

## The Importance of Supermarket Attributes in Supermarket Choice among University Students

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### Abstract

*The purpose of this research was to examine the attributes students use when evaluating a supermarket from which to buy. Students are the biggest spenders when it comes to technology, and food and groceries. The students' spending power also exceeds those of their parents. As supermarkets face competition, an understanding of the supermarket attributes students seek when selecting a supermarket would give them a competitive advantage. This requires that supermarkets understand the attributes students consider when making a choice of a supermarket. A survey was conducted among 284 students. Convenience sampling method was adopted for the study. Statistical analysis included the descriptive stats, factor analysis, t-test and the ANOVA. The findings of the study revealed that majority of students buy from Pick 'n Pay followed by Shoprite. They buy groceries once per month and buy some products from one supermarket and also buy other products from another supermarket. The most important attribute students consider when choosing a supermarket is cleanliness of the supermarket, followed by ease of locating the merchandise and value for money. The study also found that attributes most important to students differed across gender, age and level of study.*

**Keywords:** students; attributes; supermarket; store choice

### 1. Introduction

The number of students registered at the higher education institutions (HEI) in South Africa (SA) has been on the rise. There are currently over 900 000 students registered at HEI compared to less than 500 000 over the past decades (Department of Higher Education and Training, 2013). The SA government plans to increase student admission to 1.5 million by 2030, which will increase student intake from 16 percent to 23 percent. As students leave home for HEI, they reside at university and non-university residences. As a result, they buy different kinds of products during their stay at the university. Supermarkets are some of the retail stores that benefit from the student market since students buy food and groceries from the supermarkets.

There has been growing interest among businesses that now regard students as the prospective and lucrative market with which to form a long-term marketing relationship (Jenkinson, 2000). The young consumers, in general, are the most attractive market segments and have become the new target market for advertisers and marketers as a result of their increasing buying power (Koutras, 2006). The youth, consisting of those between the ages of 15 to 35, constitute over 50 percent of the SA total population (Statistics South Africa, 2013). Their spending power is overtaking those of their parents and their spending money has increased over the GDP growth rate (Koutras 2006). This study will focus on students of different age groups but starting from 18 years of age since according to (Bevan-Dye, Garnett & De Klerk, 2009), students range within the 18 to 24 years age group. According to the recent Student Village's annual student spend survey, (Student Village, 2014), students spend an average of R3768 per month and a combined spend of R6.1bn and R8.4bn on technology and food and groceries, respectively. Like any business, supermarkets cannot ignore the student market. This requires them to understand why students buy, and which factors influence their choice of a supermarket, so as to target them accordingly.

Since students, as youth, are an important market for various products, it is important for supermarkets to understand why they shop. Young consumers are considered as a specialised global market segment for variety of goods and services (Moschis & Moore, 1979) and are the major target market for the retail industry (Yi, Chan & Poom, 2012:6). The behavior of young consumers differs from those of older generational cohort (Twenge & Campbell, 2008).

Whilst many research papers have been published on youth and students in general (Bevan-Dye et al., 2012; Koutras, 2006), no such papers have focused on attributes considered by students when evaluating supermarkets. Existing research has focused on social media consumption, advertising credibility across media channels (Jordaan,

Ehlers & Grove, 2011, cellphone consumption (Koutras, 2006), materialism and status consumption (Bevan-Dye et al., 2012), cross-cultural differences (Lynton, April & Asluridge, 2012 ) shopping styles (Mandlazi, Dhurup & Mafini, 2013), and influence of colour (Muller, 2011). This is despite the fact that students spend over R8bn on food and groceries yearly (Student Village, 2014).

## **2. The Literature Review**

This section reviews the literature on the supermarket industry in South Africa, store choice and the supermarket attributes and the demographic factors.

### **2.1 The supermarket industry in South Africa**

The food retailing market in SA is worth R220bn (Naidoo, 2011). According to Gauteng Province Treasury (2012), the major industry players in South Africa (SA) include Pick 'n Pay Holdings Ltd, Shoprite Holdings Ltd, Spar Group Ltd, Woolworths Holdings Ltd and Massmart Holdings Ltd. In the 2012 Global Powers of Retailing report the country's top five retailers were ranked in the global top 250 retailers. Shoprite was ranked 92nd in the retail sales rank, Massmart (126th), Pick 'n Pay ranked (133rd), Spar (179th) and Woolworths (222nd). In SA, Shoprite is the leading supermarket group and is perceived as the cheapest in the market (PWC, 2012).

