysis showed that the hypothesis was not rejected. The relationship between perceived behavioral control – lifestyle related, and behavioral intention was significant and positive in the aggregated model (β =0.143, p<0.01). However, the relationship had varying significance and magnitudes at the format level. It was found to be the most positive and significant for internet stores (β =0.303,

p<0.05), where consumer lifestyle such as technology disposition and time availability, may have influenced the intention to use that format. The relationship was not found to be significant in the case of Hypermarkets and Kirana stores.

Relationship with Net Valence (Cognition)

The study had hypothesised that perceived benefit to cost equation (Net Valence - Cognition) for a store format would positively affect the intention of using that format. The analysis showed that the hypothesis was not rejected. The impact of net valence on behavioral intention was found to be moderately significant and positive (β =0.089, p<0.05). At format level, the relationship was found to be significant only in the case of Hypermarkets (β =0.213, p<0.01) indicating a strong association with benefits and costs related to the choice of this format compared to all other formats.

Relationship with Involvement (Cognition)

Net Involvement with shopping and grocery category was found to have a positive relationship with the intention of using that format. The regression procedure showed that the hypothesis was not rejected. The relationship between Net involvement and Behavioral Intention was found to be significant and positive (Beta =0.174, p<0.01).

The relationship of involvement with 'grocery shopping as an activity' and 'grocery as a category' individually with behavioral intention was also found to be significant and positive. It can be inferred that grocery which has been usually described as low involvement category (Kujala and Johnson, 1993; Guadagni and Little, 1983) does have an impact on store format preference as a category as well as shopping activity. The β for net involvement was the highest for Kirana stores followed by hypermarkets. This relationship was not found significant in the case of internet and discounter formats (**Table – 8**). This is an indication of a very limited role of either category or shopping involvement in explaining the behavioral intention.

Table – 8: Moderating impact of Net involvement on Attitude – Behavioral Intention relationship

Predictor Variable	Aggregated Model		
	β	R square	F
Attitude	-0.654		
Net Involvement	-0.991		
Net Valence	0.078*	0.645	121.86**
Subjective norm	0.318**		
PBC II	0.129**		
Attitude*Involvement Interaction term	**1.965**		

* p < 0.05
** p < 0.01

Net involvement was also tested for any moderating impact on the relationship of attitude and behavioral intention using James and Brett method (1984) by measuring significance of the interaction term for attitude and involvement. It was found that net involvement had a moderating impact on this relationship.

The study also separately tested the impact of Involvement with Shopping and Category. It was found that Involvement with grocery shopping as an 'activity' was a moderately stronger predictor of intention than involvement with grocery as a 'category'. The regression procedure (Table– 5.9) showed that the hypothesis was not rejected. The relationship of behavioral intention with shopping involvement (β =0.166, p<0.01) was found to be marginally stronger than Category involvement (β =0.145, p<0.01) (**Table – 9**). At format level, however, some differences were observed as summarized in (**Table – 10)**

Table – 9: Results of Hypothesis testing (Involvement types – Aggregated Model)

	Shopping Involvement	Category Involvement
Adj r square	**0.633**	**0.63**
F-ratio	**139.1**	**137.2**
Involvement	**0.166**	**0.145**
Attitude	0.518**	0. 540**
Net Valence	0.097*	0.095*
Subjective norm	0.280**	0.322**
PBC II	0.166**	0.150**

* p < 0.05
** p < 0.01

Table – 10: Results of Hypothesis testing (Involvement types – Across Formats)

Hypothesis	β Values					
	Aggregated	HM	SM	Disc.	Kirana	Internet
Shopping Involvement- Intention	**0.166****	0.204**	0.122	0.197*	0.348**	-0.221
Category Involvement- Intention	**0.145****	0.302**	0.241**	0.085**	0.278**	0.017
Net Involvement- Intention	**0.174****	0.272**	0.190**	0.148	0.326**	-0.073

