

# **LOYALTY MEASUREMENT AND ITS IMPLICATION FOR RETAIL GROCERY INDUSTRY**

by

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## **ABSTRACT**

The aim of this paper is to review different measures (i.e. behavioural and/or attitudinal) of loyalty and understand the appropriateness of these measures in varied contexts. The study also applies a composite measure of loyalty in an industry to determine its applicability and appropriateness as a generalizable scale across industries. An extensive literature review was conducted to evaluate the existing measures of loyalty in current literature. The paper selected McMullan and Gilmore's (2003) proposed scale. Retail grocery industry was selected for application of the scale, as there exists a huge confusion in current literature regarding an appropriate measure of loyalty for this industry. An empirical study, on graduate and postgraduate students, was conducted later to determine the scale's applicability in this industry. The findings suggested that the selected composite measure, proposed by McMullan and Gilmore (2003), was not appropriate for the retail grocery industry. The customers were mostly split loyal and price was one of the most important reasons for selecting a particular grocery store. Brand commitment was not evident among the customers of this industry. In conclusion, it was stated that future research is needed to understand the particular characteristics of the retail grocery industry and determine whether a composite measure, incorporating both behavioural and attitudinal dimension of loyalty measurement, is at all needed for this industry or not. It is also worth asking whether loyalty can be developed in this particular industry and if yes, how it can be developed.

## **EXECUTIVE SUMMARY**

Customer loyalty has become an important aspect of today's business. However, the construct is still going through a maturation process to achieve a well-accepted definition and method of measurement. There are numerous methods suggested by scholars in literature on how loyalty should be measured. The two most basic approaches are behavioural and attitudinal measures of loyalty. However, literatures currently supports that a composite measure of the constructs should take into account both of these approaches. Thus, the current paper studies recent literatures and evaluates the different measurement techniques suggested by scholars. It also selects the scale proposed by McMullan and Gilmore (2003) as one of the most composite measure of loyalty found in current literature. The study later applies this scale to retail grocery industry to evaluate its applicability in that industry. Retail grocery industry has been selected for this study for its unique characteristics in terms of customer loyalty. Many argue that true loyalty can never be developed in this industry, as it generates loyalty based on convenience or price. Thus, a composite measure, incorporating both behavioural and attitudinal measure, was applied on this industry to determine the validity of such prediction. The findings suggest that the composite measure, suggested by McMullan and Gilmore (2003), was not applicable for this industry. Rather, the behavioural measures could be more predictive of customer loyalty to the selected retail outlet. The paper recommends that extensive research should be conducted in future to, first, understand the specific nature of this industry and then, find out the drivers of loyalty for customers. Caution should be taken before applying any particular method of loyalty measurement. It is important first to understand what matter most to the customer and then measure those to determine their loyalty and implement strategies to build loyalty.

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# **1 LITERATURE REVIEW**

## **1.1 Introduction**

The central thrust of the marketing activities of a firm is often viewed in terms of development, maintenance, or enhancement of customers' loyalty towards its product or services, in other words its brand (Dick & Basu, 1994). However, loyalty research suffers from problems of inadequate procedural regularities (Muncy, 1983). Although academic research on loyalty has received considerable attention, it has largely focused on different procedure of measuring the construct and the construct's correlation with customers' characteristics (Kahn, Kalwani & Morrison, 1986). Implicit in this research is the notion that brand loyalty plays a special role in generating repeat purchase (Dick & Basu, 1994). Even though many marketers have emphasized the need to define brand loyalty beyond operational measures (i.e. frequency of purchase, repeat purchase), the interrelationship between brand loyalty and behavioural theory still requires stronger integration. The construct is still undergoing a maturation process striving for theoretical legitimacy and practical usefulness.

The brand loyalty literature contains a plethora of measurement instruments (Jacoby and Chestnut, 1978). Traditionally, brand loyalty research has used various behavioural measures drawn from panel data. These measures include proportion of purchase, purchase sequence, probability of future purchase, etc (Neal, 2000). On the other hand, there is another group of scholars, who criticized the purely behavioural approach of measuring loyalty and suggested inclusion of attitudinal dimension (Jacoby & Chestnut, 1978). They argue that consideration of behavioural measure only lacks conceptual basis and ignores the influence of underlying reasons of repeat purchase. High repeat purchase may reflect situational constraints, such as availability

of certain brands, whereas low repeat purchase may simply indicate different usage situations, variety seeking or lack of brand preferences within buying unit. Thus the behavioural definitions (i.e. repeat purchase, frequency of purchase) are insufficient to explain how and why brand loyalty is developed and/or modified.

This paper explores the different existing schools of thoughts of loyalty measurement in published literature and attempts to study one comprehensive measurement scale of brand loyalty, which captures the construct in an effective way. The research later on applies the selected measurement in retail grocery industry. The retail grocery industry was chosen for the application of the selected scale, as this industry has always been characterized by superficial loyalty supported by convenience or price. Literature also presents doubt whether brand loyalty can at all be developed among the customers in this particular industry or not (Frank, 1967). Thus, this study attempts use the selected scale to take an attempt to clarify some of these uncertainties.

## 1.2 What is brand loyalty?

As mentioned above, most of the current literature links loyalty with purchase frequency. Neal (2000) defined loyalty as simple as buying a single brand all the time the category is purchased. Such definition is very narrow in scope, as it ignores the situational factors that may lead a customer to buy the same brand all the time. Many times this repeat purchase behaviour is induced by club membership into loyalty programs, which frequently offers nothing but discounts. But this practice develop a consumer base, who are superficially loyal to the reward, rather than to the company/brand and are very vulnerable to competitor's promotion or other situational influences.

The conceptual and most composite definition of brand loyalty, used in loyalty research, was first proposed by Jacob Jacoby. He defined brand loyalty as:

The biased (non-random) behavioural response (purchase) expressed over time by some decision-making unit with respect to one or more alternative brands out

of a set of brands and is a function of psychological processes. (Jacoby [1971] in Thiele & Bennett, 2001, p27).

However, Jacoby came up with another definition of brand loyalty few years later in his article with Chestnut, where they defined loyalty as:

The behavioural outcome of a consumer's preference for a particular brand, over a period of time, which importantly is the result of an evaluative decision making process. (Jacoby & Chestnut, 1978, p. 43)

This definition has been accepted widely by the scholars working in the field of loyalty research (McMullan, Gilmore, 2003). But Oliver (1999) believes these definitions ignore the intensity associated with different levels of loyalty, which is very important. He recognized this gap and suggested a definition, which includes the essential features of loyalty like commitment, preferences and consistency along with the situational and environmental influences. He defined loyalty as:

A deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour. (Oliver, 1999, p.34)

According to his definition, "ultimate loyalty" (Oliver, 1999, p. 39) is a stage, when a consumer ignores the promotional effort from competitors and stick to their own brand. Unlike other definitions, this one suggested by Oliver (1999), takes a more comprehensive approach and captures all possible factors affecting loyalty; such as behavioural, attitudinal, situational and environmental. Therefore, this paper will address loyalty based on this definition.

### **1.3 Measurement of brand loyalty**

There is no consensus in marketing literature on how loyalty should be measured. In the real world, some companies even measure loyalty just by asking three magic questions on overall satisfaction, intention to recommend and intention to repurchase (Neal, 2000). But these are

actually measures of satisfaction. Intention to repurchase and recommend are usually asked in Customer Satisfaction Study to validate the measure from other items.

However, published literatures on brand loyalty could come to an agreement on the two dimensions of loyalty measurement, which are behavioural and attitudinal. But they are yet to agree on the importance of each dimension in measuring loyalty. Even for measuring each dimension, there is no consensus on how to measure them most accurately.

The attitudinal dimension of loyalty construct infers that consumers engage in extensive problem solving behaviour involving brand and attribute comparisons, leading to strong brand preference (Thiele & Bennett, 2001). Jacob Jacoby and Robert Chestnut, in their paper, defined this form of loyalty as:

...consumers' predisposition towards a brand as a function of psychological processes. (Jacoby & Chestnut, 1978, p. 43)

This includes attitudinal preferences and commitment towards a brand. On the other hand, behavioural loyalty is the observable outcome of attitudinal loyalty. It is argued that without understanding the attitudinal loyalty it is not possible to influence behaviour in positive direction. Measuring and monitoring attitudinal loyalty can identify consumers, who are vulnerable in changing environment. Therefore, this paper suggests that consideration of both the dimensions, attitudinal and behavioural, is essential in measuring loyalty.

Attitudinal loyalty has been operationalized using two approaches: brand specific and individualistic (Thiele & Bennett, 2001). Individualistic measure has two dimensions. The first one is personality trait measure, which indicates the consumer's propensity to be brand loyal. The second one, on the other hand, is product category measure, which quantifies the brand loyalty measure for a particular product category. The individualistic approach assumes that a person is loyal or disloyal due to his/her personal characteristics to be consistent and thus not related to brand or product category. On the other hand, the brand specific approach assumes that brand

loyalty is derived from consumers' perception regarding the overall performance of the brand and this is brand's property. It can be measured from purchase intention and brand commitment.

However, the two approaches were not found related measuring the same construct, which is attitudinal loyalty (Thiele & Bennett, 2001). Individual's propensity to be loyal was found different from attitudinal loyalty. Thus, it is considered that attitudinal loyalty is captured best in terms of cognitive, affective and conative brand specific factors, which will be discussed shortly.

On the other hand, behavioural loyalty has mainly been operationalized in terms of purchase behaviour and measured in terms of repeat purchase, intention to repurchase, past purchase behaviours, share of wallet in the category, etc.

Measure of loyalty also differs across market type (Thiele & Bennett, 2001). Brand loyalty can be classified into three groups based on market type, namely consumable goods markets including FMCG or consumables, durable goods markets, and service markets. Loyalty has also been categorized in current literature in terms of market specific context (i.e. service, store and vendor loyalty) and unit of measurement context (i.e. brand and customer loyalty). Finally, the markets can be categorized according to transaction value, frequency of purchase, end use, level of involvement, supplier source and purchase process. This paper addresses the measurement of loyalty in general first to identify an appropriate approach for measuring the construct. Later it applies the selected measure on retail grocery industry to evaluate its applicability in that particular sector.

### **1.3.1 Some suggested measure of loyalty**

As already mentioned, there is no consensus yet reached among the scholars on one single most effective measure of loyalty. Literature proposed loyalty to be measured using Customer Loyalty Index (CLI) (Taylor, 1998). Two out of the three items making up most Customer Loyalty Indices (CLIs) are behaviour-based (such as, the "likelihood to recommend a

product or service to others" and "likelihood to repurchase the product or service"). The third element of a CLI is usually "overall satisfaction" itself. However, as previously mentioned, these measures can be misleading. Both the behavioural measure involves consumer's opinion regarding future behaviour, which may not turn out to be true. As the index does not consider any attitudinal measure, like preference for the brand or commitment to the brand, there is not even any item to cross check their claim for future behaviour with their current attitude. Asking someone about their future intention can be misleading for other reasons too. Many times customers say 'yes' to these types of questions as they are hesitant to say 'no', they are not ready to think so much or they are not sure what they are going to do in future. And many times their actual behaviour differ from what they intended to do in the past.

The recent literatures also attempted to justify continuity of purchase over a long period of time as a measure of loyalty (Schulz, 1998). However, continuous purchase can be the outcome of inertia (also termed as 'inertia loyalty' by Kumar & Rakshit, 2003, p. 55) or indifference of preference to certain products/category and lack of interest among consumers to find a better supplier. It can also happen due to the absence of highly competitive environment in the industry and absence of a better supplier. In any case, situational influences like promotions from other existing competitors or even new entry of a stronger or better counterpart in the industry can change the situation and prove the loyalty to be superficial.

RFM analysis is another method regarded as a good measure of loyalty (Kumar & Rakshit, 2003). But the problem with this method is that it overemphasizes the customers who have bought recently from the company, made some frequent purchase and spent a lot. However, these characteristics can be attributed to a transient customer, who have very little loyalty to the company and is spending some money for a short period of time. Additionally, the measure is unable to capture the difference in purchasing cycle of different customers. So one consumer, who is not loyal to a particular brand or store, may turn out to be a heavy user of a

product/service because of the timing of conducting RFM analysis. Whereas, another customer, who is a loyal and a regular user of the product/service might be left out as he/she did not make any purchase recently.

Real loyalty measurement must be based on commitment to the brand/company, not purchase frequency or amount or even simple intention to re-patronize the brand/company in future (Schulz, 1998). Trevor Richards, writing in the European Society of Marketing and Research (ESOMAR), suggested that real loyalty must be based on commitment to the brand, where commitment has been defined as being composed of four elements. These are:

1. Needs satisfaction, or how well the product or service fulfils the customers' needs
2. Involvement in category, or the amount of interest and attention the particular product category has for the customers
3. Attraction to alternatives, or how interesting and viable other products might be or can be made to the customers; and
4. Intensity of ambivalence to change or alternatives, or how the customers ignore known alternatives.

McMullan & Gilmore (2003) proposed a measurement scale based upon the research done by Oliver in the field of loyalty measurement (1999). This scale attempts to measure loyalty in terms of brand commitment encompassing all the four factors mentioned above. It is one of the first reliable and validated measures of loyalty development, which incorporated both the behavioural and attitudinal dimension of loyalty as well as considered the situational and environmental factors. The following sections explore this measure of loyalty more elaborately and justify its superiority to other available measures.

### **1.3.2 McMullan & Gilmore's (2003) proposed measure of loyalty**

The measure of loyalty development proposed by McMullan & Gilmore (2003) was developed upon Oliver's (1999) definition of loyalty, which defines the construct as a consistent commitment to repurchase a preferred brand despite situational influences to switch. This can be supported as a comprehensive measure of loyalty development, unlike other currently available measure, for the following reasons:

1. The measure takes both behavioural and attitudinal dimensions of loyalty into account, as they are complementary aspect of one construct.
2. It doesn't measure loyalty in terms of share of wallet or purchase frequency, which might be misleading or an incomplete measure of loyalty in some cases. It rather specifies the loyalty status in terms of four different stages [cognitive, affective, conative and action loyalty], as suggested by Oliver (1999), and measures the intensity of loyalty (high, medium or low) at each stage.  
It is also helpful, as the measure segments the customer base in terms of stages of loyalty and derives the size of each segment. Looking at loyalty in terms of intensity helps the managers to gain a better understanding on the psychology and belief of the consumers regarding the brand/company and identifies areas of improvement.
3. The model not only considers the consumer's internal attitude and beliefs, it also incorporates the influence of external variables environmental and situational factors, like competitor's marketing efforts, service failure, etc.
4. The scale was developed through extensive qualitative study followed by quantitative stage to validate it.
5. It used the knowledge of many other established scales like ETCBS (Exploratory tendency in consumer behaviour scale), Oliver's satisfaction scale, SERVQUAL, etc, to

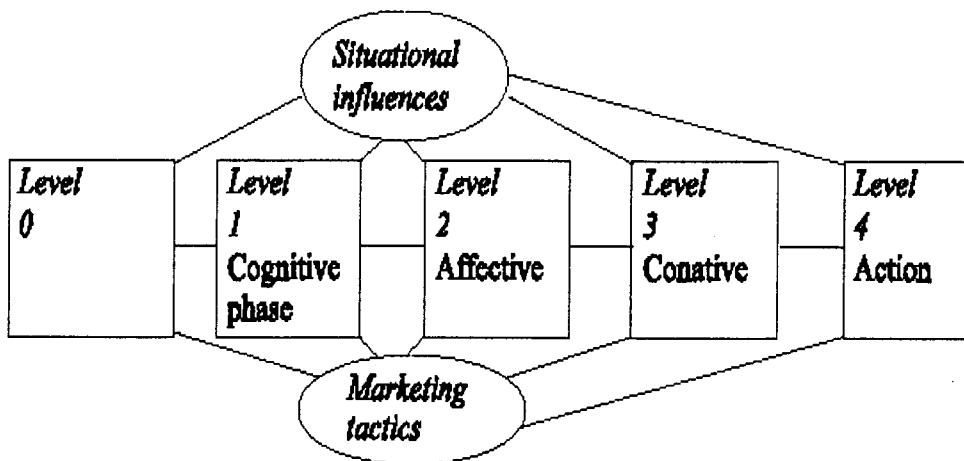
develop a comprehensive one for loyalty development measurement. This effort to utilize existing knowledge base enhanced the quality of the measure.

## **1.4 Stages in loyalty development and their measurement**

Quite a few numbers of studies have been conducted to distinguish between the behavioural and attitudinal dimension of loyalty (McMullan, Gilmore, 2003). But not much initiative has been taken to explore the interrelationship between these two dimensions. The dynamic process, which develops and sustains loyalty, has also been ignored by current literature. However, this understanding can also be very useful to develop a better measure of loyalty.

According to Oliver, there are four stages of loyalty development (McMullan & Gilmore, 2003; Oliver, 1999). The first three stages are cognitive, affective and conative stage. These three stages ultimately lead to the final stage of highest loyalty – the action loyalty stage. At this stage, the consumer becomes committed enough to ignore all the situational factors. The following diagram shows the four stages of loyalty and their interrelationships.

**Figure 1** Four stages of loyalty development. Source: McMullan and Gilmore, 2003 (Used by kind permission of Dr. McMullan and the copyright holders, Henry Stewart Publications)



As suggested by Oliver's model, the customer makes choices about the brand in all four different stages in spite of all the situational and marketing influences (McMullan & Gilmore, 2003). The characteristics of each stage are described in the table in next page.

**Table 1 Characteristics of the four stages of loyalty development (McMullan and Gilmore, 2003)**  
**(Adapted by kind permission of Dr. McMullan and the copyright holders, Henry Stewart Publications)**

Stage	Characteristics	Dimensions/Antecedents	Sustainers	Vulnerabilities
Level 0	The customer holds no information and has not developed an attitude towards the product/service			
Level 1: Cognitive Phase	The customer has some information and a set of belief, which may indicate that the product/service is superior to competition.	Accessibility: Ease with which an attitude can be retrieved, the easier to retrieve the more loyal the consumer becomes Confidence: Level of certainty about an attitude/evaluation, influenced by credibility of source or brand information Centrality: Relation between attitude towards brand and value system Clarity: Relation between the clarity of attitude towards the product/service and competitor's offers. Presence of a clear distinction between these two to reduce level of choice	Cost Benefit Quality	Cost Benefit Quality
Level 2: Affective Phase	Customer develops a favourable or unfavourable attitude towards the products/service after trial	Satisfaction Emotion/Mood: Mood is less intense than emotion; good mood recalls positive benefit of the product.	Satisfaction, Liking/Preference Cognitive consistency	Dissatisfaction, persuasion and trial of competition
Level 3: Conative Phase	This phase relates to individual's intention to behave, whether they will repurchase and how consistent they are with their belief.	Switching cost: Both monetary and non-monetary (psychological) Sunk Cost: Increases likelihood of repeat purchase Expectations	Commitment, cognitive consistency	Persuasion, trial of competitors' product
Level 4: Action Phase	It relates to the customer's actual behaviour	Inertia: Consumer's commitment with a product/service to the degree that they have blocked themselves from further Information seeking on substitutes. Sunk Cost	Persuasion and trial	Persuasion and trial

#### 1.4.1 Scale development

The measurement scale proposed by McMullan & Gilmore (2003) was developed basing upon this four-phase model shown in the table above. It aimed to test four individual phases, their

characteristics and mediating factors for each stage. The scale was developed after conducting extensive exploratory research in the field of loyalty research. As indicated in the table above, each stage has a number of characteristics including involvement, commitment, switching, quality and loyalty proneness. The scale included items to facilitate the measurement of each phase. It also included attitude statements that are negatively scored to allow for the testing of sustainers and vulnerabilities. After reviewing a number of existing scales, a pool of 122 items was generated. A panel of experts were employed to trim and refine the item list to bring the total number down to 28. Then the scale containing 28 items was piloted for face validity and reliability. As the scale was developed to measure the existence and intensity of all four stages in loyalty development, it consisted items to measure each stage. For example, there were six items on the scale tapping the cognitive stage, seven tapping the affective stage, nine tapping the conative stage and finally, six tapping the action stage. A sample of the scale, used in the pilot study, to measure loyalty development among customers of a restaurant-dining plan is shown in Appendix 1.

## 1.5 Why store loyalty?

Although most marketing research on loyalty has focused on frequently purchased packaged goods (brand loyalty), the loyalty concept is also important for industrial goods (vendor loyalty), services (service loyalty) and retail establishments (store loyalty) (Dick & Basu, 1994).

Store loyalty has been defined as:

The conscious buying behaviour of the customer expressed over time with respect to one store out of a set of stores, which is driven by commitment to the store, where commitment has been defined as the customer's enduring desire to maintain relationship with the store. (Odekerken-Schroder, De Wulf, Kasper, Kleijnen, Hoekstra, & Commandeur, 2001, p. 309)

Nature of loyalty might not be similar across all industries (Oliver, 1999). It depends on both market type and situation, as characteristics of the products and market drive and shape loyalty (Thiele & Bennett, 2001). Distinguishing between market types is important because the very nature of markets indicates that the measures used to capture loyalty might be very different. A review of the loyalty literature has revealed that intensity and nature of loyalty and thus the measurements of loyalty are different for consumable, durable and services markets. This difference is largely attributable to the difference in market characteristics, namely brand switching tendency, purchase frequency, share of category, proportion of sole buyers, commitment, intention to purchase, perceived risk, consumer inertia, role of habitual purchase, satisfaction and involvement with the category. Therefore, a single loyalty measure for all market may not be possible to develop. However, to develop an appropriate context specific measure requires an appropriate generalizable model first, which captures all the relevant concepts to measure the construct. To find out the appropriate measure for each market, application of the general model in the market context is necessary. The framework suggested by Oliver (1999) on levels of loyalty development may not be applicable to for store loyalty measurement due to the unique nature of the industry or consumer's low involvement with the product/service. For example, the highest level of loyalty (i.e. action loyalty or ultimate loyalty) may not exist or even may not be possible to attain due to the unique characteristics of the industry. Keng and Ehrenberg (1984) analyzed panel data to examine brand purchase behaviour and store loyalty simultaneously for a number of different grocery product categories. The findings suggested that consumers had low store loyalty and in some cases, shopping/switching process was found random. Uncles and Ehrenberg (1990) in their study also found similar result of low store loyalty and concluded that customers shop at a portfolio of stores. It was not even clearly established whether true loyalty, based on commitment to the store, is at all achievable in the retail sector or not. However, it should be noted that the measures taken in both of these studies considered only behavioural dimension of loyalty, which is unable to capture the construct completely. So it is

worth taking a look whether the model proposed by Oliver (1999) and the scale of loyalty measurement proposed by McMullan & Gilmore (2003) (basing upon Oliver's model) is applicable or not in case of store loyalty. This will take the store loyalty research one-step ahead by considering both behavioural and attitudinal dimension and understanding influence of situational and environmental factors on store loyalty.

Retail markets are increasingly characterized by more demanding and knowledgeable customers, shortened product life cycles, crowded retail environments, undifferentiated product and pricing, intensified competition and market fragmentation (Woodruff, 1997; Zeithaml et al., 1996). It is becoming harder every day to develop loyalty among customers in such fragmented and competitive markets. However, the way in which consumers develop loyalty to a particular store and how this loyalty can be maintained are still unresolved issues for many retailers. It seems that, especially in the retail industry, there exist uncertainty and incorrect beliefs about what matters to customers most. So it is also required to develop a better understanding of the factors that drive store loyalty among customers.