Supermarkets have the largest share of SA food retailing industry, accounting for 55.6 percent of industry values (ThomasWhiteInternational, 2011) There is no consensus as to the market share of each of the major supermarkets, however, Shoprite is believed to have a 34 percent, Pick 'n Pay, 33 percent, Spar 26 percent and Woolworths 8.8 percent (Sasfin Securities, 2009). The rivalry among the big supermarkets in SA has intensified, exacerbated by the entry of Walmart (PWC, 2012), and the increasing number of informal food retailers (ThomasWhiteInternational, 2011). Over the years, the big supermarkets have increased their number of stores and total retail space, expanding locally and internationally (Heijden & Vink, 2010).

The supermarket industry has been strained due to rising living costs and increasing electricity prices. The industry has been favoured by the growth in the number of black consumers into the middle- and upper-income groups. Consumer spending power has also been bolstered by the availability of consumer credit. However, income disparities have forced retailers to position their brands against specific income groups, leading to various sub-brands targeting different consumer segments of the market (PWC, 2012).

### **2.2 Store choice**

The importance of store attributes in supermarket selection has been widely published. As supermarkets face competition from local and international players, they have to find ways to attract and keep consumers to their stores. Supermarkets must focus on the attributes that are important to their target market, and must improve the existing supermarket attributes to attract and keep shoppers (Nguyen, Nguyen & Barrett, 2007). Store image is one way a supermarket can differentiate itself from its competitors, since consumers use store image as evaluative criteria for store selection (Visser, Preez & Noordwyk, 2006). Existing studies have found there is a relationship between store image attributes and store choice (Baker, Grewal & Levy, 1992; Jantan & Kamaruddin, 1999; Moye, 1998; Swoboda, Berg & Meierer, 2009; Tripathi & Sinha, 2008; Visser et al., 2006).

Store attributes include all the attributes of a store as perceived by the consumer through their experience of the store (Omar, 1999), and are part of the overall image of the store (Bloemer & Ruyter 1998). Consumers evaluate group of stores on a set of attributes and patronise the best stores, depending on their individual preferences (Tripathi & Sinha, 2008). This requires that supermarkets understand what consumers are looking for when choosing a supermarket, and position themselves on such attributes important to consumers (Steinhofer, 2005).

According to Engel et al. (1995), the store choice behavior is a comparison process whereby consumers evaluate various store attributes in terms of an overall perception of store image, leading to consumers selecting or not selecting a particular store. How closely the store attributes and consumer perception store attributes match, determine if the consumers will select a store (Hernant, 2009). Although store image has been defined from various perspectives, Matineau (1958) defined it as, "the way in which a store is defined in a shopper's mind, partly by its functional qualities and partly by its psychological attributes". According to Jantan and Kamarudin (1999), consumers form images of various stores based on the perceptions of attributes they consider important. This in turn determines the store from which consumers will shop; hence, many studies have found close relationship between store image attributes and store choice

### 2.2.1 Supermarket attributes

The selection of a supermarket involves a comparison of available alternative supermarkets across a range of store attributes. Store attributes are the underlying components of store choice dimensions such as merchandise and service (Ghosh, Tripathi & Kumar, 2010) and are important for consumers to decide where to shop (Moye, 1998). Consumers also differ in their rating of the most important attributes since what is important to one consumer might not be important to another (Moye, 1998:6). Existing studies on store attributes have yielded a number of attributes (Alhemoud, 2008; Arnold, Oum & Tigert, 1983; Heller & McTaggart, 2004; Ness, Gorton & Kuznesof, 2002; Oghojafor, Ladipo & Nwagwu, 2012; Steinhofner, 2005; Watkins, 1974). Studies have also differed on their findings of the most important attributes for supermarket selection.

Watkins (1974) studied attributes considered by consumers in the selection of a supermarket. The study found that price, cleanliness and quality were the most important attributes consumers consider in selecting a supermarket. The store layout, services, fast checkout and special prices were some of the less important attributes. In another study, Arnold, Oum & Tigert, (1983) found location, price, assortment, fast checkout, friendly and courteous service, and pleasant atmosphere were the most important attributes for store choice.

Tigert (1983) found location and convenience to be the most important attributes, followed by price and courteous services. Similarly, Heller & McTaggart (2004) found cleanliness of the store, low prices and friendly employees to be the top most important attributes of an average consumer. Cleanliness was also found to be among the top three most important attributes after convenient hours of operation by Steinhofner (2005). Another study investigating supermarket attributes found quality of merchandise, fairness of price and range of merchandise selection as important attributes for consumers. The friendliness of staff, variety of merchandise and fast checkout were also considered important (Alhemoud, 2008).