* $p < 0.05$
** $p < 0.01$

Implications on Store Format Choice

The study has shown some evidence that there is merit in building a favorable consumer attitude towards the format as attitude is a strong antecedent of the behavior and their relationship is well mediated through intention. The key finding is that the affective and cognitive components of attitude have differential impact on the store format choice. The affective component of the attitude in general is a stronger predictor of intention than the cognitive component indicating that the consumers primarily do a global assessment of the format proposition rather than a detailed evaluative assessment. It may however be a result of the stage of format evolution and familiarity with it, as the recent format like Hypermarket has shown the highest cognitive evaluation while the oldest format like Kirana has shown the highest affective component. It may therefore be possible to conjecture that consumer's format evaluation basis undergoes a transition from cognitive to affective with the increased familiarity and evolution of format. As a result, it becomes important for the store formats to know the attitude profiles of their target group from time to time as it may form the basis of the retail format's communication decisions and business proposition changes. A largely affective target group may be approached primarily with affective cues while cognitive cues may be communicated sporadically. On the other hand, a cognitive profile heavy target group, as in the case of Hypermarkets, may be targeted primarily with evaluative or utilitarian cues like Value for Money positioning or Discounts or Savings made in a shopping trip or a Loyalty promotion. An illustrative example from the study is presented below to highlight the role of different attitude components and their possible transition over time **(Table 11 and Figure 6).**

Table – 11: Cross Sectional View of the Target Group Composition across Store Formats
(An Illustrative example)

Store Formats studied (in Ascending order of emergence in Indian retail)	Target Group Composition		
	Affective	Cognitive	Composite
Hypermarket (Most Recent)	++	++++	++
Internet	+++	++	++++
Discounters	++++	++	+++
Supermarket	++++	+	++
Kirana (Oldest)	+++++	-	-

The role of *affect* seems to be very critical in determining intention and hence the marketers would need to study the *affect* formation and reinforcement process among grocery customers to be able to impact their store format choice process. The marketing stimuli that are able to influence both *affect* and *cognition* components are likely to be the most rewarding from marketing point of view.

Figure – 6: A possible temporal transition among attitude components used by consumers for Format Choice decision
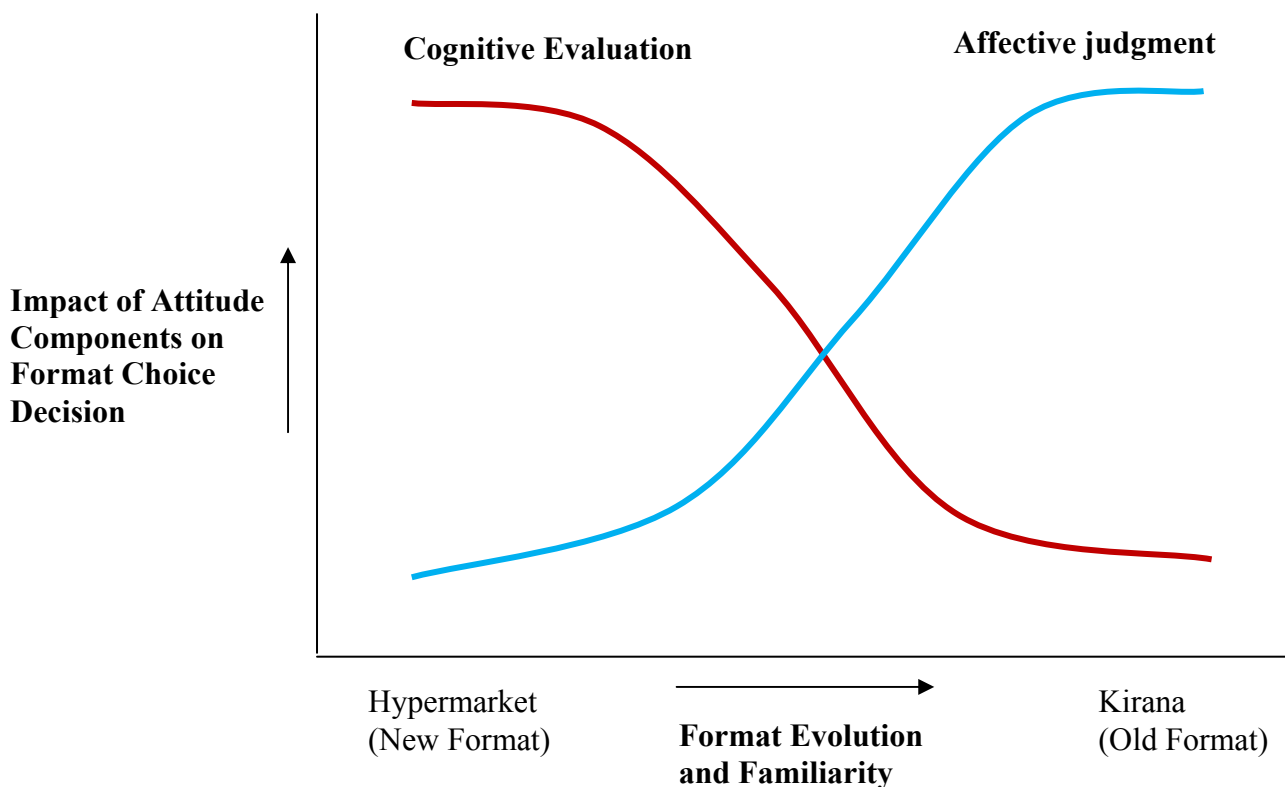
The consumer involvement with grocery category and bulk shopping has come out as a significant factor in determining intention and it is a new finding for the grocery category which has traditionally been described as low involvement. This may be because of association of greater risk with 'bulk' grocery than grocery in general. As an implication, it may be possible to identify different involvement groups within the grocery consumers and target them with suitable communication plans to impact behavior.