### **1.5.1 The retail grocery industry**

In recent years, retail competition has intensified generally as a consequence of new technologies, more sophisticated management practices and industry consolidation (Sirohi, McLaughlin & Wittink, 1998). These trends have been particularly pronounced in the food channel. For example, Wal-Mart and Kmart have added grocery sections to their outlets in many regional markets. Supermarket profits have been flat or declining for nearly a decade (Progressive Grocer Annual Report, 1996). In this environment, it is essential for firms to focus on the right customers. In the face of slow growth and highly competitive markets, a good defence is critical (Fornell, 1992). Marketing tools, such as coupons and promotions, are not only often minimally effective, but also attract the wrong customers by adverse selection (Reichheld, 1996). For example, temporary price cuts and coupons tend to attract cherry pickers, whose purchases often

actually detract from profits. Uncertainty and incorrect beliefs about what matters to customers seem to be present, especially in the grocery retail industry. For example, it has been found that executives in this industry tend to overestimate the proportion of consumers, who actively search and respond to price promotions (Urbany et al., 1996). Thus, it is not only essential to measure the level of loyalty among grocery store's customer base to identify the most profitable sources of business, it is also important to understand the importance of the two dimensions (behavioural and attitudinal) in measuring loyalty to gain a better understanding of the construct and take the optimal actions.

## 1.6 Measuring store loyalty

As already mentioned, there is no consensus yet among the published literature on the most appropriate measure of loyalty in general. Same confusion and uncertainty exist for measurement of store loyalty. Store loyalty has been measured by the current literature by using the following methods:

1. Share of wallet allocated to the store during a particular time period
2. No of stores patronized during the time period
3. No of switches or changes in store to which loyalty is exhibited

Enis & Paul, (1970) defined store loyalty as customer's inclination to patronize a given store during a specified period of time. They proposed that store loyalty can be measured by an index ranging from 0 (indication no patronization or no loyalty) to 100 (indicating complete loyalty) and argued that it is directly related to firm's profitability. The higher the loyalty of consumers on the index, the more profitable the firm is.

Some current literature suggests that more loyal customers spent considerably higher proportion of their budget to their first priority store than less loyal customers (Enis & Paul,

1970). So the amount spent by consumers was found to be positively related, but not directly proportional to the level of loyalty. Store loyalty is thus related to store's success.

However, all these measures are again focused on purchase behaviour and capture only one dimension of store loyalty. Repeat store visit or percentage of purchase of a specific product category from the store is different from store loyalty (Bloemer & de Ruyter, 1998). They only capture behavioural conceptualization, which is not sufficient for measuring and explaining store loyalty. As already mentioned above, the repeat visit or purchase is the outcome of some decision process where the attitude towards the store, the past experience and many other variables play a determining role. On the other hand, store loyalty is considered an outcome of store commitment, without which a superficial loyalty might be created due to inertia. And store commitment is the pledging/binding of an individual to his/her store choice. A customer becomes committed to a store as a result of an extensive and explicit decision-making and evaluative process. Consumers not having a commitment towards a store still might be attracted towards its attributes, but can easily be lured away by competition through incentive.

Some literatures have attempted to measure store loyalty considering both attitudinal and behavioural dimension. Bloemer & de Ruyter (1998) in their study suggested inclusion of both behavioural and attitudinal dimension in the measurement and proposed to measure store loyalty level on a continuum having true loyalty at one end and spurious loyalty with no commitment at the other hand. Others have measured store loyalty based on both strength of attitude and repeat purchase behaviour (Macintosh & Lockshin, 1997). This included three concepts: 1. Loyalty as an attitude, 2. Purchase intention and 3. Store's share of wallet. However, none of these approaches have gained enough legitimacy to be accepted as a standard measure of loyalty. Thus, it is worth exploring McMullan and Gilmore's (2003) approach to evaluate its appropriateness in retail setting.

### **1.6.1 Measuring store loyalty of retail grocery stores**

Defining the category of grocery chain stores in terms of product or service for loyalty measurement is a bit complicated. For grocery stores, it is a combination of retail service and consumable goods. While the consumable goods are the reason for consumers to go to any grocery store, it is not the only reason to choose a particular store or be loyal to that one. Several other characteristics make it a unique combination of goods and service. However, few characteristics of service and consumable goods market do not apply for retail grocery stores. For example: consumable good market usually involves low transaction amount, which might not be the case for retail grocery stores (Thiele & Bennett, 2001). In many cases, consumers purchase in bulk amount the packaged goods. On the other hand, it is assumed that buyers usually do not share their wallet with two brands in service market, which may not be true for grocery stores again. In many cases, the consumers split their grocery expenditure to more than one store depending on situational and environmental factors. In consumable markets, where the market is stable and where there is high switching and low involvement and risk, behavioural measures are appropriate for predicting brand loyalty levels. However, where the market is not stable, there is a propensity towards sole brands and there is high involvement and risk, then attitudinal measures may be better predictors of future behaviour. In a particular geographical market, the grocery chain industry may not be highly competitive and one or two players might dominate the whole market. Thus, tracing only the purchase behaviour may lead us to depend on spurious loyalty due to absence of better accessible alternative. The level of loyalty frequently changes in these situations when a new competitor steps in with better offering. However, in terms of involvement as well, not all the product carried in a store requires same level of involvement with all customers. Some of them are low involvement, whereas some demands high involvement from some customers. Thus, for retail grocery, a combination of attitudinal and behavioural approach may be more appropriate than taking either of the two. Moreover, the measure should also consider the influence of situational (e.g. absence of a better accessible alternative) and

environmental (e.g. price promotions, competitor's promotion, etc) factors on loyalty development to derive more accurate measure.

## 1.7 Scope for future research

It is very evident from the discussion above that there exists a huge gap in loyalty research. There is yet no measure for loyalty, which is well accepted by majority of the scholars, working in the field of marketing research. Debate is still going on the appropriateness of different approaches for measuring loyalty and which approach produces the most appropriate and accurate indicator of company's performance. So there is no single measure yet developed, which can be applied to different industries for determining its applicability. However, it is more or less accepted by the scholars that consideration of both behavioural and attitudinal dimension is necessary to get better indication of loyalty. But it is worth mentioning that even the role of both dimensions in loyalty measurement might not be same across all industries. Some industries may demand only a behavioural measure because of its inability to develop a highly committed customer base. Thus, there is scope for research to understand whether both attitudinal and behavioural dimension is necessary for determining store loyalty in retail grocery industry and whether different levels of loyalty exist among store customers in this sector.

In this backdrop, the next section presents the detail of the present research, which applied the loyalty measurement scale developed by McMullan and Gilmore (2003) to evaluate its applicability in retail grocery industry.

## **2 THE PRESENT STUDY**

### **2.1 The managerial problem**

Understanding loyalty means understanding customer retention (Taylor, 1998). A little increase in customer retention can influence profitability. Gaining an understanding of the level of loyalty of each customer adds competitive advantage for a company and helps them to develop effective one-to-one marketing strategy (McMullan, Gilmore, 2003). Consumers at different level of loyalty need different motivations to be more loyal. By measuring the size of the consumer segments at each stage of the loyalty development process, a company can determine where each consumer stands. They can develop a profile of each segment from the different stages to cater focused marketing effort for them. It can also track the changes in consumers' depth of loyalty by monitoring their movement across different stages.

Thus, the managerial problem this study addresses is to evaluate whether such segmentation of a company's customer base, in terms of intensity of loyalty, is possible or not in the retail grocery industry to cater focused marketing effort for each segment. The research will also help the management to gain a better understanding on loyalty development process and the relationship of purchase behaviour with customer loyalty in the selected industry.

### **2.2 The research question**

As already mentioned, the measurement scale proposed by McMullan & Gilmore (2003) is one of the most comprehensive scales available from current literatures for measuring brand loyalty. The scale not only considers both behavioural and attitudinal dimensions, it also considers the situational and environmental factors influencing loyalty. Moreover, it attempts to

identify the four stages of loyalty developments suggested by Oliver (1999) to segment the customer base in terms of intensity of loyalty. Thus the primary research question was:

**Is the measurement scale proposed by McMullan & Gilmore (2003) applicable for measuring loyalty among customers of retail grocery industry?**

To answer this primary research question, the following secondary research questions was addressed:

1. Is the scale suitable for clearly identifying the levels of loyalty from the customer base of retail grocery? Or in other words, is the scale appropriate for retail grocery?
2. Do all four level of loyalty suggested by Oliver (1999) and addressed by the scale exist among customers of retail grocery industry?
3. Is it possible to derive the relative size of each group of loyalty segment (i.e. the size of the segment in each stage of the loyalty development process: cognitive, affective, conative and action) from the customer base of a retail grocery shop by applying this scale?
4. Is the scale reliable?
5. Is the scale valid and measures the construct appropriately?
6. Is there any relationship between behavioural measures of loyalty and the loyalty measured by the scale?

### **2.3 Hypotheses**

To achieve the above mentioned objectives of the study, the following hypotheses was formulated:

1. The scale is suitable or appropriate for clearly identifying stages of loyalty development process of the customer base from retail grocery industry.

2. All four levels of loyalty suggested by Oliver (1999) and address by the scale exist among the customers of retail grocery industry.
3. It is possible to derive the relative size of each group of loyalty segment (i.e. the size of the segment in each stage of the loyalty development process: cognitive, affective, conative and action) from the customer base of a retail grocery shop by applying this scale
4. The scale is reliable
5. The scale is valid and measures the construct appropriately.
6. There is a relationship between behavioural measures of loyalty and the loyalty measured by the scale

## 2.4 Information collection

To test the above-mentioned hypotheses, the study collected the following information:

Information collected by using the scale:

1. Knowledge about the store
2. Importance of and interest in store selection
3. Value perception
4. Sensitivity to price, physical features, service
5. Satisfaction/Enjoyment/Fulfilment of expectation
6. Continuity of purchase/consistency
7. Preference/Liking/Feeling
8. Tendency to switch

In addition to the scale, some behavioural data were collected in the study for two purposes:

1. To testify the 6<sup>th</sup> and final hypothesis and see whether any relationship exists between purchase behaviour (or behavioural measure of loyalty) and the loyalty measured by the scale.
2. To support the behavioural measures incorporated in the scale. The scale had both behavioural and attitudinal dimension inbuilt in it. However, the scale measures behavioural variables like continuity of purchase and intention to switch by using a 7 point attitudinal scale, with each point labelled from 'Strongly agree' to 'Strongly disagree'. The statements on these variables were also formed in such a way that they measure attitude more and behaviour less (please refer to Appendix 1). This might not be the most appropriate way of measuring behavioural variables. Thus separate behavioural measures were included in the study.

The information collected on behavioural dimension was as follows:

1. Frequency of grocery shopping
2. Share of wallet
3. Length of relation/Continuity of purchase
4. Frequency of visit to Canadian Superstore
5. Average amount spent n grocery in Superstore
6. Reason behind selection of Canadian Superstore as a store of choice
7. Preferred shopping time
8. Behavioural responses in different future situations

In addition, overall loyalty was measured to test the validity of the scale.

Limited information was also collected on the demographic information of the respondents. They were as follows:

1. Status in Canada
2. Gender
3. Age
4. Ownership of vehicle
5. Average amount spent on grocery in a typical month

## **2.5 Methodology**

### **2.5.1 Research design**

The study had two parts. In the first part an exploratory research, which was primarily an extensive literature review, was carried out on current research publications on Loyalty measurement. This literature review was conducted to gain understanding on loyalty measurement and learn about the currently proposed models of measurement. This literature review helped the researcher to find out the scale develop by McMullan and Gilmore (2003), which is quite contemporary in the field of loyalty research.

In the second phase, a quantitative study was carried out to achieve the objective of the research project and test the hypotheses.

### **2.5.2 Target audience**

The study was conducted on grocery shoppers in the grater Vancouver region, who buy grocery items for themselves form supermarkets. The research only considered grocery shopping from supermarkets as 68% of the expenditure on food in the Vancouver went to supermarkets in 2001 (Statistics Canada, 2001, Food Expenditure in Canada, p. 53). On the other hand, only 12%

went to food specialty stores, 1% to convenience store and 7% to other types of stores. The study defined supermarkets as big stores offering wide variety of most grocery items (both food and non-food). Retail co-operatives were also included here. The present study selected supermarket customers not only for the segment's majority share in food expenditure, but also for its considerable contribution in the economy. In 2003, supermarkets and grocery stores in British Columbia generated 9495.6 million dollars of sales (Statistics Canada, February 2004, Retail Trade, p. 16). There were 17 supermarkets and grocery chains in BC in 1998, which had 448 stores (Statistics Canada, 1998, Retail Chain and Departmental Sources, p. 25). Of these, 181 stores were in Vancouver. Thus, it is evident that supermarkets represent majority of the business in retail grocery industry. So, the study selected one particular supermarket, which can represent the supermarket industry of Vancouver well and analyzed its customers in depth.

### **2.5.3 Sampling**

#### **2.5.3.1 Store selection**

Canadian Superstore was selected to represent the supermarket industry of Vancouver in retail grocery. This particular store was selected as they have a very wide variety of almost all grocery items and have a very multicultural customer base.

#### **2.5.3.2 Sample selection**

A pool of 100 Canadian Superstore customers was generated for this study. These customers shopped food items at Superstore at least once in last 2 months for their own consumption. A time limit of 2 months was determined to gather data from a variety of customers who shop there at different frequency. In this way, the study was able to collect information from customers, who go there for grocery shopping every week; to customers, who have been to the store only once in last 2 months. The samples were from Simon Fraser University, either graduate or postgraduate students, who live on their own.

### **2.5.3.3 Sampling technique**

Convenience sampling technique was adopted to collect information.

### **2.5.4 Data collection procedure**

Data was collected using a semi-structured questionnaire. As the study adapted a convenience sampling technique, the researcher personally distributed the questionnaires among her friends, classmates, in campus residences, during class and in the cafeteria area.

#### **2.5.4.1 The questionnaire**

The questionnaire included one screening question at the beginning to ensure that all the respondents have shopped at any outlet of Canadian Superstore in last 2 months to purchase food items for personal consumption.

To evaluate the loyalty development stages of the customers, the scale proposed by McMullan & Gilmore (2003) was used after minimum adaptation. The scale contains 28 statements representing different stages of the loyalty development process. A sample scale on restaurant's dining plan was provided in their article (McMullan & Gilmore, 2003). The scale used in the present study incorporated all 28 statements from the original after some minor changes to make it relevant for the retail grocery industry. The statements were measured on a 7 point scale with each points labelled. Besides, behavioural measures were also included in it. Overall loyalty was measured on a 7-point scale with only the end points labelled as 'Very disloyal' and 'Very loyal'

All the questions were close ended, with a very few having an open ended option. There was no open-ended question asking for opinion from the respondents. A sample blank questionnaire used for the present study is provided in Appendix 2.

## **2.5.5 Data operation**

After completion of collection, data was coded using a structured code sheet (Please refer to the Appendix 3 for the code sheet). Data was entered then into a SPSS spreadsheet for further statistical analysis. Before running statistical tests, non-responses were recoded as system missing. Besides, age data were recoded to the interval's mid point.

### **2.5.5.1 Calculating the cumulative loyalty score**

As mentioned earlier, data was collected by using the scale of loyalty measurement, which contained 28 items. Though for determining the applicability of the scale on grocery industry, statistical test, like factor analysis, was conducted on the data, a ‘Cumulative loyalty score’ was also calculated by adding a respondent’s rating on all 28 items of the scale to get a derived overall loyalty score from each respondent. Most of the statements in the scale is structured is such a way that it asks about attitude, intention or behaviour regarding grocery shopping or shopping in Canadian Superstore. The higher the rating is on a 7-point scale on these statements, the higher is the probability of being more loyal to the store. However, some of the (9 out of 28) statements in the scale are formed in such a way that they measure loyalty in negative way. For example, one statement is “Canadian Superstore, as a choice of grocery store, has not worked out as well as I thought it would”. So a rating of strongly agree would count as negative towards measurement of loyalty. So the responses of these 9 statements were recoded before adding them up with other ratings for ‘Cumulative loyalty score’. The percentage value of the cumulative loyalty score was also calculated for further analysis.

## **2.6 Analysis**

The following statistical analysis was conducted for testing the hypotheses. .

1. Factor analysis with the Principal Component method was applied on the data gathered by using the loyalty scale to determine the scale's applicability and find out whether the four different stages proposed by Oliver (1999) exist in the retail grocery industry or not.
2. To measure the reliability of the scale, Cronbach alpha value was derived by using SPSS
3. To measure the convergent validity of the scale, correlation between the scale item scores and overall loyalty was conducted.

Besides, one sample t-test, independent sample t-test, paired sample t-test, cross tabulations, correlations and regression analyses was conducted among the behavioural variables and with the scale item data to develop understanding on the interdependence between behavioural dimension and the scale's measurement of loyalty.

A detail analysis of the findings from these statistical tests is presented in the next section.

### **3 FINDINGS OF THE STUDY**

#### **3.1 Respondents' profile**

Out of the 100 respondents, all of whom were graduate or postgraduate students of Simon Fraser University, majority were on Visa (48%). Nearly another 20% were either permanent resident or landed immigrant. Thus, nearly 70% of the respondents were not Canadian citizens and were from multicultural background. The sample was thus pretty representative of the Canadian diverse population. Detail data on respondent's status in Canada is given in Appendix 4.

The majority (57%) were female respondents and young in age. Nearly 85% of them were from 21 to 30 years of age bracket. More than 65% mentioned that they do not own a vehicle. Please refer to Appendixes 5, 6 and 7 for detail information on respondent's profile.

#### **3.2 Grocery shopping habit of the respondents**

##### **3.2.1 Frequency of grocery shopping**

When the respondents were asked how frequently they went for grocery shopping in last six months, majority (53%) of them mentioned that they went at least once a week. However, 87% of the respondents in the study mentioned about going to grocery shopping at least once in two weeks or more. Thus it is evident that, the respondents are quite frequent shoppers. Please refer to Appendix 8 for more information.

##### **3.2.2 Amount spent on grocery shopping in a typical month**

The average amount spent by the 100 respondents of the study on grocery in a typical month was nearly 215 CAD. However, majority spent around 100 to 210 dollars per month

during last six months. The study also included some heavy shoppers, who spend around 400 CAD on grocery per month. Please refer to Appendix 9 for more information.

### **3.2.3 Most visited grocery store**

Majority (73%) of the respondents mentioned that they went to either Canadian Superstore (38%) or Safeway (35%) most for grocery shopping in last 6 months. Though it is obvious that those (35% of the respondents), who went to Safeway most of the times, also went to Superstore, as they would not have been considered eligible for the study if they did not shop in Canadian Superstore. However, out of the 38 respondents who went to Superstore most, only 24 mentioned that they also went to Safeway for grocery shopping during this period in a typical month. Thus, it is evident that the shoppers of Canadian Superstore were less interested to split their share of wallet into Superstore and Safeway.

The rest 25% of the respondents mentioned about other grocery stores in the shopping mall or other convenience stores as their most visited store in last 6 month for grocery shopping. Please refer to Appendix 10 for detail information.

A cross tabulation was conducted between ‘The most visited grocery store’ and ‘Respondent’s status in Canada’ to see whether selection of grocery store was independent of respondent’s status or not. It was revealed that the two variables are not independent. Thus, it can be inferred that the selection of grocery store is dependent on the person’s status in Canada. The data also showed that the ratio of respondents holding different status (Citizen, Permanent resident or visa) was very similar among shoppers of Canadian Superstore and Safeway. Please refer to the tables in Appendix 11 for details.

### **3.2.4 Preferred grocery shopping time**

When the respondents were asked about their preferred grocery shopping time, majority (52%) mentioned that they mostly went for grocery shopping during weekends. On the other

hand, only 18% mentioned that they went for grocery shopping on their way back from school/work. However, it should be kept in mind that a big portion of the data was collected from respondents, who live on campus of Simon Fraser University and there is no convenience store on campus from where they can buy their grocery. This may lead majority (82%) of the respondents to go for grocery during weekend or any other time they find suitable. So, it is possible that this data would be totally different for a sample that is not drawn from students only. The table in Appendix 12 provides detail information.

### **3.3 Respondents' shopping pattern in Canadian Superstore**

As already mentioned above, the Canadian Superstore was found to be the most visited grocery store (mentioned by 38%) among the respondents of the study. The other information collected in the study on shopping pattern to Superstore is summarized below.

#### **3.3.1 Share of wallet of Canadian Superstore**

The study collected information on share of grocery spending to different stores in a typical month. It was found that only 3 respondents out of 38, who shop most in Canadian Superstore, did not split their grocery budget into a portfolio of stores and thus spent the 100% in Canadian Superstore. However, 14% of all respondents mentioned that they spend 80% or more their grocery budget in Superstore. On the other hand, 40% of the respondents claimed that they spend 25% or even less of their shopping budget in Superstore. Thus, the proportion of respondents being true loyal in terms of share of wallet was found much lower than that of split loyal. When the same proportions were calculated for Safeway, it was found that 11% of all the respondents spend 80% or more of their grocery budget in Safeway. On the other hand, 34% of them claimed to spend 25% or less of their budget in Safeway. Though Canadian Superstore was found to have higher proportion of split loyal, a paired sample T-test was conducted to determine whether the share of wallet for Canadian Superstore was significantly different from that of

Safeway or not. The statistical test indicated that at 95% level of confidence, the average amount spent by the respondents on Canadian Superstore (32.52% of monthly grocery budget) and Safeway (41.62% of monthly grocery budget) was not significantly different from each other. However, a separate paired sample t-test was conducted between share of wallet of Superstore and each of the different types of stores. None of them were found to have a significantly different share of wallet than Superstore. This paper only shows the statistical output of one test conducted with Safeway's data. Please refer to Appendix 13 and 14 for detail analysis.

ANOVA test was also conducted using the Univariate General Linear model between 'Share of wallet' of Canadian Superstore and 'Frequency of grocery shopping' to determine whether share of wallet for the store was influenced by the shopping frequency or not. Statistical test did not reject the null hypothesis of equal mean share of wallet at different frequency of shopping. Thus no relation between the two variables was found. Please refer to the Appendix 15 for detail analysis.

### **3.3.2 Length of relation/ Continuity of purchase**

Nearly 56% of the respondents mentioned that they have been to Canadian Superstore in last 2 weeks or even earlier. When they were asked when they have first been to the store, the average length of relation was found to be around 27 month (2.25 years). Though the study found respondents who have been shopping in superstore for last 10 years, the proportion of such respondents were found very low. Only 7% of the respondents claimed that they have been shopping to Superstore for last 5 years or more. Please refer to Appendix 16 for detail analysis.

### **3.3.3 Frequency of visit to Canadian Superstore**

The average number of visit paid to Canadian Superstore for grocery shopping was found quite low. The respondents were asked to indicate a number from 1 to 10 to represent the frequency of shopping in Superstore in last 6 months. The average was found 4.67 %, which is

not even 50% of the times. This again indicates that the percentage of split loyal of Canadian Superstore is quite high.

One sample t-test was conducted to test whether the average frequency of visit was significantly below 50% (5 times out of 10). Statistical test indicated that the mean (4.61) was not significantly below 50% (i.e. 5.0). However, it was significantly below 60%, which indicates going to Superstore 6 times out of 10. Only 32% of the respondents mentioned that they went to Canadian Superstore 6 times or more out of 10 grocery trips in last six months. Detail statistical analysis is provided in Appendices 17 and 18.

### **3.3.4 Average spending at each grocery trip to Superstore**

The average amount spent at each trip to Superstore by the respondents of this study was found to be around 52 CAD, which is moderate for students. However, 15% of the respondents mentioned that they spent 100 CAD or more at each time they have been to superstore. When the frequency of grocery shopping of these 15% was checked, it was found that they went for grocery shopping once is every 2 weeks to once a month. Nearly 10% of them also mentioned they go to Superstore most for grocery. Because of this lower frequency of grocery shopping and higher share of the store in wallet, the average spending at each trip was found higher for these respondents (Please refer to Appendix 19).