Store attributes differ for different types of stores, which imply that businesses must understand those attributes that will influence consumer behavior towards their stores. Hansen and Deustcher (1977-78) conducted research on store choice attributes of the department stores and the grocery shops. The findings revealed that the department stores were more concerned about quality of merchandise, ease of shopping process and post-transaction satisfaction, while the grocery store consumers were concerned about merchandise mix, cleanliness of the store and ease of shopping process.

Supermarkets are expected to provide a wide range of quality and variety as a means to appeal to consumers (Terblance & Boshoff, 2004). Consumers expect quality from the variety of products within a supermarket. Freshness and cleanliness, and price and quality were also found to be the important attributes for consumers (Ali, Kapoor & Moorthy, 2010). Neven, Reardon, Chege and Wang (2006) found lower price and the variety of merchandise as the most important attributes to shoppers at supermarkets.

### 2.2.2 The supermarket attributes and demographic factors – age, gender and level of education

The demographic factors of consumers have an impact on how consumers evaluate the stores. Youth, and students in particular, are believed to exhibit different consumer behaviour compared to consumers in different age groups (Joyce & Lamert, 1996; Larson & Steinhofner, 2005). Ness, Gorton and Kuznesof (2002) investigated the store attributes of student shoppers and found that students place more importance on value for money, low prices and special offers. Students also attach more importance on convenience of location and payment methods, with product quality, well-known brands and own-label products featuring in mid-range of average scores. Youth were found to rate quality as the most important store attributes (Potluri, Pool III & Tatinbekovna, 2009).

According to Prasad and Arasari (2011), the store attributes are influenced by the demographic factors of consumers such as age, gender, education, occupation, income and family size. However, Gunaseelan and Chitra (2014) found that age, education, occupation, family size and income influence consumers store attributes while gender had no such impact. The Student buyer behavior differs across gender and level of study (Feltham, 1998). Male consumers were found to place less importance on price (Mortimer & Weeks, 2011; Williams, 2002), which indicates that the supermarket selection attributes will differ across gender. Mortimer and Clarke (2010) found that male and female consumers agree on certain attributes and differ on others. Females place more emphasis on price and value for money, as well as high quality products, and the cleanliness of the supermarket. Male consumers were found to place more importance on speed and ease of shopping, prefer to be served quickly, and place more importance on fast checkout registers. Both male and females rate convenient location an important attribute, although females rate it more highly than male consumers.

The findings of Moschis, Curasi and Bellenger (2004) differ from the above in that attributes were found to be of

equal importance for both male and female consumers, although females perceived some factors as more important than their male counterparts did. They also found that attributes change very little with age, which shows that age plays no role in supermarket selection. The level of education did not affect the importance attached to attributes. However, Dhurup (2008) found the level of education to have an impact on some store attributes. Against the above background, the following hypotheses were developed for the research:

H<sub>0</sub> There are significant differences between the male and female students on the importance attached to supermarket attributes

H<sub>1</sub> There are significant differences between the male and female students on the importance attached to supermarket attributes

H<sub>0</sub> Age of students does not significantly impact on supermarket attributes sought when evaluating a supermarket

H<sub>2</sub> Age of students significantly impacts on supermarket attributes sought when evaluating a supermarket

H<sub>0</sub> The level of education does not significantly impact on supermarket attributes sought by students when evaluating a supermarket

H<sub>3</sub> The level of education significantly impacts on supermarket attributes sought by students when evaluating a supermarket

H<sub>0</sub> The frequency of shopping does not influence the importance of supermarket attributes sought by students

H<sub>4</sub> The frequency of shopping influences the importance of supermarket attributes sought by students

### **3. Research Methodology**

A survey method was adopted for the study and was deemed appropriate for this research to determine the supermarket attributes sought by students when selecting a supermarket.

#### **3.1 Participants**

The participants for this study were the students at a university of technology. Male and female students at different levels of study were targeted. A convenience sampling method was used owing to inaccessibility of this population to the researcher (Malhotra, 2010). According to Student Village (2014), students' buying power has increased over the years and that students spend an average of R3768 per month on groceries. This serves as a reason why students were selected for this particular research. The research study reached 284 students, and is in line with the target population reached in other research studies (Larson & Steinhofer, 2005; Moirimer & Clark, 2010; Oghojafor et al., 2012).