Apart from attitude and involvement, factors like subjective norm and perceived behavioral control also impact intention significantly. Newer or niche formats like internet are likely to have low generalized social acceptability and hence increasing awareness and trials can mould customers' subjective norms and behavioral intentions significantly. Perceived operational capability to use a format impacts the actual behavior indicating that higher the complexity of task or barriers in accessing and using a format, lower would be the actual usage of that format. The past positive experience has shown to have little role in affecting behavior. Some of these relationships are strong at format level and specific actions can be taken by the retailers to address the situation as detailed in the relevant sections below.

Other Format level implications

In the case of low cost niche formats like internet, the overhead costs are relatively low and a part of the cost e.g. delivery, is semi-variable and thus it can possibly breakeven with low to moderate footfall. But as the access, awareness and target segment size of such stores is limited, the challenge for them lies in creating awareness (attitude, subjective norm), acceptability (subjective norm) and improving access (perceived behavioral control). Low subjective norm i.e. social approval of the store choice, may result through the lack of awareness about the format, risk associated with shopping on internet. Lower acceptability of the format could be due to lack of perceived ability to carry out an internet transaction. The last factor is reflected through a more significant role of perceived behavioral control (operational) than behavioral intention in determining behavior in case of internet. The retailer would therefore need to spread awareness among the larger consumer mass and design campaigns to induce quick trials. They would also need to understand all possible operational barriers impacting access/ usage of the stores and may need to design features, processes or alternatives to enable an easy usage of the format. Further, involvement with shopping or grocery category does not impact behavior in the case of internet stores, indicating that the behavior may be goal oriented and the product search and shopping process may need to be efficient to take that into account. An e-tailer therefore needs to determine the specific goal of its customers and respond to it by aligning its value proposition and services in accordance. It becomes important also because of the finding that past experience impacts

behavior in case of internet stores (Shim and Eastlick, 2001). This is of special concern as consumer's entry barriers to internet format are high but exit barriers seem low, so mediocre experience can cause fast attrition (Reichheld, 1996).

Kirana stores are low overhead - low traffic formats, which turnaround their inventory in short time and appeal mainly to convenience seeking customers (Sinha, 2001). These stores have limited catchment area, but high patronage which is also reflected by the finding that behavioral intention is the strongest predictor of behavior in case of Kirana format. Attitude strongly impacts the behavioral intention indicating the strongest attitude to behavior linkage among all formats. Perceived behavioral control has the least impact indicating easy accessibility and a comfortable purchase execution at Kirana stores. Past experience not having any impact on behavior can also be an indication of captive or habituated customers. However, involvement seems to play a role in the usage of this format as Kirana stores are heavily used for non-bulk purchases and the households are actively in touch with the Kirana stores, which may have a cross effect on their involvement in the bulk grocery purchase.