However, an ANOVA test was conducted using the Univariate General Linear model between ‘Average amount spent each time at Canadian Superstore’ and ‘Frequency of grocery shopping’ to determine whether the amount spent at each trip was influenced by the shopping frequency or not. The null hypothesis of equal mean amount spent at different frequency of shopping could not be rejected by the statistical test. Thus, it can be inferred that though the data showed that the respondents spending higher amount each time were less frequent grocery

shopper, the relation between these two variables was not significant. Please refer to the Appendix 20 for detail analysis.

### **3.3.5 Reason for selecting Superstore for grocery shopping**

The respondents were given a pool of reasons from where they are asked to rank the 3 most important ones. They also had option to add a reason in the pool and rank it if it was not there. Many times, it is assumed that the grocery stores are chosen on the basis of location convenience. However, it was interesting to note that the two most important reason of selecting Superstore was found to be price and variety of products and not location convenience. Out of 100, 94 respondents mention that they go to Superstore for reasonable price of its products. Of these 94 respondents, 67 ranked ‘Reasonable price’ as the 1<sup>st</sup> reason (rank 1) for selection. And another 21 mentioned it as the 2<sup>nd</sup> most important reason. On the other hand, ‘Variety of products’ was mentioned by 80% of the respondents as a reason for selecting Superstore. Of them, 52% mentioned it as the second most important reason. Location convenience related factors, like ‘On my way to home/work/school’ or ‘Close to my home’ gained only limited response. These were mentioned, as a reason for selection (any rank), by 18% and 23% of the respondents, respectively. However, ‘Close to bus stop or sky train station’ gained 33% response as a reason for selection (any rank). Of them, 24% mentioned it as the 3<sup>rd</sup> most important response. Nearly one fifth (21%) of the respondents did not mention about any ‘3rd most important reason’ as they did not have any (please refer to Appendix 21 for the summarized table).

A number of statistical test were conducted to explain the reason behind such data. As nearly 70% of the respondents were either on visa or permanent resident, and were from different ethnicity and cultural background, the variety of products were quite important for them to have their own cuisine. The Superstore has a very wide variety of products starting from Asian spices to real Canadian food. It was already found that the most visited grocery store was influenced by

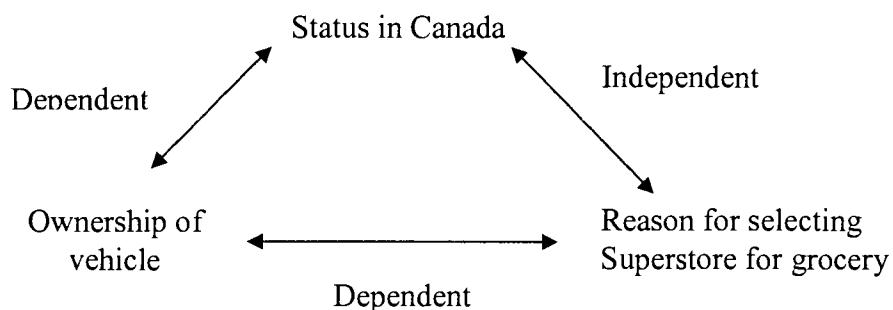
respondent's status in Canada. Another cross tabulation was now run to find out whether the variation in reason for selection was dependent on the respondents' status in Canada or not. The chi-square test could not prove any significant interdependence between the two variables (Please refer to Appendix 22). However, it was revealed that higher percentage of the Citizens and Immigrants selected Superstore (ranked as the most important reason) for 'Reasonable price', whereas higher percentage of the visa students selected the store for 'Variety of products', though these findings were not statistically significant.

Cross tabulations were also conducted to find out whether the 'Reasons for selecting Superstore' had any interrelationship with 'Ownership of vehicle'. It was found that though respondent's ownership of vehicle did not have any influence on the most important reason (rank 1) for selection, it had significant influence on the selection of second and third most important reason (rank 2 and 3). Thus the second and third most important reasons for selecting Superstore were significantly different across respondents who owned and did not own a vehicle. If we consider the third most important reason for selecting Superstore, it was found that 'Variety of products' received highest response from vehicle owners, whereas 'Close to bus stop or sky train station' received the highest response among those who did not own a vehicle. However, for the second most important reason, the proportion of respondents not owning a vehicle mentioned more about reasonable price and variety of products than those who did not own a vehicle. Please refer to Appendix 23 for detail analysis.

Another very interesting insight was derived from cross tabulation. The 'Ownership of vehicle' variable was found significantly different across different status holders (citizen, permanent resident or visa holder). It was found that rate of ownership of vehicles was much higher among citizens than among visa holders or permanent residents. Thus, though the respondent's status in Canada was not found significantly related with his/her reasons for selecting Superstore, the reason were found interrelated with ownership of vehicle and ownership

of vehicle in turn was found related with respondents' status in Canada. The interrelationships are shown in the diagram below:

**Figure 2 Interrelationship between 'Reason for selecting Superstore', 'Ownership of vehicle' and 'Status in Canada'**



The statistical output of the above mentioned cross tabulations are given in Appendix 24.

### 3.3.6 Intention to switch from Canadian Superstore

The respondents were given three different situations and asked about their intention to switch at each one.

In the first situation (situation 1), the respondents were asked whether they will switch to an alternate or reduce frequency of shopping at Canadian superstore, given the alternate store offers same quality of product and service. Out of 100, 89 respondents mentioned that they want to switch to the alternate store (Please refer to Appendix 25).

In the second situation (situation 2), the respondents were asked whether they want to switch to an alternate store, if the alternate store offers lower price for a month on their product, which is exactly of same quality as in Superstore. In this situation, 91% of the respondents showed their interest to switch to the alternate store.

In the third situation (situation 3), the respondents were asked, whether they will take an effort to come to a distance to shop in Superstore, if they move their home to a new location, no outlet of Superstore is found nearby and other convenience store are available in their locality. Out of 100, 76 respondents mentioned that they are not interested to take the effort to come to Superstore.

The above information indicates that the Superstore customers are, as a whole, very price sensitive, and less loyal. A number of statistical analyses were conducted to see whether the intention to switch or continue purchase in Superstore was related with other variables. The findings from the tests are summarized below:

1. A cross tabulation was generated on ‘Intention to switch’ in situation 1 and 3 and ‘Ownership of vehicle’ to see whether the intention to switch/continue was dependent on vehicle ownership or not. Though the situations cited about location convenience, response to the situation was not found significantly related to ownership of vehicle. Intention to switch was higher irrespective of respondent’s ownership of vehicle. Please refer to Appendix 26 for detail analysis.
2. A cross tabulation was generated to see whether respondent’s intention to switch varied with their most important reason to choose Canadian Superstore at the very first place or not. Similar result was found. The respondents’ intention to switch was not dependent on most important reason to choose Canadian Superstore for grocery shopping. Cross tabulation output for one situation is given as a sample in the Appendix 27.
3. The third cross tabulation was conducted to determine whether the intention to switch from Superstore differed with respondents’ ‘Most visited grocery store’ or not. The aim was to find out whether the intention to switch was different if Canadian Superstore was not the most visited store by the respondent. Interestingly, it was found that the intention to switch differed significantly among respondents with different ‘Most visited grocery

store' in situation 2. This situation asked about intention to switch if a lower priced alternative was found for a month. It was found that the customers, who visited Safeway most, were more inclined to switch in situation 2 than customers, who visited other stores most. Thus, it can be inferred that customers' intention to switch differs significantly depending on where they shop most of the time. However, no significant interdependence was found in case of situation 1 and 3. The Appendix 28 shows detail analysis on situation 2.

### **3.3.7 Overall loyalty to Superstore**

The loyalty of the respondents to Superstore was measured in two ways. They were:

1. By asking the respondents about their overall loyalty towards Superstore on a 7-point scale. Thus, this was more of perceived loyalty by the respondents, rather than actual loyalty measured by using any scale
2. By using McMullan and Gilmore's (2003) scale, with 28 items in it. This measured the actual loyalty. Thus, in order to measure the actual loyalty, a 'cumulative loyalty score' (both in absolute number and percentage) was calculated by using the procedure mentioned in Data operations section of the paper. Though the scale's applicability was measured later by factor analysis, this cumulative score gave an overall understanding of the loyalty of the respondents towards Canadian Superstore.

The study indicated that the respondents perceived themselves as quite low in loyalty towards Superstore. The mean overall loyalty score by the respondents was found to be around 3.5 out of 7 (Please refer to Appendix 29). A one-sample t-test was conducted to see whether the mean was significantly different from the scale's midpoint (i.e. 4 on a 7-point scale). Statistical test showed that the mean was not equal to the mid point (Please refer to Appendix 30). Thus, the

mean overall loyalty was significantly below the scale's mid point and the overall perceived loyalty was quite low.

When the percentage cumulative loyalty score was considered, the average was found to be around 60% (Please refer to Appendix 31). The distribution of loyalty score was very close to normal distribution. One sample t-test was conducted to determine whether the average score was significantly higher than the mid level, which is 50%. Statistical test showed that the average cumulative percentage score was significantly different from 50% and it was higher (Please refer to Appendix 32).

A number of statistical tests were conducted with these two variables. The following section summarizes them.

1. An independent sample t-test was conducted between the overall perceived loyalty and the intention of respondents to switch at different situations. As already mentioned above, the respondents were given 3 different situations and were asked about their intention to switch. Independent sample t test was conducted on each situation to see whether the overall loyalty varied with intention to switch.

It was found that the overall perceived loyalty varied significantly among respondents with their intention to switch in situation 2 and 3. No significant interrelationship was found in situation 1. Although a very insignificant proportion (only 9%) of the respondents denied that they would switch, even if a lower priced option is available for a month (in situation 1), the mean overall loyalty of this small group was significantly higher than those majority (more than 9%), who wanted to switch. Same result was found when the independent sample t test was conducted between 'Cumulative percentage loyalty score' and 'Intention to switch' in situation 2. Similar result was also found in case of situation 3. Again, a smaller proportion of the respondents (24%) mentioned that they would take an effort to come to a distance to shop at Canadian Superstore (situation

- 3). The overall loyalty of this group to Canadian Superstore was found significantly higher than those, who refused to take an effort to go to Superstore. Same result was found when the test was carried out on ‘Cumulative percentage loyalty score’ and ‘Intention to switch’ in situation 3. Please refer to Appendix 33 for detail analysis.
2. Univariate ANOVA test was conducted between ‘Overall loyalty’ and ‘Most visited grocery store’ to see whether the overall loyalty varied with Canadian Superstore being or not being the most visited store. It was found that the mean overall loyalty was found significantly different across different ‘Most visited store’ and it was significantly higher among those respondents, who visited Canadian Superstore most for grocery shopping. Thus, it can be inferred that the overall loyalty was found dependent on the respondent’s choice of most visited store. Same result was found when the test was run on cumulative percentage loyalty score. Please refer to Appendix 34 for detail analysis.
3. Univariate ANOVA was also conducted to see whether the ‘Overall loyalty’ varied with different ‘Most important reason for choosing Superstore’. The test showed that there was no significant interdependence between these two variables. Similar result was found in case of ‘Cumulative percentage loyalty score’. Please refer to the Appendix 35 for detail analysis.
4. Correlation value was derived to see whether respondents’ ‘Frequency of visit to Canadian Superstore’ was correlated to their ‘Overall loyalty’ to the store. The test of correlation showed the two variables were correlated with each other. It was found that the variables had moderate positive correlation (from Pearson correlation value of 0.602) with each other. Thus, increase in frequency of visit to Canadian Superstore led to higher level of loyalty among respondents. Similar result was found when the test was conducted with ‘Cumulative percentage loyalty score’. However, the strength of

correlation (expressed by the Pearson Correlation value of 0.457) was found comparatively lower with this variable. Detail analysis is given in Appendix 36.

5. Correlation test was also conducted between ‘Share of wallet’ for Canadian Superstore and the respondents’ loyalty rating. Significant positive correlation was again found between these two variables. Thus, the loyalty to Canadian Superstore varied positively with the respondents’ share of wallet of respondents for the store. Same result was found when the correlation test was run with ‘Cumulative percentage loyalty score’. However, as before, the correlation with ‘Overall loyalty’ was found stronger (0.677) than that with the ‘Cumulative percentage loyalty score’ (0.59). Please refer to the Appendix 37 for detail analysis.
6. Similar correlation test was also conducted between ‘Length of relation’ with Canadian Superstore and ‘Overall loyalty’ to determine whether continuity of purchase for a longer period of time led to a higher level of loyalty or not. The test did not reveal any significant correlation between the two variables, though the Pearson correlation value showed negative relationship (-0.157) between the variables. Thus, the loyalty seemed to go down with longer relationship with the store among the respondents of the study. However, this relation was not significant. Similar result (-0.07) was found when the study was conducted with ‘Cumulative percentage loyalty score’. Please refer to the Appendix 38 for detail analysis.
7. The last correlation test on ‘Overall loyalty’ was conducted with ‘No of stores patronized’ in a month to determine whether the overall loyalty of the respondents varied with the number of stores they patronize each month. It was found that the ‘Overall loyalty’ of the respondents had a significantly negative correlation with the ‘No. of stores patronized’. Thus, the overall perceived loyalty went down with increasing number of stores patronized by the respondents. It was also found that on an average, the

respondents patronized around 3 stores in a month for their grocery shopping. The Appendix 39 shows detail analysis.

### **3.4 Applicability of McMullan & Gilmore's (2003) scale in retail grocery industry**

The applicability of the scale was tested by conducting factor analysis on the item scores. As already mentioned, the scale had 28 items to measure each of the 4 different stages in loyalty development process and each item was measured on a 7-point scale. A factor analysis was run to determine whether all 4 different stages of loyalty development were evident among the customers of Superstore. The KMO and Bartlett's test derived a sig. value lower than 0.05 at 95% level of confidence and thus suggested a factor analysis on the data (Please refer to Appendix 40 for detail analysis). The test also derived a moderate correlation value of nearly 0.6 among the items. The component matrix derived 10 factors with eigenvalue over 1, and they all together explained 76% of the variance in the data. Thus, the existence of 4 levels of loyalty development was not clearly evident. Varimax Rotation was specified in order to increase the interpretability of factors. Factors were rotated to maximise the loadings of some of the items and to identify the conceptual meaning of the factors. However, even the rotated component matrix derived 10 underlying factors from the 28 items. Majority of the items did not even have a very high loading value to the components in rotated matrix. Out of the 28 items, only 11 items had loading value around 0.7 or 0.8 to the identified factor in rotated component matrix. There were also some overlapping variables, which did not have acceptable loading (0.5 or above) in any of the 10 factors. Thus it shows that the data generated form the scale did not clearly have any underlying factor, which can be identified as the different levels of loyalty development. This was more clarified when the items under each factor was studies from the rotated matrix. None of the factors included items from a single stage of loyalty. Rather each of them had a mix of items measuring different stages. When the item list under each component was studied closely, no

particular pattern could be identified from the list. The components did not even combine items on the basis of sustainers or vulnerabilities of the loyalty development stages. For example, in component 2 of the factor output, items like 'I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image' and 'Canadian Superstore is a store I can talk about for a long time' coexisted. Please refer to Appendix 42 for detail analysis.

Factor analysis was run again excluding the variables, which had overlapping low loading in more than one factor (Please refer to Appendix 41 for detail analysis). However, the result was not improved much. The test generated 7 factors after rotation, which all together explained around 67% of the variance in the data. Though the item-factor correlation was found much better after exclusion of these variables, the derived factors did not prove any incidence of any of the 4 stages of loyalty development process. Analyzing the items under each factor made it clearer. Again no one factor had a loading of items measuring a particular stage. Each of them had a set of item from very different stages (Please refer to Appendix 42).

For further assurance, four cumulative loyalty score for each stage of the loyalty development process was calculated (by adding the ratings of the statements measuring each stage) for each respondent to find any pattern of loyalty development. In literature, the loyalty development process was suggested to have 4 consecutive levels, which maintained order. Thus, it is assumed that it is not possible for a customer to achieve the conative or action loyalty stage of the process, without achieving intensity of loyalty in previous stages. The cumulative loyalty score calculated for each customer suggested that such order was not very clear in the data. There were customers, who scored only around 40% in cognitive or affective stage, but had a very higher score of around 85% on items measuring action loyalty. This shows an inconsistency with the model and supports the inappropriateness of the scale for this sample.

### **3.5 Measure of reliability**

Though the scale could not identify any of the four stages of loyalty distinctively, reliability test was conducted on the items. Cronbach alpha value was derived to measure reliability of the scale. The test showed that alpha value was not very high (0.66) showing a poor reliability of the scale. Thus the scale was not found very reliable for the industry. Reliability of the factors derived was not calculated any more, as the factor analysis could not give any clear indication of dimensionality of the scale. Please refer to the Appendix 43 for detail information.

### **3.6 Measure of validity**

Statistical test was also conducted to measure the validity of the data. Convergent validity of the scale was measured by deriving the correlation value between the item scores and the ‘Overall loyalty’. To calculate the correlation value between the scale items and ‘Overall loyalty’, the cumulative loyalty score was considered. The statistical test showed significant correlation of the item’s score with ‘Overall Loyalty’ (Please refer to Appendix 44 for detail analysis). However, in absolute terms, the Pearson correlation was not found very high (0.6). In conclusion, the correlation test though indicates positive measure of validity; the previous analysis and the low correlation value did not support the scale as a valid measure of loyalty for grocery industry.

### **3.7 Summary of the findings**

1. Majority of the respondents shopped at either Superstore or Safeway most during last 6 months. However, selection of most visited grocery store was found to be dependent on respondent’s status in Canada. The present study had a high concentration of visa students and immigrants.
2. Majority (more than 95%) of the respondents were split loyal and shopped at a portfolio of stores, rather than going to a single one all the time

3. Share of wallet and average spending at each trip to Canadian Superstore was not found dependent on the respondent's frequency of grocery shopping.
4. Reasonable price and variety of products were found to be the two most important reasons for choosing Canadian Superstore for grocery shopping.
5. Reason for choosing Superstore was found dependent on respondent's ownership of vehicle. Ownership of vehicle was again found dependent on respondent's status in Canada. However, the reason for choosing Superstore did not have any significant relation with respondent's status in Canada.
6. Majority of the respondents expressed positive intention to switch from Canadian Superstore to an alternative, if lower price and/or more convenient location are offered by the alternative. However, it was found that the intention to switch differed significantly across different 'Most visited grocery store' in situation 2, where lower price alternative was made available. Respondents visiting Safeway most was found to be more inclined to switch to alternative, if reasonable price was offered.
7. Overall loyalty towards Superstore was found quite low. However, the overall loyalty was found significantly correlated with the following variables
  - Respondents' intention to switch in different situations.
  - Customers' choice of the 'Most visited grocery store'. (Customers who visited Canadian Superstore most were found to have a significantly higher loyalty than those who did not go to Superstore most.)
  - Frequency of visit to Canadian Superstore (found positive correlation)
  - Share of wallet for Canadian Superstore (found positive correlation)
  - No. of stores patronized in a month for grocery shopping (found negative correlation)

8. The four different stages of loyalty could not be identified distinctively after repetitive factor analysis. Thus the first two hypotheses on distinctive existence of the 4 levels of loyalty were rejected. The third hypothesis on determining the size of each level of loyalty was also rejected, as the four levels could not be identified from the data
9. The scale was not found reliable for retail grocery on the sample comprising of graduate and postgraduate students.
10. The scale item values had a significant correlation with overall loyalty supporting convergent validity of the measure. However, the correlation was not found very high and the scale could not identify any of the 4 levels of customer loyalty development process.

## **4 IMPLICATION AND FUTURE RESEARCH**

### **4.1 Implication and conclusion**

In the literature, it was found that behavioural measures of loyalty are not comprehensive enough to capture the ‘loyalty’ construct most effectively. Thus scholars are reviewing the existing measures of loyalty and working hard to find a comprehensive measure, which encompass both behavioural and attitudinal dimension of loyalty. However, it should be kept in mind that the appropriateness of each dimension is not the same across all industries. The findings in this study revealed that the behavioural dimensions were more relevant and qualified measures of loyalty than attitudinal dimension or a composite measure. When the relationship between overall loyalty and the behavioural dimension was measured, it was again found that the behavioural measures like past purchase behaviour, share of wallet, frequency of visit could measure the loyalty in the same direction showing a high correlation. On the other hand, the composite measure proposed by McMullan and Gilmore (2003) could not identify the levels of loyalty in the sample.

It was also evident from the data that loyalty among grocery shoppers is very rare. Most shoppers distribute their grocery shopping budget among a set of grocery stores. When the respondents were asked about their intention to switch from Superstore, majority of them showed intention to switch, if a competitor offers better price or more convenient location. Even those, who had a quite high proportion of share of wallet devoted to Superstore, did not want to continue purchasing from Superstore. Though overall loyalty was found significantly correlated with respondents’ intention to switch and their share of wallet, very insignificant proportion of the respondents were found highly loyal to superstore and denied to switch even when better alternation is found in terms of price and location. These findings deliver two understanding

1. It is probably not possible to develop a higher level of loyalty among customers in retail grocery industry
2. Even if higher loyalty is not possible to develop, it is evident from the findings that the behavioural measures of loyalty (e.g. share of wallet, intention to switch, frequency of visit) are capable of capturing the ‘loyalty’ construct comprehensively as there is little or no role of the attitudinal dimension to develop loyalty in retail grocery industry.

The literature review revealed that true loyalty is developed through commitment and thus loyalty should be measured by measuring brand commitment. As already mentioned, ESOMAR (European Society of Marketing and Research) suggests that brand commitment should be measured on the basis of 4 factors – customer need, involvement in the category, attraction to alternatives and intensity of ambivalence to change. If we consider the findings of the current study it is clear that none of these factors are present for grocery industry. Lets consider one by one:

1. The customer need is not very clear for grocery industry. When the respondents were asked why they chose Canadian Superstore, they hardly mentioned about quality of the product or service. Rather the reasons were reasonable price and variety of products. When price is one of the needs to be fulfilled, it is hard to develop commitment with one supplier.
2. The involvement with grocery shopping was also not found very high. It should be mentioned that the study did not include any measure for determining the level of involvement. However, if ratings on two items on the scale are considered, some idea might be gained. The items are: “It is important that when choosing a grocery store, I make the right choice from all the options available” and “When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money”. Around 40% of the respondents had a rating of 4 or even lower on a 7-point

scale with 1 labelled as ‘Strongly disagree’ and 7 labelled as ‘Strongly agree’. This indicates that the respondents probably do not prefer to spend a lot of time to evaluate the alternatives available to get the most value out of the money. This indicates a low involvement from the consumer’s side.

3. Attraction to alternatives and intention to switch were highly evident, when the respondents were given different situations. Besides, high attraction to alternatives is also evident from their split loyalty. Majority of the respondents patronize a number of stores each month for grocery shopping. Data showed that 73% of the respondents patronize 3 to 6 stores each month for grocery.

Thus it is evident from the above analysis that brand commitment might not be possible to develop among the customers of grocery stores because of their low involvement and high attraction to alternatives. It also indicates that measuring loyalty from brand commitment might not be the most appropriate approach for this particular industry. The scale proposed by McMullan and Gilmore (2003) takes such an approach. It might not be appropriate to conclude that the scale is not a composite one or an effective one. Rather, it is important to judge the industry’s characteristics first and decide whether such a composite measure is at all needed or not. Literature also suggested that in markets, where there is high switching and low involvement, behavioural measures are found more appropriate to measure loyalty. This was proved in this study as well. However, if one or two players dominate the market, behavioural measure may give wrong indication. But the retail grocery industry in Vancouver is highly fragmented. Thus, such possibilities might also be discarded. To conclude, it is evident that more research needs to be done in different industries to determine the effectiveness of the scale proposed by McMullan and Gilmore (2003). However, it is evident that retail grocery industry has some particular characteristics, which allows behavioural measures to deliver better measure of loyalty.