#### **3.2 Data collection and measuring instrument**

The questionnaire was developed using the scales of prior research studies (Alhemoud, 2008; Khraim, Khraim, Al-Kaidah & Al-Qurashi, 2011; Larson & Steinhofer, 2005; Mortimer & Clarke, 2011; Moschis et al., 2004; Ness et al., 2002). Since the findings of the above studies yielded a variety of attributes, it was not possible to identify a uni-dimensional instrument to investigate the attributes sought by students when selecting a supermarket. The questionnaire was designed to cover attributes important to students when evaluating a supermarket. Six demographic questions were included in the questionnaire. In addition, 18 statements of the questionnaire were listed to cover attributes students consider when evaluating a supermarket. Students were expected to rate each of the attributes on a scale from one to five, with one measuring not important at all, and five measuring extremely important.

Lecturers teaching at different levels of study distributed questionnaires in class. Students were given time to complete the questionnaire in class and return it to the lecturer before the end of the lecture. Students were made aware that completing of questionnaires was voluntary and no compensation was made to the students who completed the questionnaire. A total of 500 questionnaires were distributed. 300 questionnaires were returned, however, only 284 were fully complete and were considered usable.

#### **3.3 Data analysis**

The data were analysed using Statistical Package for Social Sciences (SPSS), version 22 for Windows. Various statistical analyses were conducted including the descriptives such as the mean and standard deviation of the supermarket attributes, factor analysis, t-test and the ANOVA.

### 3.4 Reliability and validity

Reliability assessment for the supermarket attributes was conducted. Reliability is used to test if particular techniques/measures would yield the same results if applied repeatedly to the same object under the same conditions (Mouton, 2002). This is achieved by computing the Cronbach's alpha to determine the internal consistency of the measurement tool. By calculating the Cronbach's alpha values, the researcher could thus determine the internal consistency reliability. Malhotra (2010) deemed a Cronbach's alpha of 0.70 to be an indication of satisfactory internal consistency reliability. Nunnally (1978) deemed the Cronbach's alpha coefficients of less than 0.50 unacceptable. Those between 0.50 and 0.69 were adequate; whereas, those above 0.70 were regarded as being acceptable. Although the Cronbach alpha for the entire scales loaded satisfactorily at 0.717, the Cronbach alpha for sub-scales loaded from .422 to .693, which is adequate.

## 4. Findings and Discussion

### 4.1 The sample composition

The majority of students were females (56%, N=162) and between 21-24 age groups (59%, N=169). Over 34 percent (N=98) of the students were at third level of study, compared to 27 percent (N=77) and 25 percent (N=71) at first level of study and postgraduate level, respectively. The majority of students buy at Pick 'n Pay (51%, N=147) followed by those shopping at Shoprite (30%). The fact that the majority of students buy from Pick 'n Pay might be due to Pick 'n Pay being more closely located to the campus than other supermarkets. 56 percent (N=159) of students buy groceries once per month, followed by those who buy two to three times a month (36%). Furthermore, students do not stay loyal with one supermarket, but buy some product from one supermarket and other products from another supermarket, as represented by 47 percent (N=135) of the students.

### 4.2 The importance of different supermarket selection attributes

Table 1 shows the importance of attributes. The results in Table 1 show that students prefer the cleanliness of the supermarket, ease of locating the merchandise within the stores, and value for money as the three extremely important attributes. The cleanliness of the store was found to be the most important attribute for consumers (Heller & McTaggart, 2004; Mangaraj & Senauer, 2001; Steinhof, 2005). Ease of locating the merchandise was found to be extremely important by adult consumers (Moschis et al., 2004), while value for money was found to be extremely important for students (Ness et al., 2002). However, Ali et al., (2010) and Alhemood (2008) found quality of products to be extremely important for consumers, which indicates that supermarket attributes differ for various consumers, and that consumers look for different attributes when evaluating a supermarket. Friendliness of staff, nutritional information, quality merchandise and variety of merchandise were also found to be very important in this study. The quality of merchandise was found to be the fifth very important attribute, which is similar to another study (Ness et al., 2002) that investigated students and found quality to be the fifth very important attribute. Contrary to findings in other studies (Alhemood, 2008; Ali et al., 2010), low prices and special prices were found to be of less importance.

