

# **An Exploratory study on factors influencing customer decision making: a case of fuel retailing industry**

Yvonne K Saini & Siyabulela V Matinise

Wits Business School

University of Witwatersrand, Johannesburg, South Africa

## ***Abstract***

*This paper was set out to empirically investigate the factors that influence consumer choice in the decision of service station in the fuel industry in South Africa. We focus on understanding factors that influence decision making as this is critical to predicting and influencing consumer behaviour as well as in developing strategies that link customer needs. This paper examines customer decision making behaviour in the choice of petrol stations utilising the Customer Styles Inventory (CSI) model. Customer decision making is complex as the prices of fuel products are regulated except for diesel in South Africa. Three hundred and forty-nine participants participated in the study and data was collected through questionnaires. Factor analysis results were statistically significant indicating that consumers' decision is influenced by their need for convenience and speed of service. The findings of this study provide empirical evidence that indicate that fuel service providers should create shopping environments that are easily accessible and offer speed service. The results are not conclusive but results indicate that purchases of this nature are not determined by brand preferences (BP, Total, and Engen), recreation or impulsive buying behaviour. Results suggest that petrol stations should consider additional products and services to attract customers which provide convenience to customers may it be in the process of payments and availability of other services.*

*Key words: Customer Style Inventory (CSI), consumer, decision-making, South Africa*

## **1. Introduction**

Consumer decision-making process is a complex phenomenon and researchers have long been interested in identifying the underlying decision styles of shoppers (Hiu et al, 2001). Understanding buying related decision-making behaviour of consumers is important for understanding of consumer decision making characteristics and for developing a companies' marketing strategy (Walsh et al, 2001). A review of previous studies using customer style inventory (CSI) approach is a vital tool capable of highlighting the tenets of consumer's shopping behaviour and this could assist marketing managers in approaching consumers more efficiently (Bauer, Sauer & Becker, 2006). The purpose of this study is to explore factors influencing consumers' decision making processes in the decision to choose a fuel service station for fuel.

### *Why consumer behaviour?*

Consumer decision-making style refers to the mental orientation or approach a consumer has towards making choices (Leo et al., 2005). Consumer decision making process represents a roadmap of consumer's minds (Blackwell et al (2006).

### *Why CSI?*

Understanding buying related decision-making behaviour of consumers is important for companies' strategic marketing activities and multidimensional understanding of consumer decision making characteristics. (Walsh et al, 2001). Research on CSI provides understanding of consumer shopping behaviour (Bauer, Sauer & Becker, 2006. Encouraged scholars to test this inventory in various contexts to determine generalizability and validity (Sproles & Kendall, 1986) and to examine the validity of the concept (Sinkovics et al, 2010).

### *Why the Fuel retailing Industry?*

The oil industry contributes 2% of South Africa's gross domestic products and Supplies about 18% of South Africa's primary energy as well as supporting employment of over 300,000 people directly and indirectly (Sapia 2010). There are approx. 4, 600 service stations and approximately, 10.3 million vehicles (National Traffic information system 2012). Fuel products include kerosene (paraffin), petrol, liquefied petroleum gas (LPD), diesel and oils. The main players in South African oil industry are British Petroleum Southern Africa (Pty) Limited (BP),Chevron South Africa (Pty) Limited (Caltex),Engen Petroleum Limited, PetroSA (Pty) Limited, Sasol Limited, Shell SA (Pty) Limited, Total South Africa (Pty) Limited

### *Why this study?*

Fuel retailing industry has stringent legislation in South Africa. Oil companies are legally prohibited from directly retailing fuel to consumers; Service stations are run by franchisees with exclusive rights of purchasing products and managing the brand of the franchisor (Oil Company) through operational agreements). The price of fuel is set by government for petrol except for diesel where service stations can set their own price. Competition for fuel is coming from alternative fuel sources (biofuel and electric cars) and alternative modes of transport for example the Gautrain. According to Sinkovics, Leelapanyalert, and Yamin (2010), understanding consumer decision-making behaviours is critical for marketing activities such as market segmentation, positioning, and tailoring marketing strategies. Therefore, depth in the understanding of consumers' decision-making processes has become more critical in the petroleum industry. There are gaps in understanding how CSI can be applied in developing countries like South Africa and in gaining knowledge in consumer decision-making. This paper partially addresses the use of CSI in the service stations in South Africa. This paper is organised as follows: section 2 in the review of the relevant literature, section 3 describes the methodology employed and section 4 presents the analysis and discussion of the findings. Finally in section 5, conclusions and recommendations are made.