## **4.2 Limitations of the study**

The present study had a number of limitations. They are listed below:

1. Though the scale was not proved appropriate for the retail grocery industry. It was not properly adopted as well. The scale, developed by the scholars, was initially applied on the customers of a restaurant dining club. When the scale was adopted for this research, it just replaced the word ‘restaurant’ with ‘grocery store’ from the item list and had very limited adaptation. This might be one of the reasons for the scale’s ineffectiveness in this study. When the scale was used once again in a different industry by McMullan (n.d), the item list was thoroughly reviewed for adaptability to the selected industry and extensive qualitative research was conducted before using it in the questionnaire. As an academic project, such extensive work was out of the scope for this research.
2. Another major limitation of the study was its sample. Data was collected on only one store. Thus, the findings might be relevant to the customers of Canadian Superstore only. The sample was also a convenience one, with 100% of them being student. Besides, majority of them are residents of a particular campus. Thus, there might be some kind of biasness in the findings due to this convenience sampling.

## **4.3 Future research**

A number of concerns were raised by this study, which needs to be clarified through future research. They are as follows:

1. It is important to understand now whether ‘true’ loyalty is at all possible to develop among customers of retail grocery. It is also important, at the same time, to define loyalty for retail grocery customers and determine whether loyalty is repeat purchase or any particular attitude towards the store. Studying the factors that drive loyalty might help to resolve this question. The present study gave an indication that split and superficial

loyalty, based on price and convenience, is one of the most evident characteristics of retail grocery industry. However, extensive study on larger samples is necessary to reach this conclusion.

2. It is also important to understand whether attitudinal measure of loyalty is at all needed for all the industries or not. If not, then what particular characteristics the industry should possess to apply attitudinal dimension and a more composite measure of loyalty? Studies should be conducted across different industries to understand the importance of behavioural and attitudinal dimension for loyalty measurement.
3. It is true that the scale was not found appropriate for grocery industry. However, more extensive qualitative research should be conducted for adapting the scale for retail grocery and then apply it again on the customers of more than one grocery store to reach a decision about its applicability in the industry.

However, it is also worth to ask whether any standardized composite measure is possible to develop, which will need minimum adaptation for application across industries. In business world, a measure, which requires extensive research to adapt into an industry, might not be an attractive one to the managers due to higher cost, time and lack of specialized knowledge/skill of corporations to adapt the scale each time.

## APPENDICES

### Appendix 1: The sample scale of loyalty development measurement proposed by McMullan & Gilmore (2003)

The following is a sample of the proposed scale used on the customers of a restaurant-dining plan (The scale was used by kind permission of the author Dr. McMullan)

Pilot loyalty scale

C.1	I understand the features of Restaurant X well enough to evaluate it against other restaurants	1 2 3 4 5 6 7
C.2	It is important that when choosing to eat out, I make the right choice of restaurant	1 2 3 4 5 6 7
A.3	Restaurant X is a restaurant that interests me	1 2 3 4 5 6 7
C.4	When deciding on a restaurant, I am not interested in bargain-seeking	1 2 3 4 5 6 7
C.5	When choosing a restaurant, I compare prices of different restaurants to be sure I get the best value for money	1 2 3 4 5 6 7
C.6	Restaurant X has up-to-date equipment	1 2 3 4 5 6 7
C.7	Restaurant X's facilities are visually appealing	1 2 3 4 5 6 7
A.8	Restaurant X is exactly what I need from a restaurant	1 2 3 4 5 6 7
A.9	Restaurant X as a choice of restaurant has not worked out as well as I thought it would	1 2 3 4 5 6 7
AC.10	If I could do it over again, I'd choose an alternative restaurant to Restaurant X	1 2 3 4 5 6 7
CO.11	I truly have enjoyed dining in Restaurant X	1 2 3 4 5 6 7
A.12	Restaurants should not be expected to give customers individual attention	1 2 3 4 5 6 7
A.13	Restaurant X is a restaurant that I could talk about for a long time	1 2 3 4 5 6 7
A.14	I have a preference for Restaurant X in this locality	1 2 3 4 5 6 7
CO.15	Restaurant X is more than a mere restaurant	1 2 3 4 5 6 7
CO.16	I would try an alternative restaurant if it was 25% less expensive than Restaurant X	1 2 3 4 5 6 7
CO.17	I would try an alternative restaurant if the alternative restaurant offered increased facilities than Restaurant X	1 2 3 4 5 6 7
CO.18	I would change restaurant if the alternative offered increased status	1 2 3 4 5 6 7
CO.19	I would change restaurant if the alternative's staff were more friendly	1 2 3 4 5 6 7
AC.20	When I see a new restaurant somewhat different from the usual, I investigate it	1 2 3 4 5 6 7
AC.21	I usually dine in the same restaurant within a locality	1 2 3 4 5 6 7
A.22	Dining in Restaurant X says a lot about who I am	1 2 3 4 5 6 7
CO.23	I care a lot about Restaurant X	1 2 3 4 5 6 7
CO.24	I consider myself to be highly loyal to Restaurant X	1 2 3 4 5 6 7
CO.25	I would get tired of eating in Restaurant X every time I eat out	1 2 3 4 5 6 7
AC.26	When I go to a restaurant, I feel it is safer to order dishes I am familiar with	1 2 3 4 5 6 7
AC.27	If I like a restaurant, I rarely switch from it just to try something different	1 2 3 4 5 6 7
AC.28	I get bored with buying the same brands even if they are good	1 2 3 4 5 6 7

1 = strongly disagree, 2 = moderately disagree, 3 = disagree, 4 = no opinion, 5 = agree, 6 = moderately agree, 7 = strongly agree. C = cognitive item, A = affective item, CO = conative item, AC = action

## **Appendix 2: Questionnaire**

### **Measuring Loyalty to Canadian Superstore**

#### ***Questionnaire***

Dear Participant,

Good morning/afternoon/evening. Thank you for taking your time to participate in this survey. This survey is part of the SMBA research project at Simon Fraser University, under the supervision of Dr. Gary Mauser.

The study is about grocery shopping at Canadian Superstore. The questionnaire is voluntary, confidential and anonymous. The participants should be post graduate and graduate level students of Simon Fraser University, who have shopped for food items at any outlet of Canadian Superstore in last 60 days for personal consumption. There is no right or wrong answer. Your valuable opinion on this subject would help me to identify the appropriateness of the selective measure used in this study.

I would like to assure you that your opinion will be kept strictly confidential and only aggregate results will be presented in the report. This survey is NOT for any commercial use.

If you have any comments or concerns, you may contact the supervisor of this project, Dr. Gary Mauser ([mauser@sfu.ca](mailto:mauser@sfu.ca)). Completion of this questionnaire will be taken as consent to participate in this study.

I would appreciate if you kindly take a few minutes to fill out this brief questionnaire.

Thank you once again for your time and cooperation.

With regards,

Sutapa Aditya  
MBA Candidate  
Simon Fraser University

**Participant's Eligibility:** Have you been to any outlet of Canadian Superstore in last 60 days to buy any type of food item for your personal consumption?

- Yes (Please Continue)  
 No (Please go to the 'Respondent's Profile' section at the end of this questionnaire in page 4)

Q1. During the past 6 months, how frequently did you go for grocery shopping (buying any kind of food item)?

- Twice a week or more       Once a week       Once in every 2 weeks  
 Once is every 3 weeks       Once a month       Less than once a month

Q2. From which store did you buy most of your grocery in last 6 months?

- Canadian Superstore
- Save on food
- Other grocery store in shopping mall

- Safeway
- Costco
- Other convenience stores

Q3. The following is a list of grocery stores. If you were given \$100, how would you allocate it among these stores to represent your shopping pattern in last 6 months? (Please allocate \$100 as such that the total is 100 when the amounts are added back)

Amount allocated

- Canadian Superstore \_\_\_\_\_
- Safeway \_\_\_\_\_
- Save on food \_\_\_\_\_
- Costco \_\_\_\_\_
- Other grocery store in shopping mall \_\_\_\_\_
- Other convenience stores \_\_\_\_\_

Total: \$100

Q4. When did you last visit any outlet of Canadian Superstore to buy food item for personal consumption?

- In last week
- In last 4 weeks
- In last 2 weeks
- In last 6 weeks
- In last 3 weeks
- In last 8 weeks

Q5. When did you visit Canadian Superstore for the first time? Month/Year \_\_\_\_\_

Q6. Suppose you went for grocery shopping (i.e. for buying any kind of food item, including snack and milk) **10 times**, on an average, in each month during the last 6 months. How many times would you say you went to Canadian Superstore out of this 10 times for buying food items? (Please select the answer that best represents your frequency of grocery shopping at Canadian Superstore)

1	2	3	4	5	6	7	8	9	10
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Q7. On an average, how much money did you spend during the last 6 months on grocery shopping in Canadian Superstore each time you went there? \_\_\_\_\_ (Approx.)

Q8. If you think of grocery shopping in last six months, why did you go to Canadian Superstore? Which reasons are most important to you for selecting this store? (Please tick all applicable and rank only three most important ones)

- |   | Rank  |
|---|-------|
| <input type="checkbox"/> On my way to home/work/school          | _____ |
| <input type="checkbox"/> Reasonable price                       | _____ |
| <input type="checkbox"/> Variety of products                    | _____ |
| <input type="checkbox"/> Close to my home                       | _____ |
| <input type="checkbox"/> Close to bus stop or sky train station | _____ |
| <input type="checkbox"/> Good quality of products               | _____ |
| <input type="checkbox"/> Good service                           | _____ |
| <input type="checkbox"/> Others (Please specify) _____          | _____ |

Q9. The following table lists some statements to measure your attitude towards Canadian Superstore. Please circle the number that expresses your opinion best. (Please **DO NOT** consider Canadian Superstore as a departmental store for the time being and give your opinion considering it as a **grocery store** you visit. Please use the following scale and circle a number against each statement listed.)

Strongly Disagree	Moderately Disagree	Disagree	No Opinion	Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6	7

I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores	1	2	3	4	5	6	7
It is important that when choosing a grocery store, I make the right choice from all the options available	1	2	3	4	5	6	7
Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping	1	2	3	4	5	6	7
When deciding on a grocery store, I am NOT interested in bargain-seeking	1	2	3	4	5	6	7
When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money	1	2	3	4	5	6	7
Canadian Superstore has up-to-date equipment	1	2	3	4	5	6	7
Canadian Superstore's facilities are visually appealing	1	2	3	4	5	6	7
Canadian Superstore is exactly what I need from a grocery store	1	2	3	4	5	6	7
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	1	2	3	4	5	6	7
If I could do it over again, I would choose an alternative grocery store to Canadian Superstore	1	2	3	4	5	6	7
I truly enjoy grocery shopping in Canadian Superstore	1	2	3	4	5	6	7
Grocery stores should NOT be expected to give customers individualized attention	1	2	3	4	5	6	7
Canadian Superstore is a store that I can talk about for a long time	1	2	3	4	5	6	7
I have a preference for Canadian Superstore	1	2	3	4	5	6	7
The Canadian Superstore is more than just a grocery store for me	1	2	3	4	5	6	7
I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore	1	2	3	4	5	6	7
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore	1	2	3	4	5	6	7
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.	1	2	3	4	5	6	7
I would change the grocery store, if the alternative store's staff were more friendly	1	2	3	4	5	6	7
When I see a new grocery store somewhat different form the usual, I investigate it	1	2	3	4	5	6	7
I usually shop at the same grocery store within a locality	1	2	3	4	5	6	7

Grocery shopping in Canadian Superstore says a lot about who I am	1	2	3	4	5	6	7
I care a lot about Canadian Superstore	1	2	3	4	5	6	7
I consider myself to be highly loyal to Canadian Superstore	1	2	3	4	5	6	7
I would get bored of shopping at Canadian Superstore every time I do grocery shopping	1	2	3	4	5	6	7
When I go to a grocery store, I feel it is safer to buy items that I am familiar with	1	2	3	4	5	6	7
If I like a grocery store, I rarely switch from it to try something different	1	2	3	4	5	6	7
I get bored with buying the same brand even if they are good	1	2	3	4	5	6	7

Q10. As a whole, how loyal do you consider yourself to Canadian Superstore?

Very Disloyal							Very Loyal
1	2	3	4	5	6	7	

Q11. Please consider the following situations and give your opinion on your probable actions in each case.

A. If another grocery store opens a new outlet in a more convenient location for you than the current location of Canadian Superstore outlets where you go, and offers the same service and product, would you switch to that new grocery store OR reduce frequency of visiting to Canadian Superstore?

Yes  No

B. If another grocery store offers lower price (through discounts) for their product for a month and offers the same quality of product and service as Canadian Superstore, would you switch to that grocery store offering discount on that particular month?

Yes  No

C. If you shift your home to a different locality and you don't find any Canadian Superstore nearby your new neighbourhood, would you take the effort to come to a distance to buy your grocery from Canadian Superstore even if you have other convenience stores in your locality?

Yes  No

Q12. During the last 6 months, when did you usually go for grocery shopping? Please rank the shopping patterns in terms of their occurrence in your life in a typical month during the last 6 months. (Please tick all applicable and rank the options according to the way they best describe your shopping behaviour)

Rank

- During weekend
- On my way back to home from school/work
- Whenever I find some time

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### ***Respondent's Profile***

In order to best interpret the responses you have provided, we'd like to know a few non-identifying characteristics of respondents. This information will be treated confidentially and will not be used to identify you.

What is your status in Canada?

Citizen                     Permanent Resident  
 Landed Immigrant             On Visa

What is your gender?                 Male                     Female

What is your age?

21 – 25 yrs                     26 – 30 yrs                     31 – 35 yrs  
 36 – 40 yrs                     40 & above

Do you own a vehicle?                 Yes                     No

On an average, how much money did you spend on grocery shopping in a typical month, during the last 6 months period? CAD \_\_\_\_\_ (approx.)

**Thank you once again for your co-operation. Your input is extremely important.**

## **Appendix 3: Code sheet**

Participant's Eligibility: Have you been to any outlet of Canadian Superstore in last 60 days to buy any type of food item for your personal consumption?

1 = Yes

2 = No

Q1. During the past 6 months, how frequently did you go for grocery shopping (buying any kind of food item)?

6 = Twice a week or more

5 = Once a week

4 = Once in every 2 weeks

3 = Once in every 3 weeks

2 = Once a month

1 = Less than once a month

Q2. From which store did you buy most of your grocery in last 6 months?

1 = Canadian Superstore

2 = Safeway

3 = Save on food

4 = Costco

5 = Other grocery store in shopping mall

6 = Other convenience stores

Q3. The following is a list of grocery stores. If you were given \$100, how would you allocate it among these stores to represent your shopping pattern in last 6 months? (Please allocate \$100 as such that the total is 100 when the amounts are added back)

Q3A = Canadian Superstore

Q3B = Safeway

Q3C = Save on food

Q3D = Costco

Q3E = Other grocery store in shopping mall

Q3F = Other convenience stores

Q4. When did you last visit any outlet of Canadian Superstore to buy food item for personal consumption?

6 = In last week

5 = In last 2 weeks

4 = In last 3 weeks

3 = In last 4 weeks

2 = In last 6 weeks

1 = In last 8 weeks

Q8. If you think of grocery shopping in last six months, why did you go to Canadian Superstore? Which reasons are most important to you for selecting this store? (Please tick all applicable and rank only three most important ones)

- 1 = On my way to home/work/school  
 2 = Reasonable price  
 3 = Variety of products  
 4 = Close to my home  
 5 = Close to bus stop or sky train station  
 6 = Good quality of products  
 7 = Good service  
 8 = Location – in a shopping mall  
 9 = bulk products  
 10 = Good sales  
 Others (Please specify) \_\_\_\_\_

Ranking: Q8Rnk1, Q8Rnk2, Q8Rnk3

Q9. The following table lists some statements to measure your attitude towards Canadian Superstore. Please circle the number that expresses your opinion best. (Please **DO NOT** consider Canadian Superstore as a departmental store for the time being and give your opinion considering it as a **grocery store** you visit. Please use the following scale and circle a number against each statement listed.)

Strongly Disagree	Moderately Disagree	Disagree	No Opinion	Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6	7

<b>Q91</b> I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores
<b>Q92</b> It is important that when choosing a grocery store, I make the right choice from all the options available
<b>Q93</b> Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping
<b>Q94</b> When deciding on a grocery store, I am NOT interested in bargain-seeking
<b>Q95</b> When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money
<b>Q96</b> Canadian Superstore has up-to-date equipment
<b>Q97</b> Canadian Superstore's facilities are visually appealing
<b>Q98</b> Canadian Superstore is exactly what I need from a grocery store
<b>Q99</b> Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would
<b>Q910</b> If I could do it over again, I would choose an alternative grocery store to Canadian Superstore
<b>Q911</b> I truly enjoy grocery shopping in Canadian Superstore
<b>Q912</b> Grocery stores should NOT be expected to give customers individualized attention
<b>Q913</b> Canadian Superstore is a store that I can talk about for a long time
<b>Q914</b> I have a preference for Canadian Superstore
<b>Q915</b> The Canadian Superstore is more than just a grocery store for me
<b>Q916</b> I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore
<b>Q917</b> I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore

<b>Q918</b> I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.
<b>Q919</b> I would change the grocery store, if the alternative store's staff were more friendly
<b>Q920</b> When I see a new grocery store somewhat different from the usual, I investigate it
<b>Q921</b> I usually shop at the same grocery store within a locality
<b>Q922</b> Grocery shopping in Canadian Superstore says a lot about who I am
<b>Q923</b> I care a lot about Canadian Superstore
<b>Q924</b> I consider myself to be highly loyal to Canadian Superstore
<b>Q925</b> I would get bored of shopping at Canadian Superstore every time I do grocery shopping
<b>Q926</b> When I go to a grocery store, I feel it is safer to buy items that I am familiar with
<b>Q927</b> If I like a grocery store, I rarely switch from it to try something different
<b>Q928</b> I get bored with buying the same brand even if they are good

Q11. Please consider the following situations and give your opinion on your probable actions in each case.

Q11A. If another grocery store opens a new outlet in a more convenient location for you than the current location of Canadian Superstore outlets where you go, and offers the same service and product, would you switch to that new grocery store OR reduce frequency of visiting to Canadian Superstore?

- 1 = Yes  
2 = No

Q11B. If another grocery store offers lower price (through discounts) for their product for a month and offers the same quality of product and service as Canadian Superstore, would you switch to that grocery store offering discount on that particular month?

- 1 = Yes  
2 = No

Q11C. If you shift your home to a different locality and you don't find any Canadian Superstore nearby your new neighbourhood, would you take the effort to come to a distance to buy your grocery from Canadian Superstore even if you have other convenience stores in your locality?

- 1 = Yes  
2 = No

Q12. During the last 6 months, when did you usually go for grocery shopping? Please rank the shopping patterns in terms of their occurrence in your life in a typical month during the last 6 months. (Please tick all applicable and rank the options according to the way they best describe your shopping behaviour)

- 1= During weekend  
2 = On my way back to home from school/work  
3 = Whenever I find some time

Ranking: Q12Rnk1      Q12Rnk2      Q12Rnk3

### ***Respondent's Profile***

RPA What is your status in Canada?

- 1 = Citizen
- 2 = Permanent Resident
- 3 = Landed Immigrant
- 4 = On Visa

RPB What is your gender?

- 1 = Male
- 2 = Female

RPC What is your age?

- 1 = 21 – 25 yrs
- 2 = 26 – 30 yrs
- 3 = 31 – 35 yrs
- 4 = 36 – 40 yrs
- 5 = 40 & above

RPD Do you own a vehicle?

- 1 = Yes
- 2 = No

## **Appendix 4: Respondents' status in Canada**

**Status in Canada**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Citizen	33	33.0	33.0	33.0
	Permanent Resident	13	13.0	13.0	46.0
	Landed Immigrant	6	6.0	6.0	52.0
	On Visa	48	48.0	48.0	100.0
	Total	100	100.0	100.0	

## **Appendix 5: Gender of the respondents**

**Gender of the respondents**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	43	43.0	43.0	43.0
	Female	57	57.0	57.0	100.0
	Total	100	100.0	100.0	

## **Appendix 6: Age of the respondents**

**Age of the respondents**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21 to 25 years	44	44.0	44.0	44.0
	26 to 30 years	41	41.0	41.0	85.0
	31 to 35 years	10	10.0	10.0	95.0
	36 to 40 years	3	3.0	3.0	98.0
	Above 40 years	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

## **Appendix 7: Ownership of vehicle**

### **Ownership of a vehicle**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	34.0	34.0	34.0
	No	66	66.0	66.0	100.0
	Total	100	100.0	100.0	

## **Appendix 8: Frequency of grocery shopping by respondents**

### **Frequency of grocery shopping during last 6 months**

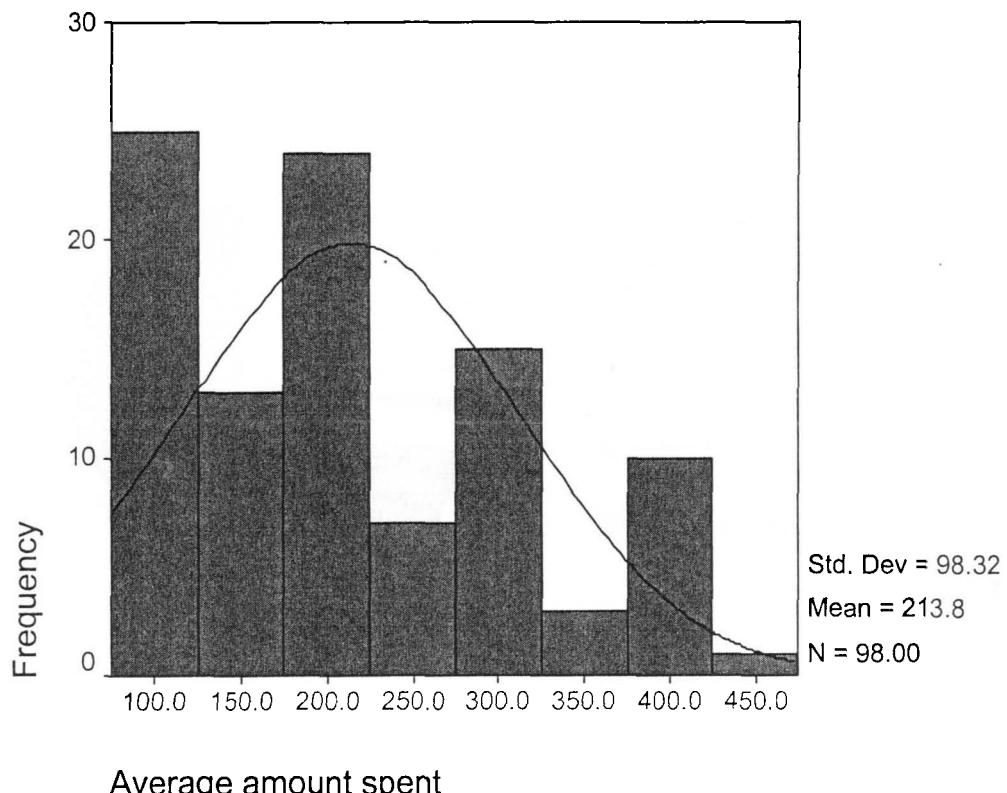
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Twice a week or more	14	14.0	14.0	14.0
	Once a week	53	53.0	53.0	67.0
	Once in every 2 weeks	20	20.0	20.0	87.0
	Once in every 3 weeks	5	5.0	5.0	92.0
	Once a month	7	7.0	7.0	99.0
	Less than once a month	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

## Appendix 9: Average amount spent on grocery shopping

Average amount spent on grocery in a typical month during last 6 months (in CAD)

N	Valid	98
	Missing	2
Mean		213.78
Median		200.00
Skewness		.622
Std. Error of Skewness		.244
Minimum		80
Maximum		450