**Table 1.** Importance of supermarket attributes

Attributes	N	Mean	SD
Cleanliness of the supermarket	286	4.43	.859
Ease of locating the merchandise within the stores	286	4.14	.854
Value for money	286	4.13	.952
Friendliness of staff	286	4.12	1.073
Nutritional information	286	4.12	.904
Quality of merchandise	286	4.09	.890
Variety of merchandise to choose from	286	4.03	.910
Pleasant atmosphere	286	4.01	.957
Operational hours	286	4.00	.953
Complaint handling	286	3.97	1.074
Brands carried within the supermarket	286	3.87	.933



Attributes	N	Mean	SD
Supermarket located near my place of stay	286	3.86	1.077
Low prices	286	3.78	1.077
Frequently have product items on special price or sale	286	3.68	1.086
Supermarket design and layout	286	3.55	1.183
Preference for payment method	286	3.42	1.148
Have fast check out register	286	3.41	1.174

Note\* 1= not at all important, 5= extremely important

### 4.3 Factor analysis

Factor analysis was conducted to ascertain whether the attributes developed from a review of the literature could be grouped into meaningful dimensions to describe the attributes for supermarket selection. The main purpose of factor analysis is to define the underlying structure among variables in the analysis (Hair, Black, Babin & Anderson, 2010). There were 18 attributes listed in the questionnaire. The principal component factor analysis was performed. Principal component analysis establishes which linear components exist within data and how each of the variables contributes to that component (Field & Miles, 2010). Prior to performing the factor analysis, the suitability of the data for factor analysis was assessed. Pallent (2010) states that ideally, the overall sample size should be over 150 for factor analysis; therefore, the sample size for this study of 286 was deemed sufficient. The Bartlett's test was used to test the overall significance of all correlations within the correlation matrix (Hair et al., 2010) and was significant at  $p < 0.000$ . It evaluates all factors and each of the factors is evaluated separately against the hypothesis that there are no factors (Tabachnik & Fidell, 2001). Moreover, the Bartlett's test produced a chi square value ( $\chi^2$ ) of 645.600 and a KMO value of 0.706 ( $> 0.50$ ), further indicating that the data were suitable for factor analysis.

According to Field and Miles (2010), a KMO closer to one indicates the patterns of correlations that are relatively compact and that factor analysis could yield distinct and reliable factors. Three items were dropped from factor analysis after they loaded unsatisfactorily in the initial analysis ( $\leq 0.50$ ). Of the 18 items, 15 were factor analysed leading to a clear five-factor structure. These factors were labeled personnel, location, product, economy and service, respectively. Table 2 below presents the five factors. The total variance explained by the extracted factors was 55 percent, indicating that the other 45 percent is accounted for by extraneous variables that do not constitute part of this study, and may be investigated in the future. Prior studies on supermarket attributes attained the total variance of 56 percent (Martínez-Ruiz, Jiménez-Zarco, Barba-Sánchez & Izquierdo-Yusta, 2010), 62 percent (Ali et al., 2010; Ness et al. 2002) and 64 percent (Alhemoud, 2008).

**Table 2.** Factor analysis of important supermarket selection attributes

Factors and variable description	Factor 1 (Personnel)	Factor 2 (Location)	Factor 3 (Product)	Factor 4 (Economy)	Factor 5 (Service)
Friendliness of staff	<b>.770</b>	.161	.001	-.008	-.004
Complaint handling	<b>.706</b>	.037	.005	.018	.048
Value for money	<b>.573</b>	-.053	.285	.130	.176
Pleasant atmosphere	<b>.550</b>	.099	-.111	.371	.131
Cleanliness of the super market	<b>.528</b>	.122	.154	.186	.240
Brands carried within the supermarket	.042	<b>.760</b>	.019	.168	.068
Nutritional information	.229	<b>.728</b>	.039	-.295	.037
Supermarket located near my place of stay	.037	<b>.588</b>	-.026	.226	.153
Ease of locating the merchandise within the store	.071	-.014	<b>.816</b>	-.165	.115
Variety of merchandise to choose from	.059	.036	<b>.809</b>	.171	.026
Low prices	.090	.223	-.114	<b>.731</b>	.174
Frequently have product items on special prices or sale	.200	-.029	.151	<b>.718</b>	-.091
Have fast check out registers	-.017	.117	.041	.131	<b>.686</b>
Preference of payment of method	.123	.079	.178	-.083	<b>.628</b>
Supermarket design and layout	.374	.045	-.093	.042	<b>.627</b>
% of variance explained (Total= 55.34)	21.65	10.32	8.85	7.71	6.79
Component reliability	.693	.422	.478	.478	.520
Cumulative % of variance	15.12	25.66	35.77	45.69	55.34
Eigenvalues	3.249	1.549	1.329	1.157	1.019

N.B: factors  $> .5$  were considered

As can be seen from the above table, the attributes load highly on the first factor with five attributes. It is related closely to friendliness of staff, complaint handling, pleasant atmosphere and cleanliness of the supermarket and is labeled as the personnel factor. Factor 2 loaded three attributes, which had high coefficients on supermarket located near my place of stay, ease of locating the merchandise within the store, and variety of merchandise to choose from, and was labeled the location factor. Factor 3 is related closely to brands carried within the supermarket and nutritional information; it was labeled the product factor. Factor 4 loaded highly on low prices and frequently has product items on special prices or sale, which was labeled the economy factor. Factor 5 had a high coefficient in fast checkout registers and preference for payment method, and was labeled the service factor. Table 3 below shows the factors and percentage for each of the responses.