Discount stores like Janta bazaars are low overhead, moderate traffic stores. They are usually positioned on the low price value proposition attained mainly through efficient throughput and restricted services. The traditional discount stores are however, being fast replaced by the deep discounters and retail chains with greater bargaining power and better service quality, such as hypermarkets. As a result the value proposition of these stores has been negated to a large extent and is also reflected so by the finding that the net valence is not significant and intention is a somewhat weak predictor of behavioral intention, given that there is a strong positive attitudinal disposition towards the format. The intention behavior linkage may be weak because of the lack of awareness or access to the stores as shown by high impact of perceived behavioral control on format choice. The format may need to realign its value proposition in the light of competing value proposition from other formats. The high attitudinal preference should be leveraged by strong communication about the promotions or Every Day Low Price (EDLP) status and improving store accessibility, which can have an impact on the perceived behavioral control. Subjective norm has a low overall impact on intention to use the discount formats, as the marginal impact of subjective norm seems to have flattened out over time.

Research Implications

The thesis explores store format choice decision in an attitude-behavior framework mediated through behavioral intention, and integrates it with consumer involvement. *Affect* and *cognition* components of attitude have been used as simultaneous antecedents of behavior. The study clearly shows that *affect* is a much stronger antecedent of intention than *cognition*. Such a utilization of

attitude components and involvement construct in an attitude behavior framework would be a new contribution to the store format choice literature. The use of *cognition* in the perceived cost benefit framework was also a new approach to measurement.

It was hypothesized that involvement has an occasion (shopping) as well as object association (grocery as a category) and that the two together have a positive impact on store format choice, even though literature in general has described grocery as a low involvement category. A combined view of involvement is a new addition to the research in this area.

A key contribution of this thesis has been the development and testing of a comprehensive framework for understanding the store format choice through attitude behavior linkage. The importance of including involvement and net valence in the framework gets well illustrated in this study. The research looks at format level choices instead of store level choices as mostly reported in the literature and also integrates physical and virtual store formats in a single study. The study shows good relevance for the early stage retail evolution in emerging economies.

Limitations of the study

One of the main limitations with regard to this study was that the actual behavior was obtained through self reports and not through observations due to time and operational constraints. According to Ajzen (1991), this leads to somewhat higher intercorrelation among TACT base constructs. The sampling was done in an exhaustive manner and sample parsimony was not maintained, which resulted in a longer time in data collection and back checks. Alternative methodologies like convenience sampling through store interception of customers was attempted during the pilot phase but eventually dropped due to lack of cooperation from the retailers. The telephone and internet segment respondents were obtained through company databases and were somewhat inadequate in providing a large enough sample size. During the pilot study it was realized that telephone channel was utilized as an ordering channel rather than the shopping channel and hence needed to be dropped from the study. As the retail market has been evolving at a fast pace in the country the competitive scenario, format choice set and consumer knowledge is continuously changing, it may alter some of the implications of this research. The study involved only the city of Bangalore, which is a cosmopolitan city posing a sampling challenge, but had the highest retail evolution when the study was designed. Similar studies in other geographies may result a different magnitude of relationship among the various constructs of the framework, especially perceived behavioral control, subjective norm and involvement.

Areas for future research

The study showed that *Affective* component of attitude (*locus of permanent beliefs*) plays a larger role in intention prediction than the *cognition* component (*locus of active beliefs*). This needs to be tested further across different product categories and stages of market. Such a compilation of research would help in determining whether the two constructs work simultaneously or in tandem or as a substitute. It would provide a more realistic view of attitude from among Unidimensionalist, Hierarchical and Converging Framework. As familiarity with the behavior seems have an impact on which component of attitude is utilized, it is important to explore this transition process in much more detail and across categories. The new stimuli are likely to first undergo the *cognitive* evaluation process to form active beliefs and only if the attitude is stabilized and beliefs are transformed to resident belief they may become part of *affect*. The co-existence of the two kinds of beliefs and their utilization can be one core area of research.

A similar framework can be utilized to explore other planned purchase categories or occasions and strengthen the understanding of attitude behavior linkage. The framework can be applied to study products that are hedonic in nature or shopping that is undertaken for instrumental purposes. It would be interesting to explore the attitude behavior linkage and role of affect, cognition and involvement in contexts that vary in the level of familiarity or habituation.