Average amount spent on grocery in a typical month

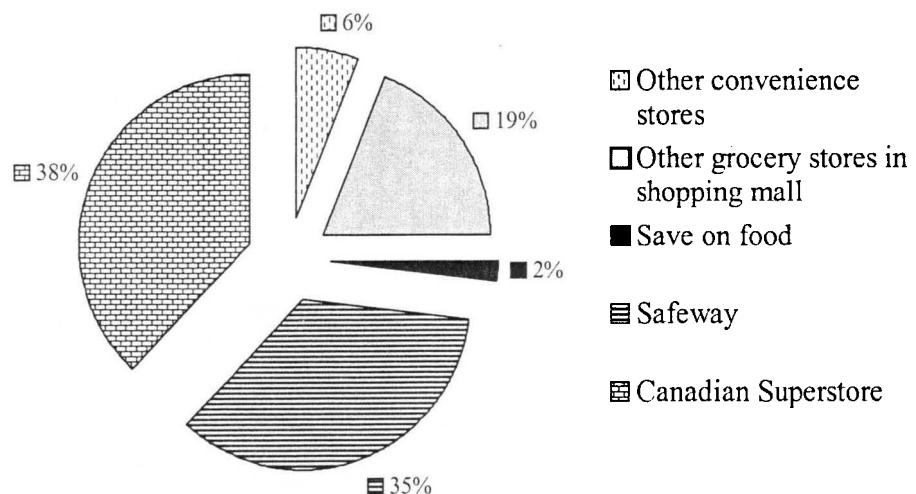


## Appendix 10: Most visited grocery store

### Most visited grocery store during last 6 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other convenience stores	6	6.0	6.0	6.0
	Other grocery stores in shopping mall	19	19.0	19.0	25.0
	Save on food	2	2.0	2.0	27.0
	Safeway	35	35.0	35.0	62.0
	Canadian Superstore	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

### Grocery stores getting the most business



## Appendix 11: Output of cross tabulation on 'Most visited grocery store' and 'Status in Canada'

Ho: The two variables are independent

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Status in Canada * The most visited grocery store in last 6 months	100	100.0%	0	.0%	100	100.0%

### The most visited grocery store in last 6 months \* Status in Canada Cross tabulation

		Status in Canada					Total
		Citizen	Permanent Resident	Landed Immigrant	On Visa		
The most visited grocery store in last 6 months	Canadian Superstore	Count	15	4	1	18	38
		% within The most visited grocery store in last 6 months	39.5%	10.5%	2.6%	47.4%	100.0%
		% within Status in Canada	45.5%	30.8%	16.7%	37.5%	38.0%
		% of Total	15.0%	4.0%	1.0%	18.0%	38.0%
	Safeway	Count	14	5	0	16	35
		% within The most visited grocery store in last 6 months	40.0%	14.3%	.0%	45.7%	100.0%
		% within Status in Canada	42.4%	38.5%	.0%	33.3%	35.0%
		% of Total	14.0%	5.0%	.0%	16.0%	35.0%
	Save of food	Count	2	0	0	0	2

		Status in Canada				Total
		Citizen	Permanent Resident	Landed Immigrant	On Visa	
	% within The most visited grocery store in last 6 months	100.0%	.0%	.0%	.0%	100.0%
	% within Status in Canada	6.1%	.0%	.0%	.0%	2.0%
	% of Total	2.0%	.0%	.0%	.0%	2.0%
Other grocery stores in shopping mall	Count	1	2	5	11	19
	% within The most visited grocery store in last 6 months	5.3%	10.5%	26.3%	57.9%	100.0%
	% within Status in Canada	3.0%	15.4%	83.3%	22.9%	19.0%
	% of Total	1.0%	2.0%	5.0%	11.0%	19.0%
Other convenience stores	Count	1	2	0	3	6
	% within The most visited grocery store in last 6 months	16.7%	33.3%	.0%	50.0%	100.0%
	% within Status in Canada	3.0%	15.4%	.0%	6.3%	6.0%
	% of Total	1.0%	2.0%	.0%	3.0%	6.0%
Total	Count	33	13	6	48	100
	% within The most visited grocery store in last 6 months	33.0%	13.0%	6.0%	48.0%	100.0%
	% within Status in Canada	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	33.0%	13.0%	6.0%	48.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.881(a)	12	.004
Likelihood Ratio	27.800	12	.006
Linear-by-Linear Association	3.473	1	.062
N of Valid Cases	100		

a 14 cells (70.0%) have expected count less than 5. The minimum expected count is .12.

**Interpretation:** As evident from the table above, the sig. value from Pearson Chi Square test that it is below 0.05 at 95% confidence interval. So the null hypothesis of no interaction between the two variables is rejected. Thus the ‘most visited grocery store’ and ‘status in Canada’ are not independent.

### Appendix 12: Respondents’ preferred grocery shopping time

	Most preferred option	Second most preferred option	Third most preferred option
During weekend	52%	20%	28%
On way back from school/work	18%	49%	33%
Whenever time is available	30%	31%	39%
Total	100%	100%	100%

## **Appendix 13: Paired sample t-test on ‘Share of wallet’ of Canadian Superstore and Safeway**

Ho: The mean share of wallet for Canadian Superstore is equal to the mean share of wallet for Safeway

### **Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	32.52	75	24.443	2.822
	Amount allocated to Safeway out of 100 dollar spent on grocery	41.16	75	29.048	3.354

### **Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Amount allocated to Canadian Superstore out of 100 dollar spent on grocery & Amount allocated to Safeway out of 100 dollar spent on grocery	75	-.566	.000

### **Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper		
Pair 1	Amount allocated to Canadian Superstore out of 100 dollar spent on grocery - Amount allocated to Safeway out of 100 dollar spent on grocery	-8.64	47.382	5.471	-19.54	2.26	-1.579	.74 .119

**Interpretation:** As found in the above table, the sig. value at 95% confidence interval is 0.119, which is greater than 0.05. Thus the null of equal mean fails to be rejected.

#### Appendix 14: Respondents' share of wallet for different grocery stores

		Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	Amount allocated to Safeway out of 100 dollar spent on grocery	Amount allocated to Save on food out of 100 dollar spent on grocery	Amount allocated to Costco out of 100 dollar spent on grocery	Amount allocated to other grocery stores in shopping mall out of 100 dollar spent on grocery	Amount allocated to other convenience out of 100 dollar spent on grocery
N	Valid	100	75	25	11	49	34
	Missing	0	25	75	89	51	66
Mean		38.44	41.16	17.68	20.09	31.20	26.09
Median		35.00	30.00	15.00	20.00	30.00	20.00
Minimum		2	5	2	5	5	1
Maximum		100	95	80	40	80	85
Percentiles	25	15.00	15.00	5.00	6.00	10.00	10.00
	50	35.00	30.00	15.00	20.00	30.00	20.00
	75	53.75	70.00	20.00	30.00	45.00	42.50

	Percentage of total respondents spending 80% or more of grocery budget in a month	Percentage of total respondents spending 25% or less of grocery budget in a month
Canadian Superstore	14	40
Safeway	11	34
Save on foods	1	21
Costco	0	7
Other grocery stores in shopping mall	1	23
Other convenience store	2	24

## Appendix 15: Statistical output of ANOVA test conducted between ‘Share of wallet’ of Superstore and ‘Frequency of grocery shopping’

Ho: Mean share of wallet for Superstore across each different frequency of shopping is equal.

### Between-Subjects Factors

		Value Label	N
Frequency of grocery shopping during last 6 months	1	Less than once a month	1
	2	Once a month	7
	3	Once in every 3 weeks	5
	4	Once in every 2 weeks	20
	5	Once a week	53
	6	Twice a week or more	14

### Levene's Test of Equality of Error Variances (a)

Dependent Variable: Amount allocated to Canadian Superstore out of 100 dollar spent on grocery

F	df1	df2	Sig.
1.649	5	94	.155

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.  
a Design: Intercept+Q1

### Tests of Between-Subjects Effects

Dependent Variable: Amount allocated to Canadian Superstore out of 100 dollar spent on grocery

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3317.069(a)	5	663.414	.860	.511
Intercept	25769.582	1	25769.582	33.424	.000
Q1	3317.069	5	663.414	.860	.511
Error	72473.571	94	770.995		
Total	223554.000	100			
Corrected Total	75790.640	99			

a R Squared = .044 (Adjusted R Squared = -.007)

**Interpretation:** As found in the table above, the sig. value from the ANOVA test was found 0.511. At 95% confidence interval level, it is above 0.05. Thus the null hypothesis of equal mean share of wallet of Superstore across different frequency of shopping could not be rejected.

Thus, it can be interpreted that the share of wallet of Superstore is not dependent on frequency of shopping.

## **Appendix16: Length of relation/Continuity of purchase**

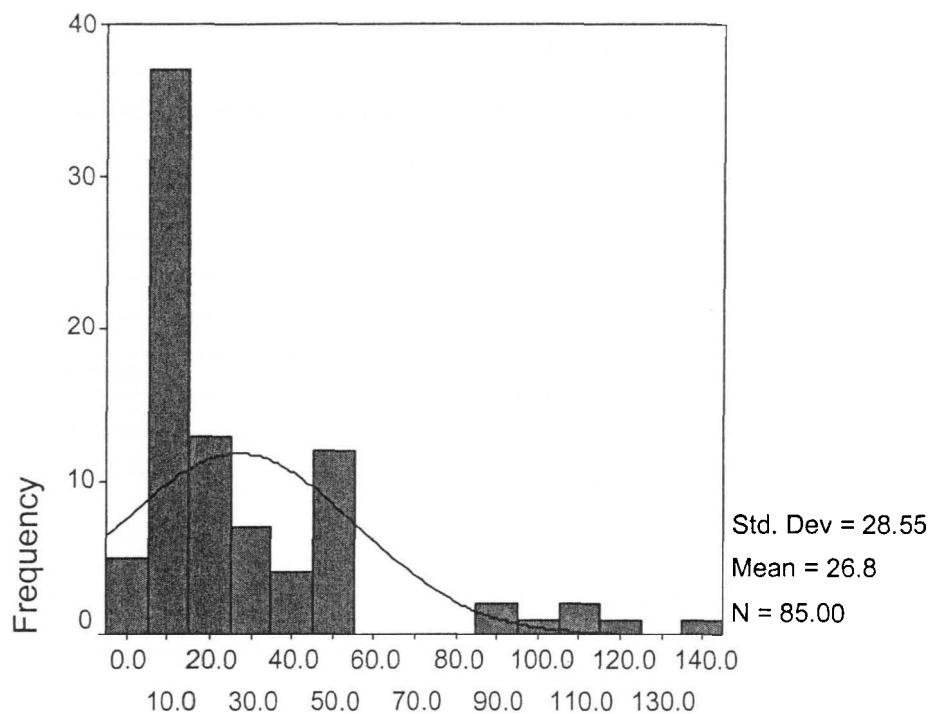
**Time of last visit to Canadian Superstore to buy food item**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	In last 8 weeks	15	15.0	15.0	15.0
	In last 6 weeks	9	9.0	9.0	24.0
	In last 4 weeks	8	8.0	8.0	32.0
	In last 3 weeks	12	12.0	12.0	44.0
	In last 2 weeks	21	21.0	21.0	65.0
	In last week	35	35.0	35.0	100.0
	Total	100	100.0	100.0	

**Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)**

N	Valid	85
	Missing	15
Mean		26.84
Median		15.00
Skewness		2.038
Std. Error of Skewness		.261
Minimum		1
Maximum		137

## Length of relation with Canadian Superstore



Length of relation in months

## Appendix 17: Frequency of visit to Canadian Superstore.

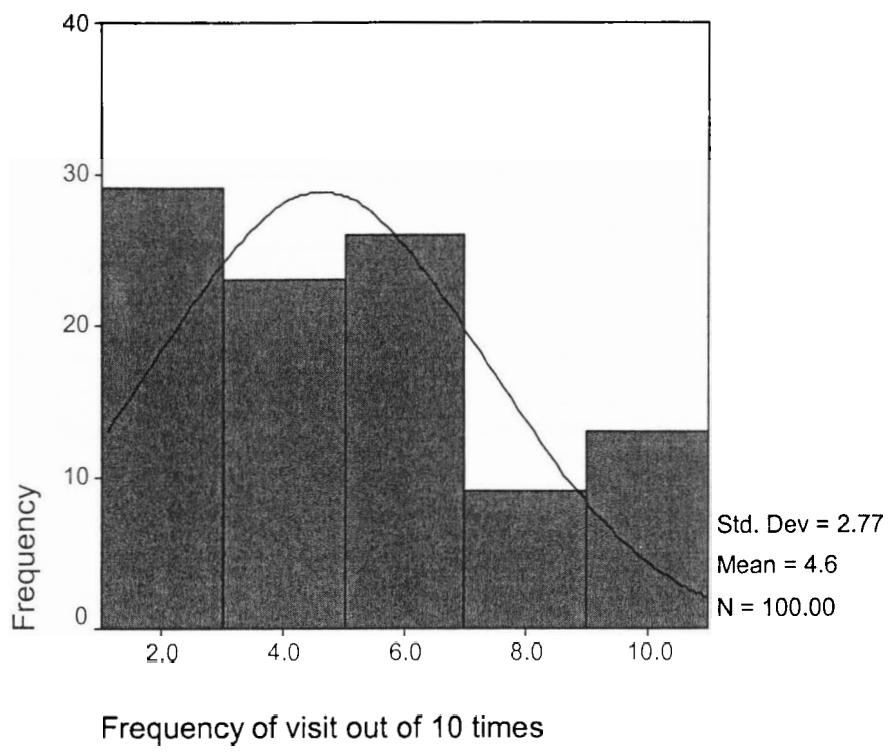
### Frequency of visit to Canadian Superstore to buy grocery in last 6 months

N	Valid	100
	Missing	0
Mean		4.61
Median		4.00
Skewness		.503
Std. Error of Skewness		.241
Minimum		1
Maximum		10

### Frequency of visit to Canadian Superstore to buy grocery in last 6 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 out of 10 times	14	14.0	14.0	14.0
	2 out of 10 times	15	15.0	15.0	29.0
	3 out of 10 times	10	10.0	10.0	39.0
	4 out of 10 times	13	13.0	13.0	52.0
	5 out of 10 times	16	16.0	16.0	68.0
	6 out of 10 times	10	10.0	10.0	78.0
	7 out of 10 times	2	2.0	2.0	80.0
	8 out of 10 times	7	7.0	7.0	87.0
	9 out of 10 times	5	5.0	5.0	92.0
	10 out of 10 times	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

### Frequency of visit to Canadian Superstore



## Appendix 18: One sample t-test conducted on ‘Frequency of visit’ to Canadian Superstore

### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	100	4.61	2.767	.277

H<sub>0</sub>: Average frequency of visit to Canadian superstore is 5 out of 10 times

### One-Sample Test

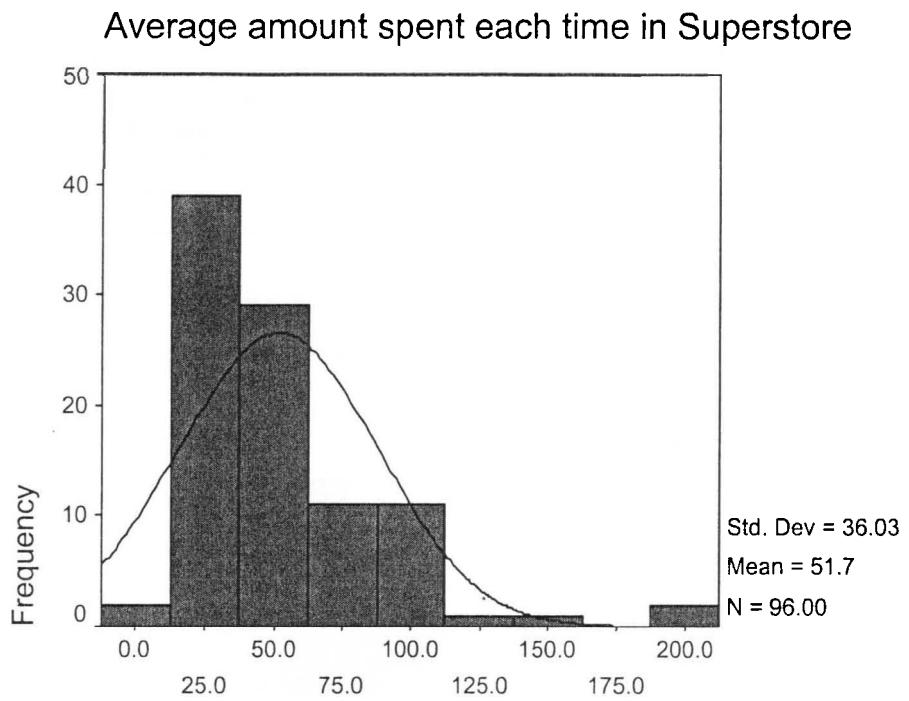
	Test Value = 5					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	-1.410	99	.162	-.39	-.94	.16

**Interpretation:** At 95% level of significance, the sig. value was found to be 0.162, which is greater than 0.05. Thus the null hypothesis of mean equal to 5 out of 10 times could not be rejected. It indicates that the mean frequency of visit was not significantly different than 5 times out of 10.

### One-Sample Test

	Test Value = 6					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	-5.024	99	.000	-1.39	-1.94	-.84

Interpretation: At 95% level of significance, the sig. value was found to be 0, which is less than 0.05. Thus the null of mean equal to 6 out of 10 times could be rejected. It indicates that the mean frequency of visit was significantly different than 6 times out of 10.

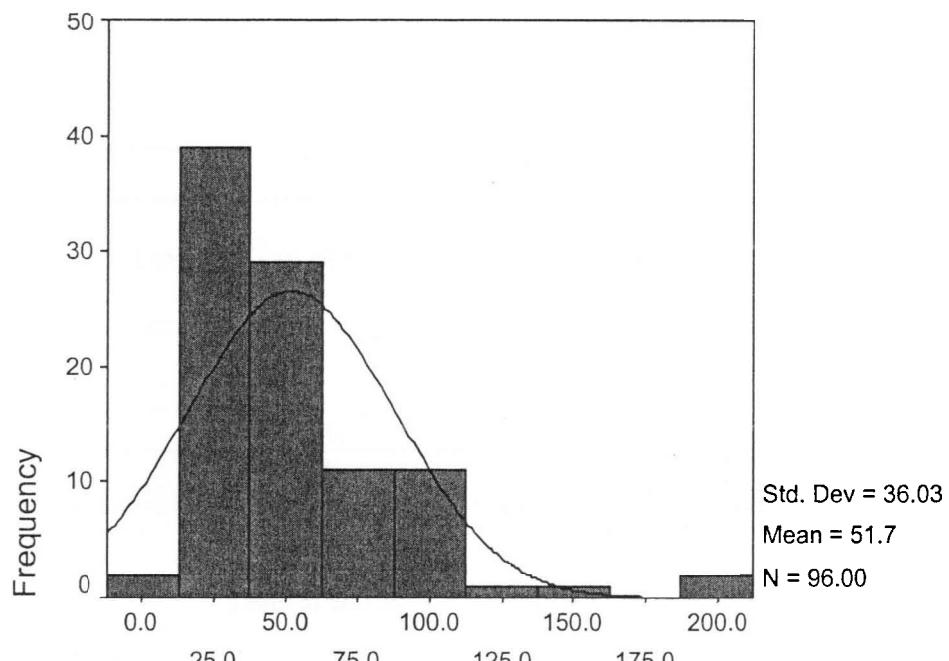


## Appendix 19: Average amount spent at Canadian Superstore at each trip

Average amount spent on grocery at each time in Canadian Superstore during last 6 months

N	Valid	96
	Missing	4
Mean		51.72
Median		40.00
Skewness		1.902
Std. Error of Skewness		.246
Minimum		10
Maximum		200

Average amount spent each time in Superstore



Average amount spent

## **Appendix 20: Statistical output of ANOVA test between ‘Average amount spent each time at Superstore’ and ‘Frequency of grocery shopping’**

Ho: Mean amount spent each time at Canadian Superstore is same across different frequency of grocery shopping

### **Between-Subjects Factors**

		Value Label	N
Frequency of grocery shopping during last 6 months	1	Less than once a month	1
	2	Once a month	7
	3	Once in every 3 weeks	5
	4	Once in every 2 weeks	19
	5	Once a week	50
	6	Twice a week or more	14

### **Levene's Test of Equality of Error Variances (a)**

Dependent Variable: Average amount spent on grocery at each time in Canadian Superstore during last 6 months

F	df1	df2	Sig.
2.813	5	90	.021

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept+Q1

### **Tests of Between-Subjects Effects**

Dependent Variable: Average amount spent on grocery at each time in Canadian Superstore during last 6 months

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10859.105(a)	5	2171.821	1.739	.134
Intercept	49846.902	1	49846.902	39.902	.000
Q1	10859.105	5	2171.821	1.739	.134
Error	112432.301	90	1249.248		
Total	380075.000	96			
Corrected Total	123291.406	95			

a R Squared = .088 (Adjusted R Squared = .037)

**Interpretation:** It is evident from the table above that the sig. value at 95% confidence interval is above 0.05. Thus we fail to reject the null hypothesis of equal mean across different frequency of shopping. Thus it can be inferred that the amount spent each time at superstore is not dependent on or influenced by frequency of grocery shopping.

## Appendix 21: Reason for selecting Canadian Superstore for grocery shopping

Reason	In percentage of response			
	Rank 1	Rank 2	Rank 3	Total
On my way to home/work/school	9	5	4	18
Reasonable price	67	21	6	94
Variety of products	14	52	14	80
Close to my home	3	8	12	23
Close to buss stop or sky train station	3	6	24	33
Good quality of products	-	1	12	13
Good service	-	-	4	4
Location (in shopping mall)	1	-	2	3
Sell bulk products	2	-	-	2
Good sales/discounts	-	-	1	1
No response	1	7	21	
Total	100	100	100	

## **Appendix 22: Cross tabulation output conducted between ‘Reason for selecting Superstore for grocery shopping’ and ‘Status in Canada’**

Cross tabulation A: ‘Most important (rank 1) reason for selecting Superstore for grocery shopping’ and ‘Status in Canada’

Ho: The most important reason for selecting Superstore is not different across respondent’s status in Canada

### **Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 1) for selecting Superstore * Status in Canada	99	99.0%	1	1.0%	100	100.0%

### **Most important reason (rank 1) for selecting Superstore \* Status in Canada Cross tabulation**

Most important reason (rank 1) for selecting Superstore	On my way to home/ work/ school	Count	Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
Most important reason (rank 1) for selecting Superstore	On my way to home/ work/ school	Count	4	1	0	4	9
		% within Most important reason (rank 1) for selecting Superstore	44.4%	11.1%	.0%	44.4%	100.0%
		% within Status in Canada	12.1%	8.3%	.0%	8.3%	9.1%
		% of Total	4.0%	1.0%	.0%	4.0%	9.1%
	Reasonable price	Count	24	10	4	29	67

		Status in Canada				Total
		Citizen	Permanent Resident	Landed Immigrant	On Visa	
	% within Most important reason (rank 1) for selecting Superstore	35.8%	14.9%	6.0%	43.3%	100.0%
	% within Status in Canada	72.7%	83.3%	66.7%	60.4%	67.7%
	% of Total	24.2%	10.1%	4.0%	29.3%	67.7%
Variety of products	Count	3	0	0	11	14
	% within Most important reason (rank 1) for selecting Superstore	21.4%	.0%	.0%	78.6%	100.0%
	% within Status in Canada	9.1%	.0%	.0%	22.9%	14.1%
	% of Total	3.0%	.0%	.0%	11.1%	14.1%
Close to my home	Count	1	0	1	1	3
	% within Most important reason (rank 1) for selecting Superstore	33.3%	.0%	33.3%	33.3%	100.0%
	% within Status in Canada	3.0%	.0%	16.7%	2.1%	3.0%
	% of Total	1.0%	.0%	1.0%	1.0%	3.0%
Close to buss stop/sky train	Count	1	1	1	0	3
	% within Most important reason (rank 1) for selecting Superstore	33.3%	33.3%	33.3%	.0%	100.0%
	% within Status in Canada	3.0%	8.3%	16.7%	.0%	3.0%
	% of Total	1.0%	1.0%	1.0%	.0%	3.0%
Location in mall	Count	0	0	0	1	1

		Status in Canada				Total
		Citizen	Permanent Resident	Landed Immigrant	On Visa	
	% within Most important reason (rank 1) for selecting Superstore	.0%	.0%	.0%	100.0%	100.0%
	% within Status in Canada	.0%	.0%	.0%	2.1%	1.0%
	% of Total	.0%	.0%	.0%	1.0%	1.0%
Sell bulk products	Count	0	0	0	2	2
	% within Most important reason (rank 1) for selecting Superstore	.0%	.0%	.0%	100.0%	100.0%
	% within Status in Canada	.0%	.0%	.0%	4.2%	2.0%
	% of Total	.0%	.0%	.0%	2.0%	2.0%
Total		Count	33	12	6	48
	% within Most important reason (rank 1) for selecting Superstore	33.3%	12.1%	6.1%	48.5%	100.0%
	% within Status in Canada	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	33.3%	12.1%	6.1%	48.5%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.230(a)	18	.268
Likelihood Ratio	22.752	18	.200
Linear-by-Linear Association	2.886	1	.089
N of Valid Cases	99		

a 24 cells (85.7%) have expected count less than 5. The minimum expected count is .06.