**Table 3.** Factors, scale percentage and mean scores of attributes

Factors and variable description	N	Scale of percentages					M
		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
Factor 1 ( Personnel factor)							
Friendliness of staff	286	3.5	3.8	19.6	23.4	49.7	4.12
Complaint handling	286	2.4	7.3	18.9	31.8	39.2	3.97
Value for money	286	2.1	2.8	18.5	33.2	43.4	4.13
Pleasant atmosphere	286	2.1	4.5	18.9	39.2	35.3	4.01
Cleanliness of the super market	286	1.7	1.0	10.8	24.8	61.5	4.43
Factor 2 (Product factor)							
Supermarket located near my place of stay	286	3.8	5.9	24.8	31.1	34.3	3.86
Ease of locating the merchandise within the store	286	0.7	2.1	19.9	37.4	39.9	4.14
Variety of merchandise to choose from	286	1.4	3.5	21.0	39.2	35.0	4.03
Factor 3 (Location factor)							
Brands carried within the supermarket	286	2.1	3.8	26.6	39.9	27.6	3.87
Nutritional information	286	1.4	3.1	17.5	37.8	40.2	4.12
Factor 4 (Economy factor)							
Low prices	286	3.1	8.7	25.9	31.1	31.1	3.78
Frequently have product items on special prices or sale	286	3.8	9.8	27.6	32.2	26.6	3.68
Factor 5 (Service factor)							
Have fast check out registers	286	8.7	10.8	31.1	29.7	19.6	3.41
Preference of payment of method	286	7.3	11.9	32.2	29.0	19.6	3.42
Supermarket design and layout	286	7.0	12.2	24.1	32.5	24.1	3.55

#### 4.4 The impact of gender on the importance supermarket attributes

This section determines if the supermarket attributes differ across the gender of students. To achieve this, an independent t-test was conducted. As can be seen in Table 4, male and female students differed in terms of the importance attached to service attributes ( $p < 0.05$ ) but did not differ with other attributes such as personnel, products, location and economy.

**Table 4.** Supermarket attributes and gender of students

Supermarket attributes	Male (N=124)		Female (N=162)		Test for differences			
	Mean	SD	Mean	SD	F	DF	T	Sig (P-value)
Personnel	20.3387	3.07597	20.9074	3.45657	.696	284	-1.446	.149
Products	7.9435	1.41595	8.0309	1.54607	2.859	284	-.491	.624
Location	12.0565	1.76830	12.0000	2.07319	7.529	284	.243	.808
Economy	7.3387	1.80283	7.5556	1.84828	.091	284	-.994	.321
Services	9.9919	2.58670	10.6543	2.40683	.117	284	-2.223	.026
*Significant at $p < 0.05$								
Minimum value (1) = not important at all; Maximum value (5) = extremely important								

The results of the independent t-test showed that there is significant differences between male and female students on the service attributes ( $F = .117$ ;  $t = .018$ ;  $p < 0.05$ ). However, no significant differences existed between male and female

students on personnel ( $F=.696$ ;  $t=-1.446$ ;  $p>0.05$ ), products ( $F=2.859$ ;  $t=-.491$ ;  $p>0.05$ ), location ( $F=7.529$ ;  $t=.243$ ;  $p>.808$ ) and economy attributes ( $F=.091$ ;  $t=-2.223$ ;  $p<0.05$ ). Prior studies presented mixed results with some reporting that gender has no significant impact on supermarket attributes (Ali et al., 2010; Dhurup, 2008; Moschis et al., 2004) while others reporting significant differences (Alhemoud, 2008:53; Mortimer & Clark, 2010). This research found that significant differences exist among male and female students on the importance of supermarket attributes. Therefore, the null hypothesis was rejected.

#### 4.5 The impact of age on the importance of supermarket attributes

To determine if students at different age groups differ on the importance of supermarket attributes, a one-way analysis of variance (ANOVA) tests was run. Table 5 presents the results. As shown in the table; students differed on the importance attached to supermarket attributes. Significant differences were found on the personnel factor ( $F(2, 283) = 3.805$ ,  $p = .023$ ). Significant differences were not found on services, products, location and economy attributes. The results are similar to those of existing studies (Ali et al., 2010; Dhurup, 2008; Moschis et al., 2004) that found that age influences the supermarket attributes sought by consumers when selecting a supermarket. However, other studies (Alhemoud, 2008:53; Mortimer & Clark, 2010) found age does not influence supermarket attributes.