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Appendix – A
Sub Sample Allocation and Selection heuristic across stages

Segment	N	No. of Stores	PSU (Catchment Areas)	SSU (Polling Booths)	TSU (Households)
Hypermarket	100	3	3 Entire Set	6 per PSU Random Selection	5/6 per SSU Right hand rule with one skip was applied.
Discounter	100	10	5 Random Selection	4 per PSU Random Selection	5 per SSU Right hand rule with one skip was applied.
Supermarkets	100	100+	11 Stratified Random	2 per PSU Random Selection	5 per SSU Right hand rule with one skip was applied
Kirana+	100	3000	20 Random Selection	1 per PSU Random Selection	5 per SSU Right hand rule with one skip was applied.
Internet	50	1	Customers were selected through random number generation out of a thoroughly jumbled database of 1000 customers, till 50 customers were interviewed		

Sample distribution by City Zones

	Zones					
	North	South	East	West	Central	Total
Hypermarket		2	44	19	27	**92**
Supermarket	24	20	21	19	11	**95**
Discounter	43	19	17	17		**96**
Regular Kirana	21	17	22	24	11	**95**
Internet	5	5	26	3		**39**
Total	**93**	**63**	**130**	**82**	**49**	**417**

Sample distribution by Format and Socio Economic Classification

SEC	Hypermarket	Supermarket	Discounter	Kirana	Internet	Overall
A1	25.0%	34.7%	34.4%	18.9%	69.2%	32.1%
A2	35.9%	26.3%	33.3%	27.4%	23.1%	30.0%
B1	14.1%	12.6%	22.9%	20.0%	2.6%	16.1%
B2	25.0%	26.3%	9.4%	33.7%	5.1%	21.8%
	100%	100%	100%	100%	100%	100%

Sample distribution by Format and Income Groups

Income Group	Hypermarket	Supermarket	Discounter	Kirana	Internet	Overall
Rs. 5,001 – Rs. 10,000	5.4%	29.5%	33.3%	43.2%	7.9%	26.2%
Rs. 10,001 – Rs. 15,000	32.6%	41.1%	21.9%	36.8%	7.9%	30.8%
Rs. 15,001 – Rs. 20,000	35.9%	16.8%	28.1%	14.7%	28.9%	24.3%
Rs. 20,001 – Rs. 25,000	13.0%	3.2%	10.4%	1.1%	26.3%	8.7%
Rs. 25,001 – < Rs. 50,000	10.9%	8.4%	4.2%	4.2%	21.1%	8.2%
Rs. 50000 or more	2.2%	1.1%	2.1%		7.9%	1.9%
	100%	100%	100%	100%	100%	100%

Sample distribution by Format and Age Groups

Age Groups	Hypermarket	Supermarket	Discounter	Kirana	Internet	Overall
21 to 25 years	18.5%	17.9%	4.2%	17.9%	10.3%	14.1%
26 to 30 years	21.7%	21.1%	14.6%	22.1%	23.1%	20.1%
31 to 35 years	16.3%	21.1%	16.7%	18.9%	15.4%	18.0%
36 to 40 years	8.7%	7.4%	12.5%	15.8%	12.8%	11.3%
41 to 50 years	20.7%	23.2%	20.8%	13.7%	17.9%	19.4%
More than 50 years	14.1%	9.5%	31.3%	11.6%	20.5%	17.0%
	100%	100%	100%	100%	100%	100%

Sample distribution by Format and Income Groups

	Hypermarket	Supermarket	Discounter	Kirana	Internet	Overall
Nuclear family with both spouses working full-time	12.0%	17.0%	20.8%	16.8%	23.7%	17.3%
Nuclear family with one spouse working full time	75.0%	73.4%	59.4%	69.5%	34.2%	66.0%
Joint family with only one member earning full time	4.3%	6.4%	8.3%	7.4%	13.2%	7.2%
Joint family with more than one member earning full time	5.4%	3.2%	11.5%	5.3%	26.3%	8.2%
Informal Work	3.3%			1.1%	2.6%	1.2%
	100%	100%	100%	100%	100%	100%