## 2. Literature Review: Consumer decision making

At the level of marketing theory and practice, the consumer is central to all marketing activity (Holly, 2007). The consumer decision-making process is the sequence of mental and physical steps taken by consumers from the point of realising that they want a certain product or service to the time when it becomes surplus to their requirements and is disposed of (Vrontis & Thrassou, 2007). Consumer behaviour and consumer decision-making processes are the results of a combination of consumer environment factors like culture, social context and family, and specific individual factors like personality, values, attitudes, motivation and lifestyle (Vrontis & Thrassou, 2007). Researchers have identified “significant variables” which influence consumer behaviour, a multitude of decision strategies and a vast reservoir of knowledge about consumer decisions. The consumer decision-making model stipulates that consumers move in stages from need recognition, information search, evaluation of alternatives, purchase and post-purchase evaluation (Hawkins *et al*, 2004; Blackwell *et al*, 2006). As consumers move through these stages, they experience internal and external influences ranging through culture, social class, personality and motivation. There many models which explain the complex decision making process of consumers. There are many consumer behaviour models including the bounded rationality perspective, behavioural decision theory, social cognitive perspective and the consumer decision making style inventory. The generic model states that consumer behaviour comprises the activities undertaken when obtaining, consuming and disposing of products and services (Blackwell *et al*, 2006). The focus for this paper is the consumer decision making style model.

### *Consumer decision-making style Inventory (CSI)*

The CSI was the one of the first instruments used to measure decision making styles for consumers. It was a breakthrough in the understanding of consumers and used for evaluating market segments and developing marketing positioning strategies (Wang *et al*, 2004). The CSI developed and validated from a sample of American high school students and were asked about their decision making for personal products e.g. clothing, cosmetics and 81 percent of the sample were female (Sproles & Kendall, 1986, Bakewell & Mitchell, 2004). It is necessary that the CSI be tested on samples other than students if the instruments is to be used on the general population and researchers are cautioned not to use this inventory without first establishing the applicability of the CSI in the specific culture under examination (Lysonski *et al*, 1996).

Bakewell and Mitchell used the CSI to investigate the consumer decision making styles for males in the UK and the results indicated that the CSI results could not be generalised to male shoppers (Bakewell & Mitchell, 2004). One study focused on gender difference in German consumer decision-making styles and the conclusion was that male and female styles are different and this used sample aged between 18 and above 58 years and was more educated (Mitchell & Walsh, 2004). The UK study found that there were four (brand consciousness, perfectionism, confused by over choice and impulsiveness) common factors and six new characteristics were identified, satisfying, enjoyment-variety seeking, economy seeking, fashion-sale seeking, time restricted and quality consciousness (Mitchell & Walsh, 2004).

While most of the studies used the offline environment, a study in Taiwan, focuses on the differences in the Internet environment using CSI, the results indicated that two categories were not useful, recreational and price consciousness (Yang & Wu, 2007). It was deduced that online shoppers are programmed as problem-solvers while making purchase decisions and concluded that consumers in cyberspace and non-online environments act differently (Yang & Wu, 2007). For this Taiwan study, it was concluded that female Internet consumer's decision making is dominated by novel-fashion and a male Internet shopper's decision-making is dominated by brand (Yang & Wu, 2007).

As previously mentioned, the CSI has been used to investigate consumers in cultures of China, South Korea, U.S., New Zealand, Greece, United Kingdom and Germany. Walsh et al., (2001) posited that a modified model of consumer decision-making styles may be necessary to more adequately account for the consumer behaviour and retail environment of another culture. Sinkovics et al., (2010) argue that cross-cultural consumer-research instruments are sensitive to the nature of the attitudinal constructs, the nationality of the respondents, and the country-of-origin effects examined in the research. This is relevant in this study as the CSI was derived from American consumers. Cross cultural studies on CSI are discussed in detail below.

#### *Cross cultural studies on consumer styles inventory (CSI)*

The validity of the CSI has been tested in various countries in an attempt to develop a tool that can be applied across countries and industries. Leo et al., (2005) states that culture underlies the way consumers think and is understandably highly important in decision making. Briley, Morris, and Simonson (2000) proposed that consumers' cultural tendencies may be active or dormant, depending on the shopping situation and the state of mind it evokes, marketers can learn to predict when cultural leanings may arise or be suppressed and to guide this process using marketing tools. Comparing consumer decision-making styles between Singaporeans and Australians utilizing Hofstede's framework, Leo et al., (2005) argued that cultural dimensions influence consumer decision-making styles.