**Table 5.** Anova results for supermarket attributes and the age of students

Supermarket attributes		Sum of Squares	df	Mean Square	F	Sig.
Personnel	Between Groups	81.436	2	40.718 10.702	3.805	.023
	Within Groups	3028.666	283			
	Total	3110.101	285			
Services	Between Groups	19.472	2	9.736 6.244	1.559	.212
	Within Groups	1766.979	283			
	Total	1786.451	285			
Products	Between Groups	.994	2	.497 2.230	.223	.800
	Within Groups	630.992	283			
	Total	631.986	285			
Location	Between Groups	14.107	2	7.053 3.755	1.878	.155
	Within Groups	1062.722	283			
	Total	1076.829	285			
Economy	Between Groups	18.075	2	9.038 3.304	2.735	.067
	Within Groups	935.002	283			
	Total	953.077	285			
*Significant at p <0 .05 Minimum value (1) = not important at all; Maximum value (5) = extremely important						

#### 4.6 The impact of the level of education on the importance of supermarket attributes

The one-way analysis of variance (ANOVA) was run to determine if supermarket attributes differ for students at different levels of study. Table 6 presents the results. Students with different level of education differed on the importance attached to the economy attributes ( $F(3, 283) = 4.582$ ,  $p = .004$ ) and did not differ with personnel, service, product and location attributes. The results shows that male and female consumers of different age groups and level of education differ in the importance attached to different supermarket attributes. However, prior studies presented mixed results with some reporting that gender and age have no significant impact on supermarket attributes (Ali et al., 2010; Dhurup, 2008; Moschis et al., 2004) while others reporting significant differences (Alhemoud, 2008; Mortimer & Clark, 2010). Furthermore, Ali and Kapoor (2010) and Dhurup (2008) found the level of education to have significant differences, and that it influenced decisions on supermarket attributes.



**Table 6.** Anova results for supermarket attributes and the age of students

Supermarket attributes		Sum of Squares	df	Mean Square	F	Sig.
Personnel	Between Groups	12.878	3	4.293 10.983	.391	.760
	Within Groups	3097.223	282			
	Total	3110.101	285			
Services	Between Grou	5.128	3	1.709 6.317	.271	.847
	Within Groups	1781.323	282			
	Total	1786.451	285			
Products	Between Groups	3.785	3	1.262 2.228	.566	.638
	Within Groups	628.201	282			
	Total	631.986	285			
Location	Between Groups	14.581	3	4.860 3.767	1.290	.278
	Within Groups	1062.248	282			
	Total	1076.829	285			
Economy	Between Groups	44.302	3	14.767 3.223	4.582	.004
	Within Groups	908.775	282			
	Total	953.077	285			
*Significant at p <0 .05 Minimum value (1) = not important at all; Maximum value (5) = extremely important						

The Duncan post-hoc test was used to determine where significant differences exist across age and level of education. Students over 24 years of age placed more emphasis on the personnel attributes than others did. With regard to level of education, those with postgraduate education place more emphasis on the economy attributes followed by third-year and first-year students.

#### 4.7 Frequency of shopping and the supermarket attributes

This section determined if the frequency of shopping influences the supermarket attributes sought by students. A one-way analysis of variance was used to test the differences between students' frequency of shopping and the supermarket attributes. As shown in Table 7, the frequency of shopping influenced the supermarket attributes sought by students. Students differed on the importance placed to the service attributes ( $F(3, 282) = 3.458, p = .017$ ) but did not differ with personnel, products, location and the economy attributes.

**Table 7.** Anova results for supermarket attributes and the frequency of shopping

Supermarket attributes		Sum of Squares	df	Mean Square	F	Sig.
Personnel	Between Groups	7.904	3	2.635 11.001	.240	.869
	Within Groups	3102.197	282			
	Total	3110.101	285			
Services	Between Groups	26.087	3	8.696 6.242	1.393	.245
	Within Groups	1760.364	282			
	Total	1786.451	285			
Products	Between Groups	14.003	3	4.668 2.191	2.130	.097
	Within Groups	617.983	282			
	Total	631.986	285			
Location	Between Groups	21.887	3	7.296 3.741	1.950	.122
	Within Groups	1054.942	282			
	Total	1076.829	285			
Economy	Between Groups	33.820	3	11.273 3.260	3.458	.017
	Within Groups	919.257	282			
	Total	953.077	285			
*Significant at p <0 .05						
Minimum value (1) = not important at all; Maximum value (5) = extremely important						