**Interpretation:** The Pearson Chi-Square sig. value is greater than 0.05 at 95%

confidence interval. Thus we fail to reject the null hypothesis of independence.

Cross tabulation B: 'Second most important (rank 2) reason for selecting Superstore for grocery shopping' and 'Status in Canada'

Ho: The second most important reason for selecting Superstore is not different across respondent's status in Canada

#### **Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 2) for selecting Superstore * Status in Canada	93	93.0%	7	7.0%	100	100.0%

#### **Most important reason (rank 2) for selecting Superstore \* Status in Canada Cross tabulation**

			Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
Most important reason (rank 2) for selecting Superstore	On my way to home/work/school	Count	2	0	0	3	5
		% within Most important reason (rank 2) for selecting Superstore	40.0%	.0%	.0%	60.0%	100.0%
		% within Status in Canada	6.9%	.0%	.0%	6.4%	5.4%
		% of Total	2.2%	.0%	.0%	3.2%	5.4%
	Reasonable price	Count	6	1	1	13	21

			Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
		% within Most important reason (rank 2) for selecting Superstore	28.6%	4.8%	4.8%	61.9%	100.0%
		% within Status in Canada	20.7%	9.1%	16.7%	27.7%	22.6%
		% of Total	6.5%	1.1%	1.1%	14.0%	22.6%
	Variety of products	Count	17	8	3	24	52
		% within Most important reason (rank 2) for selecting Superstore	32.7%	15.4%	5.8%	46.2%	100.0%
		% within Status in Canada	58.6%	72.7%	50.0%	51.1%	55.9%
		% of Total	18.3%	8.6%	3.2%	25.8%	55.9%
	Close to my home	Count	3	2	2	1	8
		% within Most important reason (rank 2) for selecting Superstore	37.5%	25.0%	25.0%	12.5%	100.0%
		% within Status in Canada	10.3%	18.2%	33.3%	2.1%	8.6%
		% of Total	3.2%	2.2%	2.2%	1.1%	8.6%
	Close to buss stop/sky train	Count	1	0	0	5	6
		% within Most important reason (rank 2) for selecting Superstore	16.7%	.0%	.0%	83.3%	100.0%
		% within Status in Canada	3.4%	.0%	.0%	10.6%	6.5%

		Status in Canada				Total
		Citizen	Permanent Resident	Landed Immigrant	On Visa	
	% of Total	1.1%	.0%	.0%	5.4%	6.5%
Good quality of products	Count	0	0	0	1	1
	% within Most important reason (rank 2) for selecting Superstore	.0%	.0%	.0%	100.0%	100.0%
	% within Status in Canada	.0%	.0%	.0%	2.1%	1.1%
	% of Total	.0%	.0%	.0%	1.1%	1.1%
Total	Count	29	11	6	47	93
	% within Most important reason (rank 2) for selecting Superstore	31.2%	11.8%	6.5%	50.5%	100.0%
	% within Status in Canada	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	31.2%	11.8%	6.5%	50.5%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.109(a)	15	.444
Likelihood Ratio	16.450	15	.353
Linear-by-Linear Association	.030	1	.863
N of Valid Cases	93		

a 19 cells (79.2%) have expected count less than 5. The minimum expected count is .06.

**Interpretation:** The Pearson Chi-Square sig. value is greater than 0.05 at 95% confidence interval. Thus we fail to reject the null hypothesis of independence.

Cross tabulation C: 'Third most important (rank 3) reason for selecting Superstore for grocery shopping' and 'Status in Canada'

Ho: The third most important reason for selecting Superstore is not different across respondent's status in Canada

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 3) for selecting Superstore * Status in Canada	79	79.0%	21	21.0%	100	100.0%

**Most important reason (rank 3) for selecting Superstore \* Status in Canada Cross tabulation**

			Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
Most important reason (rank 3) for selecting Superstore	On my way to home/work/school	Count	1	0	0	3	4
		% within Most important reason (rank 3) for selecting Superstore	25.0%	.0%	.0%	75.0%	100.0%
		% within Status in Canada	5.0%	.0%	.0%	7.1%	5.1%
		% of Total	1.3%	.0%	.0%	3.8%	5.1%
	Reasonable price	Count	2	0	1	3	6
		% within Most important reason (rank 3) for selecting Superstore	33.3%	.0%	16.7%	50.0%	100.0%
		% within Status in Canada	10.0%	.0%	16.7%	7.1%	7.6%
		% of Total	2.5%	.0%	1.3%	3.8%	7.6%
	Variety of products	Count	4	3	2	5	14
		% within Most important reason (rank 3) for selecting Superstore	28.6%	21.4%	14.3%	35.7%	100.0%
		% within Status in Canada	20.0%	27.3%	33.3%	11.9%	17.7%
		% of Total	5.1%	3.8%	2.5%	6.3%	17.7%
	Close to my home	Count	4	1	1	6	12

			Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
	% within Most important reason (rank 3) for selecting Superstore	33.3%	8.3%	8.3%	50.0%	100.0%	
	% within Status in Canada	20.0%	9.1%	16.7%	14.3%	15.2%	
	% of Total	5.1%	1.3%	1.3%	7.6%	15.2%	
	Close to buss stop/sky train	Count	7	5	0	12	24
	% within Most important reason (rank 3) for selecting Superstore	29.2%	20.8%	.0%	50.0%	100.0%	
	% within Status in Canada	35.0%	45.5%	.0%	28.6%	30.4%	
	% of Total	8.9%	6.3%	.0%	15.2%	30.4%	
	Good quality of products	Count	1	2	2	7	12
	% within Most important reason (rank 3) for selecting Superstore	8.3%	16.7%	16.7%	58.3%	100.0%	
	% within Status in Canada	5.0%	18.2%	33.3%	16.7%	15.2%	
	% of Total	1.3%	2.5%	2.5%	8.9%	15.2%	
	Good service	Count	0	0	0	4	4
	% within Most important reason (rank 3) for selecting Superstore	.0%	.0%	.0%	100.0%	100.0%	
	% within Status in Canada	.0%	.0%	.0%	9.5%	5.1%	

			Status in Canada				Total
			Citizen	Permanent Resident	Landed Immigrant	On Visa	
		% of Total	.0%	.0%	.0%	5.1%	5.1%
	Location in mall	Count	0	0	0	2	2
	% within Most important reason (rank 3) for selecting Superstore		.0%	.0%	.0%	100.0%	100.0%
	% within Status in Canada		.0%	.0%	.0%	4.8%	2.5%
	% of Total		.0%	.0%	.0%	2.5%	2.5%
	Good sales/discount	Count	1	0	0	0	1
	% within Most important reason (rank 3) for selecting Superstore	100.0%		.0%	.0%	.0%	100.0%
	% within Status in Canada	5.0%		.0%	.0%	.0%	1.3%
	% of Total	1.3%		.0%	.0%	.0%	1.3%
Total		Count	20	11	6	42	79
	% within Most important reason (rank 3) for selecting Superstore	25.3%		13.9%	7.6%	53.2%	100.0%
	% within Status in Canada	100.0%		100.0%	100.0%	100.0%	100.0%
	% of Total	25.3%		13.9%	7.6%	53.2%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.586(a)	24	.720
Likelihood Ratio	24.876	24	.413
Linear-by-Linear Association	.656	1	.418
N of Valid Cases	79		

a 31 cells (86.1%) have expected count less than 5. The minimum expected count is .08.

**Interpretation:** The Pearson Chi-Square sig. value is greater than 0.05 at 95% confidence interval. Thus we fail to reject the null hypothesis of independence.

### **Appendix 23: Cross tabulation output conducted between ‘Reason for selecting Superstore for grocery shopping’ and ‘Ownership of vehicle’**

Cross tabulation A: ‘Most important (rank 1) reason for selecting Superstore for grocery shopping’ and ‘Ownership of vehicle’

Ho: The most important reason for selecting Superstore is not different across respondent’s ownership of vehicle

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 1) for selecting Superstore * Ownership of a vehicle	99	99.0%	1	1.0%	100	100.0%

**Most important reason (rank 1) for selecting Superstore \* Ownership of a vehicle Cross tabulation**

			Ownership of a vehicle		Total
			Yes	No	
Most important reason (rank 1) for selecting Superstore	On my way to home/work/school	Count	3	6	9
		% within Most important reason (rank 1) for selecting Superstore	33.3%	66.7%	100.0%
		% within Ownership of a vehicle	9.1%	9.1%	9.1%
		% of Total	3.0%	6.1%	9.1%
		Count	26	41	67
	Reasonable price	% within Most important reason (rank 1) for selecting Superstore	38.8%	61.2%	100.0%
		% within Ownership of a vehicle	78.8%	62.1%	67.7%
		% of Total	26.3%	41.4%	67.7%
		Count	1	13	14
	Variety of products	% within Most important reason (rank 1) for selecting Superstore	7.1%	92.9%	100.0%
		% within Ownership of a vehicle	3.0%	19.7%	14.1%
		% of Total	1.0%	13.1%	14.1%
		Count	1	2	3
	Close to my home	% within Most important reason (rank 1) for selecting Superstore	33.3%	66.7%	100.0%
		% within Ownership of a vehicle	3.0%	3.0%	3.0%
		% of Total	1.0%	2.0%	3.0%
		Count	0	3	3
	Close to buss stop/sky train	% within Most important reason (rank 1) for selecting Superstore	.0%	100.0%	100.0%

		Ownership of a vehicle		Total
		Yes	No	
	% within Ownership of a vehicle	.0%	4.5%	3.0%
	% of Total	.0%	3.0%	3.0%
Location in mall	Count	0	1	1
	% within Most important reason (rank 1) for selecting Superstore	.0%	100.0%	100.0%
	% within Ownership of a vehicle	.0%	1.5%	1.0%
	% of Total	.0%	1.0%	1.0%
Sell bulk products	Count	2	0	2
	% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%
	% within Ownership of a vehicle	6.1%	.0%	2.0%
	% of Total	2.0%	.0%	2.0%
Total		Count	33	66
		% within Most important reason (rank 1) for selecting Superstore	33.3%	66.7%
		% within Ownership of a vehicle	100.0%	100.0%
		% of Total	33.3%	66.7%
				100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.224(a)	6	.082
Likelihood Ratio	14.054	6	.029
Linear-by-Linear Association	.011	1	.916
N of Valid Cases	99		

a 10 cells (71.4%) have expected count less than 5. The minimum expected count is .33.

**Interpretation:** The Pearson Chi-Square sig. value is greater than 0.05 at 95% confidence interval. Thus we fail to reject the null hypothesis of independence.

Cross tabulation B: ‘Second most important (rank 2) reason for selecting Superstore for grocery shopping’ and ‘Ownership of vehicle’

Ho: The second most important reason for selecting Superstore is not different across respondent’s ownership of vehicle

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 2) for selecting Superstore * Ownership of a vehicle	93	93.0%	7	7.0%	100	100.0%

**Most important reason (rank 2) for selecting Superstore \* Ownership of a vehicle Cross tabulation**

			Ownership of a vehicle		Total
			Yes	No	
Most important reason (rank 2) for selecting Superstore	On my way to home/work/school	Count	3	2	5
		% within Most important reason (rank 2) for selecting Superstore	60.0%	40.0%	100.0%
		% within Ownership of a vehicle	10.7%	3.1%	5.4%
		% of Total	3.2%	2.2%	5.4%
		Count	4	17	21
	Reasonable price	% within Most important reason (rank 2) for selecting Superstore	19.0%	81.0%	100.0%
		% within Ownership of a vehicle	14.3%	26.2%	22.6%
		% of Total	4.3%	18.3%	22.6%
		Count	12	40	52
		% within Most important reason (rank 2) for selecting Superstore	23.1%	76.9%	100.0%
	Variety of products	% within Ownership of a vehicle	42.9%	61.5%	55.9%
		% of Total	12.9%	43.0%	55.9%
		Count	8	0	8
		% within Most important reason (rank 2) for selecting Superstore	100.0%	.0%	100.0%
		% within Ownership of a vehicle	28.6%	.0%	8.6%
	Close to buss stop/sky train	% of Total	8.6%	.0%	8.6%
		Count	1	5	6
		% within Most important reason (rank 2) for selecting Superstore	16.7%	83.3%	100.0%

		Ownership of a vehicle		Total
		Yes	No	
% within Ownership of a vehicle		3.6%	7.7%	6.5%
% of Total		1.1%	5.4%	6.5%
Good quality of products	Count	0	1	1
	% within Most important reason (rank 2) for selecting Superstore	.0%	100.0%	100.0%
	% within Ownership of a vehicle	.0%	1.5%	1.1%
	% of Total	.0%	1.1%	1.1%
Total	Count	28	65	93
	% within Most important reason (rank 2) for selecting Superstore	30.1%	69.9%	100.0%
	% within Ownership of a vehicle	100.0%	100.0%	100.0%
	% of Total	30.1%	69.9%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.083(a)	5	.000
Likelihood Ratio	25.021	5	.000
Linear-by-Linear Association	.335	1	.562
N of Valid Cases	93		

a 7 cells (58.3%) have expected count less than 5. The minimum expected count is .30.

**Interpretation:** The Pearson Chi-Square sig. value is less than 0.05 at 95% confidence interval. Thus we reject the null hypothesis of independence. Thus it can be inferred that the second most important reason for selecting Superstore varies with ownership of vehicle.

Cross tabulation C: 'Third most important (rank 3) reason for selecting Superstore for grocery shopping' and 'Ownership of vehicle'

Ho: The third most important reason for selecting Superstore is not different across respondent's ownership of vehicle

### **Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 3) for selecting Superstore * Ownership of a vehicle	79	79.0%	21	21.0%	100	100.0%

### **Most important reason (rank 3) for selecting Superstore \* Ownership of a vehicle Cross tabulation**

Most important reason (rank 3) for selecting Superstore	On my way to home/work/school		Ownership of a vehicle		Total
			Yes	No	
Reasonable price	On my way to home/work/school	Count	1	3	4
		% within Most important reason (rank 3) for selecting Superstore	25.0%	75.0%	100.0%
		% within Ownership of a vehicle	5.0%	5.1%	5.1%
		% of Total	1.3%	3.8%	5.1%
		Count	2	4	6
		% within Most important reason (rank 3) for selecting Superstore	33.3%	66.7%	100.0%
		% within Ownership of a vehicle	10.0%	6.8%	7.6%
		% of Total	2.5%	5.1%	7.6%
	Variety of products	Count	9	5	14
		% within Most important reason (rank 3) for selecting Superstore	64.3%	35.7%	100.0%

			Ownership of a vehicle		Total
			Yes	No	
		% within Ownership of a vehicle	45.0%	8.5%	17.7%
		% of Total	11.4%	6.3%	17.7%
Close to my home	Count		3	9	12
	% within Most important reason (rank 3) for selecting Superstore		25.0%	75.0%	100.0%
	% within Ownership of a vehicle		15.0%	15.3%	15.2%
	% of Total		3.8%	11.4%	15.2%
Close to buss stop/sky train	Count		2	22	24
	% within Most important reason (rank 3) for selecting Superstore		8.3%	91.7%	100.0%
	% within Ownership of a vehicle		10.0%	37.3%	30.4%
	% of Total		2.5%	27.8%	30.4%
Good quality of products	Count		2	10	12
	% within Most important reason (rank 3) for selecting Superstore		16.7%	83.3%	100.0%
	% within Ownership of a vehicle		10.0%	16.9%	15.2%
	% of Total		2.5%	12.7%	15.2%
Good service	Count		0	4	4
	% within Most important reason (rank 3) for selecting Superstore		.0%	100.0%	100.0%
	% within Ownership of a vehicle		.0%	6.8%	5.1%
	% of Total		.0%	5.1%	5.1%
Location in mall	Count		0	2	2

			Ownership of a vehicle		Total
			Yes	No	
			.0%	100.0%	
Good sales/discount	% within Most important reason (rank 3) for selecting Superstore		.0%	100.0%	100.0%
			.0%	3.4%	2.5%
		% of Total	.0%	2.5%	2.5%
	Count		1	0	1
	% within Most important reason (rank 3) for selecting Superstore		100.0%	.0%	100.0%
			5.0%	.0%	1.3%
	% of Total		1.3%	.0%	1.3%
		Count	20	59	79
Total	% within Most important reason (rank 3) for selecting Superstore		25.3%	74.7%	100.0%
			100.0%	100.0%	100.0%
	% of Total		25.3%	74.7%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.569(a)	8	.008
Likelihood Ratio	20.930	8	.007
Linear-by-Linear Association	3.845	1	.050
N of Valid Cases	79		

a 13 cells (72.2%) have expected count less than 5. The minimum expected count is .25.

**Interpretation:** The Pearson Chi-Square sig. value is less than 0.05 at 95% confidence interval. Thus we reject the null hypothesis of independence. Thus it can be inferred that the third most important reason for selecting Superstore varies with ownership of vehicle.

## Appendix 24: Cross tabulation output conducted between ‘Ownership of vehicle’ and ‘Status in Canada’

Ho: Respondent’s ownership of vehicle is not different across respondent’s status in Canada

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Status in Canada * Ownership of a vehicle	100	100.0%	0	.0%	100	100.0%

### Status in Canada \* Ownership of a vehicle Cross tabulation

			Ownership of a vehicle		Total
			Yes	No	
Status in Canada	Citizen	Count	21	12	33
		% within Status in Canada	63.6%	36.4%	100.0%
		% within Ownership of a vehicle	61.8%	18.2%	33.0%
		% of Total	21.0%	12.0%	33.0%
	Permanent Resident	Count	4	9	13
		% within Status in Canada	30.8%	69.2%	100.0%
		% within Ownership of a vehicle	11.8%	13.6%	13.0%
		% of Total	4.0%	9.0%	13.0%
	Landed Immigrant	Count	3	3	6
		% within Status in Canada	50.0%	50.0%	100.0%
		% within Ownership of a vehicle	8.8%	4.5%	6.0%
		% of Total	3.0%	3.0%	6.0%
	On Visa	Count	6	42	48
		% within Status in Canada	12.5%	87.5%	100.0%
		% within Ownership of a vehicle	17.6%	63.6%	48.0%
		% of Total	6.0%	42.0%	48.0%

Total	Count	34	66	100
	% within Status in Canada	34.0%	66.0%	100.0%
	% within Ownership of a vehicle	100.0%	100.0%	100.0%
	% of Total	34.0%	66.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.549(a)	3	.000
Likelihood Ratio	24.409	3	.000
Linear-by-Linear Association	20.879	1	.000
N of Valid Cases	100		

a 3 cells (37.5%) have expected count less than 5. The minimum expected count is 2.04.

**Interpretation:** The Pearson Chi-Square sig. value is less than 0.05 at 95% confidence interval. Thus we reject the null hypothesis of independence. Thus it can be inferred that the ownership of vehicle varies with respondent's status in Canada.

## **Appendix 25: Respondents' intention to switch from Canadian Superstore in different situations**

**Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	89	89.0	89.0	89.0
	No	11	11.0	11.0	100.0
	Total	100	100.0	100.0	

**Situation 2: Interest to switch to other store if lower price is offered with same product and/or service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	91	91.0	91.0	91.0
	No	9	9.0	9.0	100.0
	Total	100	100.0	100.0	

**Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	24	24.0	24.0	24.0
	No	76	76.0	76.0	100.0
	Total	100	100.0	100.0	

## **Appendix 26: Cross tabulation between ‘Intention to switch’ in Situation 1 and 3 and ‘Ownership of vehicle’**

Ho: ‘Intention to switch’ in situation 1 and ‘ownership of vehicle’ is independent of each other.

### **Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service * Ownership of a vehicle	100	100.0%	0	.0%	100	100.0%

### **Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service \* Ownership of a vehicle Cross tabulation**

			Ownership of a vehicle		Total
			Yes	No	
Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	Yes	Count	30	59	89
		% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	33.7%	66.3%	100.0%
		% within Ownership of a vehicle	88.2%	89.4%	89.0%
		% of Total	30.0%	59.0%	89.0%
	No	Count	4	7	11
		% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	36.4%	63.6%	100.0%
		% within Ownership of a vehicle	11.8%	10.6%	11.0%

			Ownership of a vehicle		Total
			Yes	No	
		% of Total	4.0%	7.0%	11.0%
Total	Count		34	66	100
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service		34.0%	66.0%	100.0%
	% within Ownership of a vehicle		100.0%	100.0%	100.0%
	% of Total		34.0%	66.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.031(b)	1	.861		
Continuity Correction(a)	.000	1	1.000		
Likelihood Ratio	.030	1	.861		
Fisher's Exact Test				1.000	.552
Linear-by-Linear Association	.030	1	.861		
N of Valid Cases	100				

a Computed only for a 2x2 table

b 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.74.

**Interpretation:** At 95% level of confidence, as the Pearson chi-square sig. value is greater than 0.05, we fail to reject the null hypothesis of independence.

Ho: 'Intention to switch' in situation 3 and 'Ownership of vehicle' is independent of each other.

### Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby • Ownership of a vehicle		100	100.0%	0	.0%	100	100.0%

**Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby \* Ownership of a vehicle Cross tabulation**

			Ownership of a vehicle		Total	
			Yes	No		
Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby	Yes	Count	10	14	24	
		% within Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby	41.7%	58.3%	100.0%	
		% within Ownership of a vehicle	29.4%	21.2%	24.0%	
	No	% of Total	10.0%	14.0%	24.0%	
		Count	24	52	76	
		% within Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby	31.6%	68.4%	100.0%	
		% within Ownership of a vehicle	70.6%	78.8%	76.0%	
		% of Total	24.0%	52.0%	76.0%	
Total		Count	34	66	100	
		% within Situation 3: Interest to continue shopping at Superstore even when no outlet is found nearby	34.0%	66.0%	100.0%	
		% within Ownership of a vehicle	100.0%	100.0%	100.0%	
		% of Total	34.0%	66.0%	100.0%	

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.827(b)	1	.363		
Continuity Correction(a)	.439	1	.508		
Likelihood Ratio	.810	1	.368		
Fisher's Exact Test				.459	.252
Linear-by-Linear Association	.819	1	.366		
N of Valid Cases	100				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.16.

**Interpretation:** At 95% level of confidence, as the Pearson chi-square sig. value is greater than 0.05, we fail to reject the null hypothesis of independence.

## **Appendix 27: Cross tabulation between ‘Intention to switch’ in situation 1 and ‘Most important reason for selecting Superstore’**

Ho: ‘Intention to switch’ in situation 1 and ‘most important reason for selecting Superstore’ is independent of each other.

### **Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Most important reason (rank 1) for selecting Superstore * Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	99	99.0%	1	1.0%	100	100.0%

### **Most important reason (rank 1) for selecting Superstore \* Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service Cross tabulation**

		Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service			
			Yes	No	Total
Most important reason (rank 1) for selecting Superstore	On my way to home/work/school	Count	9	0	9
		% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%
		% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	10.2%	.0%	9.1%

		Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service		
		Yes	No	
		% of Total	.0%	Total
Reasonable price	Count	57	10	67
	% within Most important reason (rank 1) for selecting Superstore	85.1%	14.9%	100.0%
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	64.8%	90.9%	67.7%
	% of Total	57.6%	10.1%	67.7%
Variety of products	Count	13	1	14
	% within Most important reason (rank 1) for selecting Superstore	92.9%	7.1%	100.0%
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	14.8%	9.1%	14.1%
	% of Total	13.1%	1.0%	14.1%
Close to my home	Count	3	0	3
	% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%

		Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service		Total
		Yes	No	
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	3.4%	.0%	3.0%
	% of Total	3.0%	.0%	3.0%
Close to buss stop/sky train	Count	3	0	3
	% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	3.4%	.0%	3.0%
	% of Total	3.0%	.0%	3.0%
Location in mall	Count	1	0	1
	% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	1.1%	.0%	1.0%
	% of Total	1.0%	.0%	1.0%
Sell bulk products	Count	2	0	2

		Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service		Total
		Yes	No	
	% within Most important reason (rank 1) for selecting Superstore	100.0%	.0%	100.0%
	% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	2.3%	.0%	2.0%
	% of Total	2.0%	.0%	2.0%
Total		Count	88	11
		% within Most important reason (rank 1) for selecting Superstore	88.9%	11.1%
		% within Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	100.0%	100.0%
		% of Total	88.9%	11.1%
				100.0%

### Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.460(a)	6	.749
Likelihood Ratio	5.395	6	.494
Linear-by-Linear Association	.661	1	.416
N of Valid Cases	99		

a 10 cells (71.4%) have expected count less than 5. The minimum expected count is .11.

**Interpretation:** At 95% level of confidence, as the Pearson chi-square sig. value is greater than 0.05, we fail to reject the null hypothesis of independence.

**Appendix 28: Cross tabulation between ‘Intention to switch’ in situation 2 and ‘Most visited grocery store’**

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
The most visited grocery store in last 6 months * Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	100	100.0%	0	.0%	100	100.0%

**The most visited grocery store in last 6 months \* Situation 2: Interest to switch to other store if lower price is offered with same product and/or service Cross tabulation**

		Count	Situation 2: Interest to switch to other store if lower price is offered with same product and/or service		
			Yes	No	Total
The most visited grocery store in last 6 months	Canadian Superstore	% within The most visited grocery store in last 6 months	81.6%	18.4%	100.0%
		% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	34.1%	77.8%	38.0%
		% of Total	31.0%	7.0%	38.0%
		Count	34	1	35
		% within The most visited grocery store in last 6 months	97.1%	2.9%	100.0%
	Safeway	Count	34	1	35
		% within The most visited grocery store in last 6 months	97.1%	2.9%	100.0%

		Situation 2: Interest to switch to other store if lower price is offered with same product and/or service		Total
		Yes	No	
% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service		37.4%	11.1%	35.0%
% of Total		34.0%	1.0%	35.0%
Save on food	Count	1	1	2
	% within The most visited grocery store in last 6 months	50.0%	50.0%	100.0%
	% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	1.1%	11.1%	2.0%
	% of Total	1.0%	1.0%	2.0%
Other grocery stores in shopping mall	Count	19	0	19
	% within The most visited grocery store in last 6 months	100.0%	.0%	100.0%
	% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	20.9%	.0%	19.0%
	% of Total	19.0%	.0%	19.0%
Other convenience stores	Count	6	0	6
	% within The most visited grocery store in last 6 months	100.0%	.0%	100.0%

		Situation 2: Interest to switch to other store if lower price is offered with same product and/or service		Total
		Yes	No	
	% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	6.6%	.0%	6.0%
	% of Total	6.0%	.0%	6.0%
Total	Count	91	9	100
	% within The most visited grocery store in last 6 months	91.0%	9.0%	100.0%
	% within Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	100.0%	100.0%	100.0%
	% of Total	91.0%	9.0%	100.0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.308(a)	4	.015
Likelihood Ratio	12.347	4	.015
Linear-by-Linear Association	4.258	1	.039
N of Valid Cases	100		

a 6 cells (60.0%) have expected count less than 5. The minimum expected count is .18.

**Interpretation:** At 95% level of confidence, the Pearson chi-square sig. value is less than 0.05. Thus we reject the null hypothesis of independence.

## Appendix 29: Overall Loyalty towards Canadian Superstore

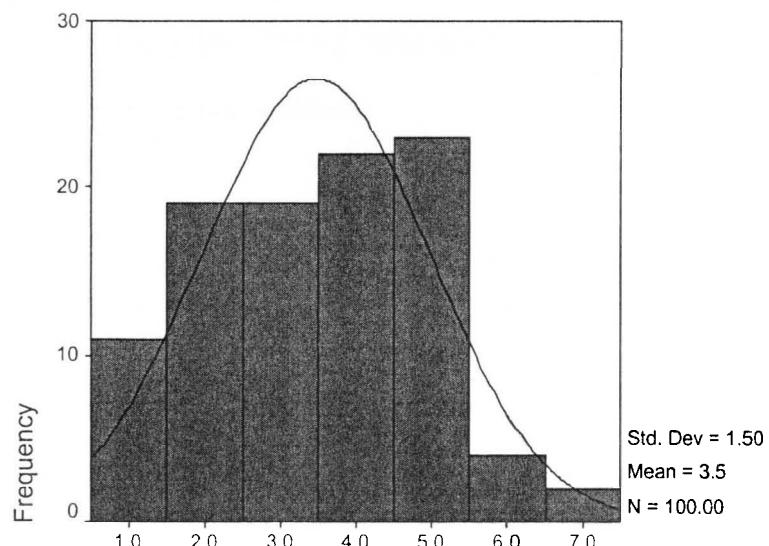
### Statistics

N	Valid	100
	Missing	0
Mean		3.47
Median		4.00
Skewness		.031
Std. Error of Skewness		.241
Minimum		1
Maximum		7

### Overall loyalty towards Canadian Superstore

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	11.0	11.0	11.0
	2	19	19.0	19.0	30.0
	3	19	19.0	19.0	49.0
	4	22	22.0	22.0	71.0
	5	23	23.0	23.0	94.0
	6	4	4.0	4.0	98.0
	7	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

### Overall loyalty towards Canadian Superstore



### Overall loyalty towards Canadian Superstore

## Appendix 30: One sample t-test on ‘Overall loyalty’ towards Superstore to measure the difference between sample means and scale’s midpoint.

$H_0$ : Mean overall loyalty perceived by respondents is = 4

### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Overall loyalty towards Canadian Superstore	100	3.47	1.501	.150

### One-Sample Test

	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Overall loyalty towards Canadian Superstore	-3.532	99	.001	-.53	-.83	-.23

**Interpretation:** The sig. value at 95% level of confidence was found to be below 0.05.

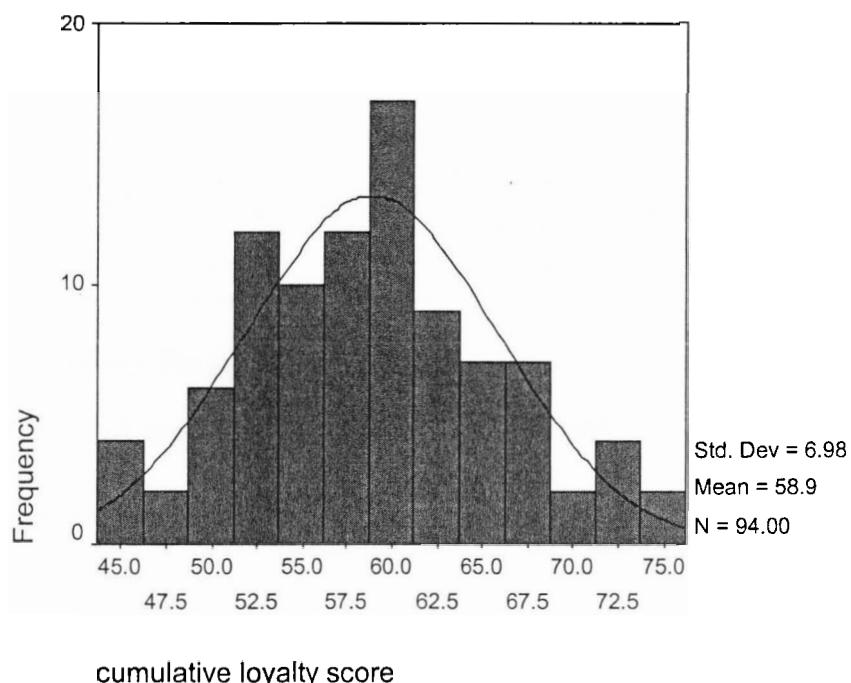
Thus we reject the null hypothesis that the mean is equal to 4.

## Appendix 31: Overall loyalty (Cumulative loyalty score of the respondents)

**Statistics**

N	Valid	94
	Missing	6
Mean		58.8797
Median		59.1837
Std. Deviation		6.98168
Minimum		45.41
Maximum		74.49
Percentiles	25	53.5714
	50	59.1837
	75	62.7551

Cumulative loyalty score in percentage



## Appendix 32: One sample t-test on ‘Overall loyalty’ (Cumulative loyalty score) towards Superstore to measure the difference between sample mean and scale’s midpoint

$H_0$ : The average cumulative percentage score = 50%

### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Cumulative loyalty score in percentage	94	58.88	6.982	.720

### One-Sample Test

	Test Value = 50					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Cumulative loyalty score in percentage	12.331	93	.000	8.88	7.45	10.31

**Interpretation:** The sig. value at 95% level of confidence was found to be below 0.05.

Thus we reject the null hypothesis that the mean is equal to 50%.

### Appendix 33: Independent sample t test carried out on ‘Intention to switch’ in different situations and ‘Overall loyalty’

Ho: The mean overall loyalty is same across intention to switch in situation 1

Ho: The variances across groups are equal

#### Group Statistics

	Situation 1: Interest to switch to other store if more convenient location is offered with same product and/or service	N	Mean	Std. Deviation	Std. Error Mean
Overall loyalty towards Canadian Superstore	Yes	89	3.39	1.512	.160
	No	11	4.09	1.300	.392

#### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Overall loyalty towards Canadian Superstore	Equal variances assumed	.223	.638	-1.463	98	.147	-.70	.477	-1.644	.249
	Equal variances not assumed			-1.647	13.579	.122	-.70	.424	-1.609	.213

**Interpretation:** As the Levene's test of equality derived a sig. value of 0.638, we fail

reject the null hypothesis of equal variance. With equal variance assumed, at 95% level of confidence, the sig. value is derived to be 0.147, which is greater than 0.05. Thus we fail to reject the null hypothesis of equal mean overall loyalty across intention to switch in situation 1.

Ho: The mean overall loyalty is same across intention to switch in situation 2

Ho: The variances across groups are equal

### Group Statistics

	Situation 2: Interest to switch to other store if lower price is offered with same product and/or service	N	Mean	Std. Deviation	Std. Error Mean
Overall loyalty towards Canadian Superstore	Yes	91	3.34	1.408	.148
	No	9	4.78	1.856	.619

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference			
									Lower	Upper	
Overall loyalty towards Canadian Superstore	Equal variances assumed	.009	.925	-2.837	98	.006	-1.44	.507	-2.442	-.432	
	Equal variances not assumed			-2.260	8.934	.050	-1.44	.636	-2.877	.003	

**Interpretation:** As the Levene's test of equality derived a sig. value of 0.925; we fail to reject the null hypothesis of equal variance. With equal variance assumed, at 95% level of confidence, the sig. value is derived to be 0.006, which is less than 0.05. Thus we reject the null hypothesis of equal mean overall loyalty across intention to switch in situation 2

Ho: The mean overall loyalty is same across intention to switch in situation 3

Ho: The variances across groups are equal

### Group Statistics

	Situation 3: Interest to switch to other store if shifted and no Canadian Superstore is found nearby	N	Mean	Std. Deviation	Std. Error Mean
Overall loyalty towards Canadian Superstore	Yes	24	4.00	1.063	.217
	No	76	3.30	1.583	.182

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference				
									Lower	Upper		
Overall loyalty towards Canadian Superstore	Equal variances assumed	7.238	.008	2.015	98	.047	.70	.346	.011	1.384		
	Equal variances not assumed			2.464	57.805	.017	.70	.283	.131	1.264		

**Interpretation:** As the Levene's test of equality derived a sig. value of 0.008; we reject the null hypothesis of equal variance. With equal variance not assumed, at 95% level of confidence, the sig. value is derived to be 0.017, which is less than 0.05. Thus we reject the null hypothesis of equal mean overall loyalty across intention to switch in situation 3

## Appendix 34: Univariate ANOVA test conducted between ‘Overall loyalty’ and ‘Most visited grocery store’

Ho: The mean overall loyalty is same across most visited grocery store.

### Between-Subjects Factors

		Value Label	N
The most visited grocery store in last 6 months	1	Canadian Superstore	38
	2	Safeway	35
	3	Save on food	2
	5	Other grocery stores in shopping mall	19
	6	Other convenience stores	6

### Levene's Test of Equality of Error Variances (a)

Dependent Variable: Overall loyalty towards Canadian Superstore

F	df1	df2	Sig.
1.408	4	95	.237

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept+Q2

### Tests of Between-Subjects Effects

Dependent Variable: Overall loyalty towards Canadian Superstore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	98.007(a)	4	24.502	18.636	.000
Intercept	234.850	1	234.850	178.625	.000
Q2	98.007	4	24.502	18.636	.000
Error	124.903	95	1.315		
Total	1427.000	100			
Corrected Total	222.910	99			

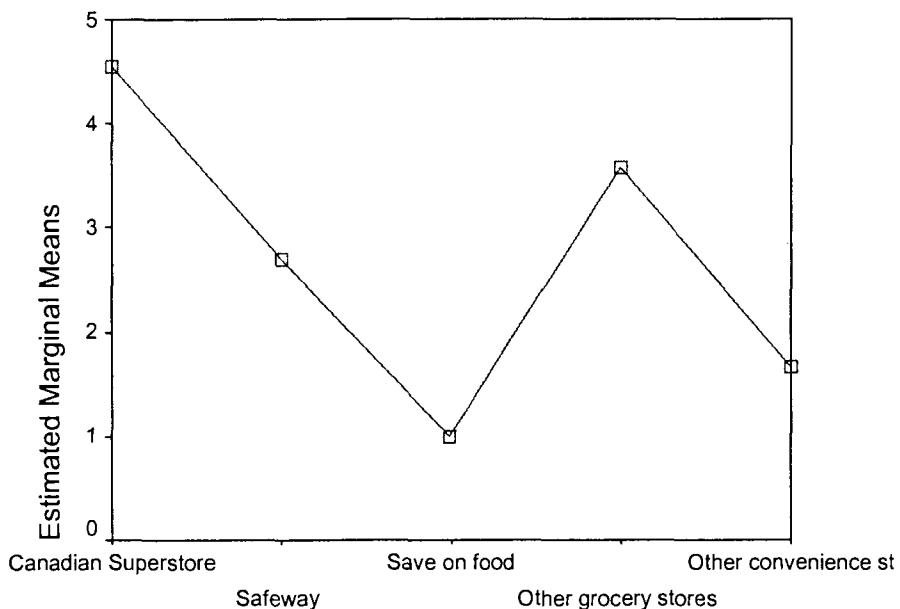
a R Squared = .440 (Adjusted R Squared = .416)

### The most visited grocery store in last 6 months

Dependent Variable: Overall loyalty towards Canadian Superstore

The most visited grocery store in last 6 months	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Canadian Superstore	4.553	.186	4.183	4.922
Safeway	2.686	.194	2.301	3.070
Save on food	1.000	.811	-.610	2.610
Other grocery stores in shopping mall	3.579	.263	3.057	4.101
Other convenience stores	1.667	.468	.737	2.596

Estimated Marginal Means of Overall loyalty



The most visited grocery store in last 6 months

**Interpretation:** at 95% confidence level, the sig. value was found to be 0, which is less than 0.05. Thus we reject the null hypothesis of equal mean overall loyalty across different most visited grocery stores.

## **Appendix 35: Univariate ANOVA test conducted between ‘Overall loyalty’ and ‘Most important reason for choosing Superstore’**

Ho: The mean overall loyalty is same across different reason for choosing Superstore.

### **Between-Subjects Factors**

		Value Label	N
Most important reason (rank 1) for selecting Superstore	1	On my way to home/work/school	9
	2	Reasonable price	67
	3	Variety of products	14
	4	Close to my home	3
	5	Close to buss stop/sky train	3
	8	Location in mall	1
	9	Sell bulk products	2

### **Levene's Test of Equality of Error Variances (a)**

Dependent Variable: Overall loyalty towards Canadian Superstore

F	df1	df2	Sig.
2.469	6	92	.029

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept+Q8RK1

### **Tests of Between-Subjects Effects**

Dependent Variable: Overall loyalty towards Canadian Superstore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13.047(a)	6	2.174	.982	.442
Intercept	236.574	1	236.574	106.847	.000
Q8RK1	13.047	6	2.174	.982	.442
Error	203.701	92	2.214		
Total	1426.000	99			
Corrected Total	216.747	98			

a R Squared = .060 (Adjusted R Squared = -.001)

**Interpretation:** At 95% confidence level, the sig. value was found to be 0.442, which is greater than 0.05. Thus we fail to reject the null hypothesis of equal mean overall loyalty across different reasons for choosing Superstore.

### Appendix 36: Correlation between ‘Frequency of visit to Canadian Superstore’ and ‘Overall loyalty’ to the store.

Ho: there is no correlation between frequency of visit to Canadian Superstore and overall loyalty

#### Descriptive Statistics

	Mean	Std. Deviation	N
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	4.61	2.767	100
Overall loyalty towards Canadian Superstore	3.47	1.501	100

#### Correlations(a)

		Frequency of visit to Canadian Superstore to buy grocery in last 6 months	Overall loyalty towards Canadian Superstore
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	Pearson Correlation	1	.602
	Sig. (2-tailed)	.	.000
	Sum of Squares and Cross-products	757.790	247.330
	Covariance	7.654	2.498
Overall loyalty towards Canadian Superstore	Pearson Correlation	.602	1
	Sig. (2-tailed)	.000	.
	Sum of Squares and Cross-products	247.330	222.910
	Covariance	2.498	2.252

a Listwise N=100

**Interpretation:** at 95% confidence interval, the sig. value derived from the correlation test is 0 and it is less than 0.05. Thus we reject the null hypothesis of no correlation.

Ho: there is no correlation between frequency of visit to Canadian Superstore and cumulative percentage loyalty score

### Descriptive Statistics

	Mean	Std. Deviation	N
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	4.63	2.782	94
Cumulative loyalty score in percentage	58.88	6.982	94

### Correlations(a)

		Frequency of visit to Canadian Superstore to buy grocery in last 6 months	Cumulative loyalty score in percentage
Frequency of visit to Canadian Superstore to buy grocery in last 6 months	Pearson Correlation	1	.457
	Sig. (2-tailed)	.	.000
	Sum of Squares and Cross-products	719.968	825.076
	Covariance	7.742	8.872
Cumulative loyalty score in percentage	Pearson Correlation	.457	1
	Sig. (2-tailed)	.000	.
	Sum of Squares and Cross-products	825.076	4533.173
	Covariance	8.872	48.744

a Listwise N=94

**Interpretation:** at 95% confidence interval, the sig. value derived from the correlation test is 0 and it is less than 0.05. Thus we reject the null hypothesis of no correlation.

## Appendix 37: Correlation between ‘Share of wallet for Canadian Superstore’ and ‘Overall loyalty’ to the store

Ho: there is no correlation between share of wallet for Canadian Superstore and overall loyalty

### Descriptive Statistics

	Mean	Std. Deviation	N
Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	38.44	27.669	100
Overall loyalty towards Canadian Superstore	3.47	1.501	100

### Correlations(a)

		Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	Overall loyalty towards Canadian Superstore
Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	Pearson Correlation	1	.677
	Sig. (2-tailed)	.	.000
	Sum of Squares and Cross-products	75790.640	2782.320
	Covariance	765.562	28.104
Overall loyalty towards Canadian Superstore	Pearson Correlation	.677	1
	Sig. (2-tailed)	.000	.
	Sum of Squares and Cross-products	2782.320	222.910
	Covariance	28.104	2.252

a Listwise N=100

**Interpretation:** at 95% confidence interval, the sig. value derived from the correlation test is 0 and it is less than 0.05. Thus we reject the null hypothesis of no correlation.

Ho: there is no correlation between share of wallet for Canadian Superstore and cumulative percentage loyalty score

### Descriptive Statistics

	Mean	Std. Deviation	N
Cumulative loyalty score in percentage	58.88	6.982	94
Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	38.39	27.962	94

### Correlations(a)

		Cumulative loyalty score in percentage	Amount allocated to Canadian Superstore out of 100 dollar spent on grocery
Cumulative loyalty score in percentage	Pearson Correlation	1	.591
	Sig. (2-tailed)	.	.000
	Sum of Squares and Cross-products	4533.173	10731.144
	Covariance	48.744	115.389
Amount allocated to Canadian Superstore out of 100 dollar spent on grocery	Pearson Correlation	.591	1
	Sig. (2-tailed)	.000	.
	Sum of Squares and Cross-products	10731.144	72716.436
	Covariance	115.389	781.897

a Listwise N=94

**Interpretation:** at 95% confidence interval, the sig. value derived from the correlation test is 0 and it is less than 0.05. Thus we reject the null hypothesis of no correlation.

## Appendix 38: Correlation between ‘Length of relation with Canadian Superstore’ and ‘Overall loyalty’ to the store.

Ho: there is no correlation between length of relation with Canadian Superstore and overall loyalty

### Descriptive Statistics

	Mean	Std. Deviation	N
Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)	26.84	28.551	85
Overall loyalty towards Canadian Superstore	3.31	1.520	85

### Correlations(a)

		Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)	Overall loyalty towards Canadian Superstore
Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)	Pearson Correlation	1	.158
	Sig. (2-tailed)	.	.147
	Sum of Squares and Cross-products	68475.694	-577.718
	Covariance	815.187	-6.878
Overall loyalty towards Canadian Superstore	Pearson Correlation	-.158	1
	Sig. (2-tailed)	.147	.
	Sum of Squares and Cross-products	-577.718	194.047
	Covariance	-6.878	2.310

a Listwise N=85

**Interpretation:** at 95% confidence interval, the sig. value derived form the correlation test is .147 and it is greater than 0.05. Thus we fail to reject the null hypothesis of no correlation.

Ho: there is no correlation between length of relation with Canadian Superstore and cumulative percentage loyalty score

### Descriptive Statistics

	Mean	Std. Deviation	N
Cumulative loyalty score in percentage	58.82	6.993	81
Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)	26.46	28.070	81

### Correlations(a)

		Cumulative loyalty score in percentage	Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)
Cumulative loyalty score in percentage	Pearson Correlation	1	-.070
	Sig. (2-tailed)	.	.532
	Sum of Squares and Cross-products	3912.554	-1105.360
	Covariance	48.907	-13.817
Length of relation with Canadian Superstore in months (calculated from the time of first visit to Canadian Superstore)	Pearson Correlation	-.070	1
	Sig. (2-tailed)	.532	.
	Sum of Squares and Cross-products	-1105.360	63036.099
	Covariance	-13.817	787.951

a Listwise N=81

**Interpretation:** at 95% confidence interval, the sig. value derived form the correlation test is 0.532 and it is greater than 0.05. Thus we fail to reject the null hypothesis of no correlation.