## 5. Discussion

Factor 1 (personnel factor), had the highest percentage of variance explained of 21.65. The factor consist of five variables, friendliness of staff, complaint handling, pleasant atmosphere and cleanliness of the supermarket. Students considered cleanliness of the supermarket as the extremely important attribute as shown by 86.3 percent of students that rated it very important and extremely important. Value for money also received more rating in this factor as shown by 76 percent of students that rate it important, very important, and extremely important. This implies that supermarket must consider cleanliness as part of their marketing strategies targeted to the students. A study investigating consumer's most important attributes for selecting a supermarket also found cleanliness to be the number one attribute followed by low prices (Heller & McTaggart, 2004). Friendliness of staff and complaint handling also received high rating of 73 percent and 71 percent respectively, which shows that students perceive them as very important. However, the pleasant atmosphere was rated by only 64.5 percent of students, which shows that it is moderately important compared to the other four variables.

Factor 2 (location factor), had 10.32 percent of variance and consisted of supermarket located near my place of stay and ease of locating the merchandise within a store. The majority of students (77.3%) rated ease of locating merchandise as very important and extremely important, compared to supermarket located near my place of stay (65.5%). This implies that supermarkets should ensure that students can easily locate merchandise within a store, while not forgetting the winning formula of convenient location. Existing studies have indicated that consumers consider convenience of shopping, store Location, personnel Service important to determine store loyalty (Yoo & Chang, 2005).

Factor 3 (product factor) comprised two variables and accounted for 8.85 percent of the variance. Nutritional information was rated as very important and extremely important by 78 percent of the students, while brands carried within a store was rated by 67.5 percent of the students. This implies that students weight information about the products more than the brands carried within a supermarket. Retailers could integrate, as part of their supermarket marketing strategy, information about the products with information about the products.

Factor 4 (economy factor), comprised two variables, low prices and frequently have product items on special prices or sale. Low prices were rated as very important and extremely important by 62.2 percent of students, while frequently have product items on special prices or sale was rated by 58.4 percent of students as very important and extremely important. It appears that students do not consider frequently have product items on special prices or sale as an important attribute as shown by its lower rating compared to low prices. This factor is explained by 7.71 percent of variance. A study by Khraim et al. (2011) revealed that a low price is the most important attribute among the merchandise factor.

Factor 5 (service factor) was explained by 6.79 percent of variance and comprised fast check-out, preference of payment method and supermarket layout and design. These factors comprised the least important variables in supermarket selection as seen by the percentage of students (48.6% for preference of payment method; 49.3% of fast checkout and 53.6% of supermarket design and layout) that rated them very important and extremely important. Although these attributes carried less weight in supermarket selection among the students, supermarkets could still incorporate them in their marketing strategy since Steinhof (2005) found fast checkout to be among the 10 extremely important attributes of the 65 attributes investigated among the young, single consumers.

## 6. Concluding Remarks

The results of this study provided an insight into understanding the supermarket attributes used by students in selecting a supermarket. The findings reflect that cleanliness of the stores is the number one most important supermarket selection attribute. The ease of locating the merchandise and value for money was rated second and third, respectively. This implies that marketers who want to target the students should incorporate cleanliness, ease of location and value for money into their retail marketing strategy since these are the most important attributes for students.

Factor analysis produced five factors with the most important factor being the personnel factor. This factor included the friendliness of the staff, complaint handling, value for money, pleasant atmosphere and cleanliness of the supermarket. Therefore, marketers should emphasise this factor when marketing to students. The results also indicated the significant differences between the supermarket attributes and the demographic factors such as gender, age and the level of education. This implies that markets should emphasise different supermarket attributes when marketing to male and female students as well as students at different age groups and levels of study since they emphasise different supermarket attributes.

The product factor was the second most important factor students consider when selecting a supermarket followed

by the convenience location factor. It is important for supermarket managers to incorporate product and location attributes in their marketing strategy, since students also consider them important in selecting a supermarket. Supermarket managers must also combine a variety of attributes into their marketing strategy to market successfully to students. Students did not rate low prices as very important to them. However, as already mentioned, they rated value for money as extremely important.

A close analysis of the results indicated that students consider multiple attributes in their evaluation of a supermarket. It is, therefore, important for supermarket managers to use a combination of the most important attributes when targeting students. It is also worth mentioning that students at different age groups and level of study differed in the importance they attach to selected supermarket attributes.

The research investigated the supermarket attributes of students in one university. Therefore, the findings cannot be generalised across all the students in SA. Another study could determine the importance of super market attributes to students and youth in general.

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