## **Appendix 39: Correlation between ‘No. of patronized stores’ and ‘Overall loyalty’ to the store.**

### **Descriptive Statistics**

	Mean	Std. Deviation	N
No. of store patronized in a month	2.95	.847	94
Cumulative loyalty score in percentage	58.88	6.982	94

### **Correlations(a)**

		No. of store patronized in a month	Cumulative loyalty score in percentage
No. of store patronized in a month	Pearson Correlation	1	-.183
	Sig. (2-tailed)	.	.078
	Sum of Squares and Cross-products	66.734	-100.499
	Covariance	.718	-1.081
Cumulative loyalty score in percentage	Pearson Correlation	-.183	1
	Sig. (2-tailed)	.078	.
	Sum of Squares and Cross-products	-100.499	4533.173
	Covariance	-1.081	48.744

a Listwise N=94

## Appendix 40: Factor analysis output with all 28 item from the scale

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.579
Bartlett's Test of Sphericity	Approx. Chi-Square	1368.319
	df	378
	Sig.	.000

### Communalities

	Initial	Extraction
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores	1.000	.735
It is important that when choosing a grocery store, I make the right choice from all the options available	1.000	.840
Canadian Superstore is a grocery store that interests me/l consider for me for grocery shopping	1.000	.732
When deciding on a grocery store, I am NOT interested in bargain-seeking	1.000	.773
When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money	1.000	.789
Canadian Superstore has up-to-date equipment	1.000	.789
Canadian Superstore's facilities are visually appealing	1.000	.816
Canadian Superstore is exactly what I need from a grocery store	1.000	.716
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	1.000	.807
If I could do it over again, I would choose an alternative grocery store to Canadian Superstore	1.000	.873
I truly enjoy grocery shopping in Canadian Superstore	1.000	.807
Grocery stores should NOT be expected to give customers individualized attention	1.000	.810
Canadian Superstore is a store that I can talk about for a long time	1.000	.673
I have a preference for Canadian Superstore	1.000	.782
The Canadian Superstore is more than just a grocery store for me	1.000	.730
I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore	1.000	.771
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore	1.000	.772
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.	1.000	.669
I would change the grocery store, if the alternative store's staff were more friendly	1.000	.757

When I see a new grocery store somewhat different from the usual, I investigate it	1.000	.661
I usually shop at the same grocery store within a locality	1.000	.724
Grocery shopping in Canadian Superstore says a lot about who I am	1.000	.677
I care a lot about Canadian Superstore	1.000	.788
I consider myself to be highly loyal to Canadian Superstore	1.000	.753
I would get bored of shopping at Canadian Superstore every time I do grocery shopping	1.000	.734
When I go to a grocery store, I feel it is safer to buy items that I am familiar with	1.000	.791
If I like a grocery store, I rarely switch from it to try something different	1.000	.772
I get bored with buying the same brand even if they are good	1.000	.770

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.264	18.801	18.801	5.264	18.801	18.801
2	3.224	11.515	30.317	3.224	11.515	30.317
3	2.551	9.110	39.426	2.551	9.110	39.426
4	2.072	7.401	46.828	2.072	7.401	46.828
5	1.803	6.440	53.268	1.803	6.440	53.268
6	1.574	5.620	58.888	1.574	5.620	58.888
7	1.364	4.870	63.757	1.364	4.870	63.757
8	1.287	4.596	68.354	1.287	4.596	68.354
9	1.144	4.087	72.441	1.144	4.087	72.441
10	1.028	3.672	76.113	1.028	3.672	76.113
11	.900	3.215	79.328			
12	.745	2.662	81.990			
13	.648	2.314	84.304			
14	.630	2.250	86.554			
15	.605	2.160	88.714			
16	.489	1.746	90.460			
17	.427	1.527	91.986			
18	.369	1.319	93.305			
19	.336	1.200	94.505			
20	.284	1.015	95.521			
21	.263	.939	96.459			
22	.246	.880	97.339			
23	.197	.704	98.044			
24	.157	.559	98.603			
25	.141	.505	99.108			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
26	.106	.380	99.487			
27	.077	.275	99.762			
28	.067	.238	100.000			

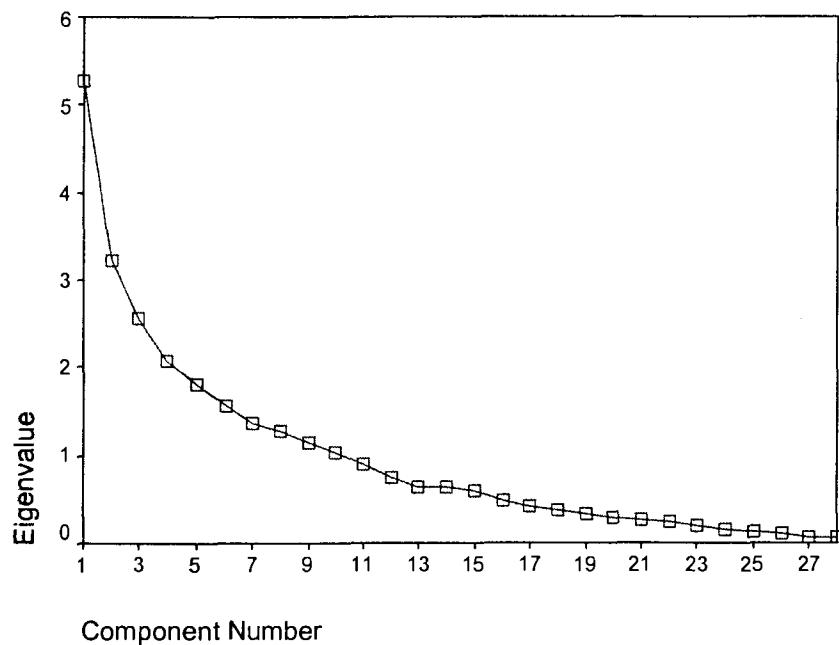
Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.835	13.698	13.698
2	2.532	9.044	22.742
3	2.308	8.244	30.986
4	2.104	7.515	38.501
5	2.012	7.186	45.687
6	1.859	6.638	52.325
7	1.757	6.276	58.601
8	1.757	6.275	64.877
9	1.754	6.265	71.142
10	1.392	4.971	76.113
11			
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28			

Extraction Method: Principal Component Analysis.

## Scree Plot



**Component Matrix(a)**

	Component									
	1	2	3	4	5	6	7	8	9	10
I have a preference for Canadian Superstore	.807									
I truly enjoy grocery shopping in Canadian Superstore	.742									
I consider myself to be highly loyal to Canadian Superstore	.707									
The Canadian Superstore is more than just a grocery store for me	.697									
Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping	.683									
Canadian Superstore is exactly what I need from a grocery store	.634				.401					
I care a lot about Canadian Superstore	.611									

	Component									
	1	2	3	4	5	6	7	8	9	10
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	-.599	.460								
If I could do it over again, I would choose an alternative grocery store to Canadian Superstore	-.538	.525								
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.		.667								
When I see a new grocery store somewhat different from the usual, I investigate it		.631								
Grocery shopping in Canadian Superstore says a lot about who I am		.572								
I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore .			.645							
If I like a grocery store, I rarely switch from it to try something different			.553	.499						
When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money	.459	.456	.495							
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores			.487							
Canadian Superstore is a store that I can talk about for a long time		.401	.464							
I get bored with buying the same brand even if they are good				-.626						
I would get bored of shopping at Canadian Superstore every time I do grocery shopping				-.532						

	Component									
	1	2	3	4	5	6	7	8	9	10
I would change the grocery store, if the alternative store's staff were more friendly				.463						
Canadian Superstore has up-to-date equipment					.643				.423	
Canadian Superstore's facilities are visually appealing	.441				.529					
I usually shop at the same grocery store within a locality					.514			.483		
When I go to a grocery store, I feel it is safer to buy items that I am familiar with						.714				
When deciding on a grocery store, I am NOT interested in bargain-seeking			.416				.616			
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore					-.437			.522		
It is important that when choosing a grocery store, I make the right choice from all the options available						.419			.522	
Grocery stores should NOT be expected to give customers individualized attention										.521

Extraction Method: Principal Component Analysis.  
a 10 components extracted.

### Rotated Component Matrix(a)

	Component									
	1	2	3	4	5	6	7	8	9	10
If I could do it over again, I would choose an alternative grocery store to Canadian Superstore	-.869									
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	-.844									
I have a preference for Canadian Superstore	.713									
Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping	.591		.479							
I consider myself to be highly loyal to Canadian Superstore	.517					.494				
I care a lot about Canadian Superstore	.495					.459				
Grocery shopping in Canadian Superstore says a lot about who I am		.769								
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.		.560					.403			
When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money		.552	.478							
When I see a new grocery store somewhat different from the usual, I investigate it		.517				.497				
Canadian Superstore is a store that I can talk about for a long time		.490	.438							
I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore			.821							

	Component									
	1	2	3	4	5	6	7	8	9	10
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores			.723							
Canadian Superstore's facilities are visually appealing				.838						
Canadian Superstore has up-to-date equipment				.624						
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore		.538		-.558						
I get bored with buying the same brand even if they are good					.813					
I would get bored of shopping at Canadian Superstore every time I do grocery shopping					.731					
Canadian Superstore is exactly what I need from a grocery store	.427				.468					
When I go to a grocery store, I feel it is safer to buy items that I am familiar with						.815				
I usually shop at the same grocery store within a locality							-.773			
I would change the grocery store, if the alternative store's staff were more friendly							.670			
Grocery stores should NOT be expected to give customers individualized attention								.857		
I truly enjoy grocery shopping in Canadian Superstore	.414			.403				.506		
The Canadian Superstore is more than just a grocery store for me								.466		
When deciding on a grocery store, I am NOT interested in bargain-seeking									.796	

	Component									
	1	2	3	4	5	6	7	8	9	10
If I like a grocery store, I rarely switch from it to try something different									.618	
It is important that when choosing a grocery store, I make the right choice from all the options available										.863

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.  
a Rotation converged in 22 iterations.

### Component Transformation Matrix

Component	1	2	3	4	5	6	7	8	9	10
1	.740	.226	.257	.354	-.166	.152	.110	.353	-.072	.132
2	-.315	.711	-.020	.017	.216	.445	.333	-.040	.084	.174
3	-.169	.077	.754	-.157	-.105	-.058	-.074	-.236	-.534	.104
4	-.384	-.093	.122	.147	-.784	.015	.190	.199	.306	.154
5	-.287	.076	.156	.723	.214	-.053	-.547	.041	.127	-.022
6	.079	-.408	-.013	-.065	.012	.687	-.269	-.202	.062	.483
7	-.001	-.175	.537	-.250	.396	-.072	.121	.266	.609	.027
8	.109	.428	-.008	-.463	-.269	.064	-.660	.117	.209	-.149
9	.173	.205	-.075	.010	-.021	-.513	-.031	-.423	.243	.648
10	-.217	-.025	-.175	-.158	.158	-.169	-.117	.688	-.340	.491

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

## Appendix 41: Factor analysis output after excluding the overlapping items

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.565
Bartlett's Test of Sphericity	Approx. Chi-Square	584.520
	df	190
	Sig.	.000

### Communalities

	Initial	Extraction
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores	1.000	.792
It is important that when choosing a grocery store, I make the right choice from all the options available	1.000	.606
Canadian Superstore is a grocery store that interests me/l consider for me for grocery shopping	1.000	.708
When deciding on a grocery store, I am NOT interested in bargain-seeking	1.000	.646
Canadian Superstore's facilities are visually appealing	1.000	.742
Canadian Superstore is exactly what I need from a grocery store	1.000	.738
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	1.000	.607
Grocery stores should NOT be expected to give customers individualized attention	1.000	.554
Canadian Superstore is a store that I can talk about for a long time	1.000	.672
I have a preference for Canadian Superstore	1.000	.764
The Canadian Superstore is more than just a grocery store for me	1.000	.595
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore	1.000	.716
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.	1.000	.622
When I see a new grocery store somewhat different form the usual, I investigate it	1.000	.587
I usually shop at the same grocery store within a locality	1.000	.482
Grocery shopping in Canadian Superstore says a lot about who I am	1.000	.699
I care a lot about Canadian Superstore	1.000	.604
When I go to a grocery store, I feel it is safer to buy items that I am familiar with	1.000	.795

		Initial	Extraction
If I like a grocery store, I rarely switch from it to try something different		1.000	.712
I get bored with buying the same brand even if they are good		1.000	.762

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.611	18.053	18.053	3.611	18.053	18.053
2	2.558	12.792	30.846	2.558	12.792	30.846
3	1.929	9.647	40.493	1.929	9.647	40.493
4	1.587	7.933	48.425	1.587	7.933	48.425
5	1.352	6.759	55.184	1.352	6.759	55.184
6	1.210	6.052	61.236	1.210	6.052	61.236
7	1.155	5.775	67.011	1.155	5.775	67.011
8	.991	4.955	71.966			
9	.872	4.358	76.324			
10	.754	3.771	80.096			
11	.690	3.450	83.545			
12	.602	3.011	86.556			
13	.581	2.904	89.460			
14	.448	2.239	91.699			
15	.411	2.054	93.753			
16	.351	1.756	95.509			
17	.295	1.476	96.985			
18	.244	1.219	98.204			
19	.190	.951	99.155			
20	.169	.845	100.000			

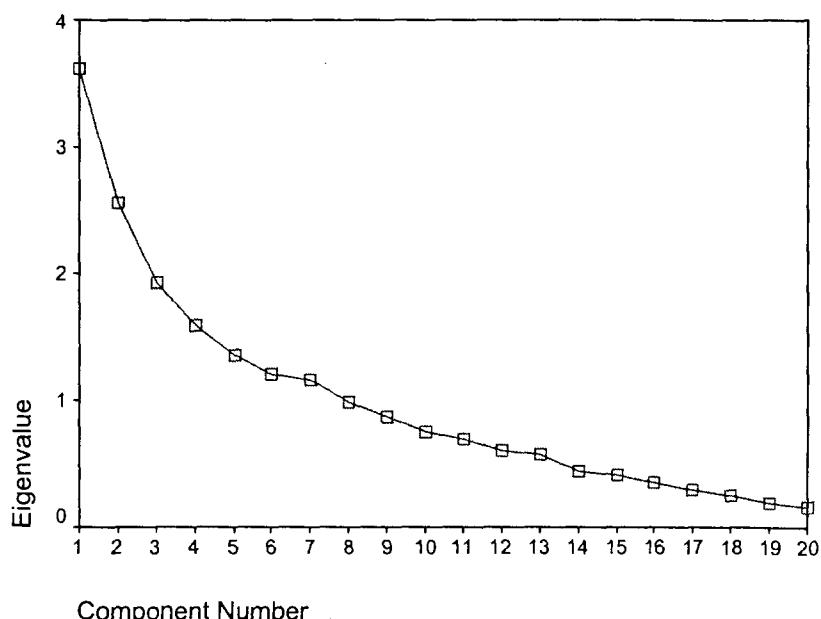
Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.039	15.195	15.195
2	2.315	11.577	26.773
3	1.869	9.347	36.119
4	1.695	8.477	44.596
5	1.606	8.030	52.626
6	1.451	7.254	59.880
7	1.426	7.131	67.011
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Extraction Method: Principal Component Analysis.

### Scree Plot



### Component Matrix(a)

	Component						
	1	2	3	4	5	6	7
I have a preference for Canadian Superstore	.794						
The Canadian Superstore is more than just a grocery store for me	.742						
Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping	.664						
Canadian Superstore is exactly what I need from a grocery store	.663						
I care a lot about Canadian Superstore	.611	.434					
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	-.594						
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.		.733					
Grocery shopping in Canadian Superstore says a lot about who I am		.615					
Canadian Superstore is a store that I can talk about for a long time		.542		-.446			
If I like a grocery store, I rarely switch from it to try something different			-.577	.527			
When I see a new grocery store somewhat different form the usual, I investigate it		.509	.562				
When deciding on a grocery store, I am NOT interested in bargain-seeking			-.544				

Grocery stores should NOT be expected to give customers individualized attention				-.421				
When I go to a grocery store, I feel it is safer to buy items that I am familiar with					.622			-.419
It is important that when choosing a grocery store, I make the right choice from all the options available				.405	.465			
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore						-.758		
I get bored with buying the same brand even if they are good					-.465	.477		.437
Canadian Superstore's facilities are visually appealing	.458						.620	
I usually shop at the same grocery store within a locality							.498	
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores								.539

Extraction Method: Principal Component Analysis.

a 7 components extracted.

### Rotated Component Matrix(a)

	Component						
	1	2	3	4	5	6	7
I have a preference for Canadian Superstore	.841						
Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping	.698						
Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would	-.651						
The Canadian Superstore is more than just a grocery store for me	.643						
I care a lot about Canadian Superstore	.564						
I usually shop at the same grocery store within a locality	-.491						
Grocery shopping in Canadian Superstore says a lot about who I am		.757					
I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.		.687					
When I see a new grocery store somewhat different from the usual, I investigate it		.613		-.410			
If I like a grocery store, I rarely switch from it to try something different			.756				
When deciding on a grocery store, I am NOT interested in bargain-seeking			.716				
Grocery stores should NOT be expected to give customers individualized attention				.698			

	Component						
	1	2	3	4	5	6	7
Canadian Superstore is exactly what I need from a grocery store				.667			
When I go to a grocery store, I feel it is safer to buy items that I am familiar with			.436	-.580			
I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores					.843		
It is important that when choosing a grocery store, I make the right choice from all the options available					.578		
Canadian Superstore is a store that I can talk about for a long time					-.561		
Canadian Superstore's facilities are visually appealing						.766	
I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore		.449				-.597	
I get bored with buying the same brand even if they are good							-.842

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 15 iterations.

### Component Transformation Matrix

Component	1	2	3	4	5	6	7
1	.867	.172	.045	.317	.178	.263	.124
2	-.071	.832	.433	-.235	-.209	.087	-.095
3	.048	.352	-.671	-.458	.454	-.060	.062
4	-.226	-.076	.443	-.093	.579	.149	.617
5	.062	-.291	.171	-.448	.172	.622	-.516
6	-.376	.183	-.355	.416	-.136	.693	.163
7	-.212	.177	.092	.502	.578	-.174	-.547

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

## Appendix 42: Component item list

### Complete list of 28 items from the scale

Item 1 I understand the features of Canadian Superstore well enough to evaluate it against other grocery stores
Item 2 It is important that when choosing a grocery store, I make the right choice from all the options available
Item 3 Canadian Superstore is a grocery store that interests me/I consider for me for grocery shopping
Item 4 When deciding on a grocery store, I am NOT interested in bargain-seeking
Item 5 When choosing a grocery store, I compare prices of different grocery stores to be sure I get the best value for money
Item 6 Canadian Superstore has up-to-date equipment
Item 7 Canadian Superstore's facilities are visually appealing
Item 8 Canadian Superstore is exactly what I need from a grocery store
Item 9 Canadian Superstore, as a choice of grocery stores, has NOT worked out as well as I thought it would
Item 10 If I could do it over again, I would choose an alternative grocery store to Canadian Superstore
Item 11 I truly enjoy grocery shopping in Canadian Superstore
Item 12 Grocery stores should NOT be expected to give customers individualized attention
Item 13 Canadian Superstore is a store that I can talk about for a long time
Item 14 I have a preference for Canadian Superstore
Item 15 The Canadian Superstore is more than just a grocery store for me
Item 16 I would try an alternate grocery store if it was 25% less expensive than Canadian Superstore
Item 17 I would try an alternative grocery store if the alternative store offered better facilities than Canadian Superstore
Item 18 I would change the grocery store, if the alternative store offered increased status for me/ suits more with my self-image.
Item 19 I would change the grocery store, if the alternative store's staff were more friendly
Item 20 When I see a new grocery store somewhat different form the usual, I investigate it
Item 21 I usually shop at the same grocery store within a locality
Item 22 Grocery shopping in Canadian Superstore says a lot about who I am
Item 23 I care a lot about Canadian Superstore
Item 24 I consider myself to be highly loyal to Canadian Superstore
Item 25 I would get bored of shopping at Canadian Superstore every time I do grocery shopping

Item 26 When I go to a grocery store, I feel it is safer to buy items that I am familiar with
Item 27 If I like a grocery store, I rarely switch from it to try something different
Item 28 I get bored with buying the same brand even if they are good

**List of component and their items from factor analysis run on all 28 items (The level that is measured by each item is mentioned in the parenthesis)**

Component 1	Item 9 (Affective loyalty), Item 10 (Action loyalty), Item 14 (Affective loyalty), Item 3 (Affective loyalty), Item 23 (Conative loyalty), Item 24 (Conative loyalty)
Component 2	Item 22 (Affective loyalty), Item 20 (Action loyalty), Item 13 (Affective loyalty), Item 5 (Cognitive loyalty), Item 18 (Conative loyalty)
Component 3	Item 1 (Cognitive loyalty), Item 16 (Conative loyalty)
Component 4	Item 6 (Cognitive loyalty), Item 7 (Cognitive loyalty), Item 17 (Conative loyalty)
Component 5	Item 8 (Affective loyalty), Item 28 (Action loyalty), Item 25 (Conative loyalty)
Component 6	Item 26 (Action loyalty)
Component 7	Item 21 (Action loyalty), Item 19 (Conative loyalty)
Component 8	Item 12 (Affective loyalty), Item 11 (Conative loyalty), Item 15 (Conative loyalty)
Component 9	Item 27 (Affective loyalty), Item 4 (Cognitive loyalty)
Component 10	Item 2 (Cognitive loyalty)

**List of component and their items from factor analysis run after excluding the overlapping items (The level that is measured by each item is mentioned in the parenthesis)**

Component 1	Item 9 (Affective loyalty), Item 14 (Affective loyalty), Item 3 (Affective loyalty), Item 23 (Conative loyalty), Item 15 (Conative loyalty), Item 8 (Affective loyalty)
Component 2	Item 22 (Affective loyalty), Item 13 (Affective loyalty), Item 18 (Conative loyalty)
Component 3	Item 27 (Affective loyalty), Item 4 (Cognitive loyalty), Item 12 (Affective loyalty), Item 20 (Action loyalty)
Component 4	Item 26 (Action loyalty), Item 2 (Cognitive loyalty)
Component 5	Item 17 (Conative loyalty), Item 28 (Action loyalty)
Component 6	Item 21 (Action loyalty), Item 7 (Cognitive loyalty)
Component 7	Item 1 (Cognitive loyalty)

## **Appendix 43: Measure of reliability**

R E L I A B I L I T Y    A N A L Y S I S    -    S C A L E    (A L P H A)

N of Cases = 94.0

Inter-item Covariances Variance	Mean	Minimum	Maximum	Range	Max/Min
.2343	.1493	-1.1445	1.8836	3.0280	-1.6458

Inter-item Correlations Variance	Mean	Minimum	Maximum	Range	Max/Min
.0459	.0602	-.5295	.7955	1.3250	-1.5026

Reliability Coefficients 28 items

Alpha = .6636 Standardized item alpha = .6419

## **Appendix 44: Correlation between overall loyalty and cumulative loyalty score.**

### **Descriptive Statistics**

	Mean	Std. Deviation	N
Cumulative loyalty score	115.4043	13.68408	94
Overall loyalty towards Canadian Superstore	3.51	1.501	94

### **Correlations (a)**

		Cumulative loyalty score	Overall loyalty towards Canadian Superstore
Cumulative loyalty score	Pearson Correlation	1	.606
	Sig. (2-tailed)	.	.000
Overall loyalty towards Canadian Superstore	Pearson Correlation	.606	1
	Sig. (2-tailed)	.000	.

a Listwise N=94

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