In a study examining the cross-cultural applicability of the CSI using a sample of Korean students, Hafstrom et al., (1992) found that five of the styles, Brand Consciousness, Quality Consciousness, Recreational Shopping Consciousness, Impulsiveness, and Confused-by-Over choice were common in both Korean and U.S. cultures. Lysonski et al., (1996) investigated the cross-cultural applicability of the CSI using multi-country samples from India, Greece, U.S and New Zealand. The researchers noticed that the inventory appears to be more applicable to the economically developed countries (U.S. and New Zealand) than to the economically developing countries (India and Greece) (Mishra 2010). Comparing various cross cultural studies, Mishra (2010) found that four consumer styles are relatively more applicable to different countries, namely quality conscious, brand conscious, fashion conscious and recreational conscious. Appendix B depicts a summary of cross cultural studies conducted by various authors and the adaptations of the CSI they utilised in their respective environments. Sinkovics et al., (2010) summarised various studies conducted in eleven (11) countries, with repetitions in United States and China increasing the tally to fifteen (15).

These studies tested the CSI with extended factors totalling fifteen (15) using various valid student and adult samples in different settings. The countries were grouped into: (1) economically well developed countries such as Austria, Germany, the UK, and the United States; (2) emerging markets, such as China, Taiwan, South Korea, and India; and (3) countries in between, such as Greece and New Zealand. Sinkovics et al., (2010) concluded that there is some evidence that the stage of economic development may impact the CSI's dimensionality. From the study conducted by Sinkovics et al., (2010), factors that were common and tested in most countries are summarized in Table 4. The number of times a factor was tested is reflected in no particular order below.

**Table 1: Country Comparison of tested CSI factors**

<b>Factor</b>	<b>No of times tested</b>	<b>Factor</b>	<b>No of times tested</b>
Perfectionist	13	Brand-Store Loyalty	11
Brand Conscious	14	Impulsiveness	8
Confused by Over-choice	12	Habitual Brand-Loyal	1
Time-Energy Conserving	4	Quality Conscious	2
Novelty-Fashion Conscious	13	Information Seekers	1
Price-Value Conscious	7	Variety seekers	1
Recreational Shoppers	13	Low-Price Seekers	1
	3	Non-perfectionist/Brand Indifference	1

Source: Prepared by the author from Sinkovics et al., (2010)

This table indicates that seven factors, perfectionist, brand conscious, confused by over-choice, novelty-fashion conscious, brand-store loyalty and impulsiveness seem to be present across cultures. In this study, these factors will form the basis of testing the reliability of the CSI and for determining the consumer decision making styles of the patrons of the petroleum industry. Literature reviewed indicated that for convenience store categories, when all other variables are equal, location becomes a determining factor. In their research on the South African fuel retailing industry, Greenstone marketing (2012) corroborated the view that location and brand become the two key determining factors in the consumer's decision making process when choosing a service station. Location has been discussed in Hawkins et al., (2004), as brand is touted as key in consumer's purchasing decision.

Consumers engage in shopping with certain fundamental decision-making modes or styles including rational shopping, consciousness's regarding brand, price and quality among others (Lyonski et al, 1996). The consumer characteristics approach seems to be the most powerful and explanatory since it focuses on the mental orientation of consumers in making decisions and it is useful to marketers since it provides a quantitative instrument for classifying heterogeneous decision-making styles among consumers (Lyonski et al, 1996).

Research on CSI initially indicated that the decision-making styles could be applied to all product categories (Bauer et al, 2006). However, recent studies reveal that the model generates diverse results based on different cultural contexts and product categories. Clearly, CSI and its measurements can be modified to examine consumer purchasing behaviour in developing countries due to differences in income levels, product shortages and cultural factors. Given that not all of the original CSI dimensions could be confirmed in every country, this suggests that CSI is unable to measure adequately consumer decision-making characteristics across countries (Walsh et al, 2001). Cross cultural studies suggest that quality conscious, brand conscious, fashion conscious and recreational were application in many cultures (Hiu et al, 2001) and modified models have been proposed and used.

### *Constructs of CSI*

The initial characteristics of consumer decision-making styles by Sproles and Kendall (1986) identified the following decision making styles;

1. **Perfectionistic and High-Quality conscious consumer.** This factor measures the consumer's search for the very best quality in products and services and consumers high in perfectionism would be expected to shop more carefully, systematically and by comparison (Sproles & Kendal, 1986).
2. **Brand conscious and price equals quality consumer:** Measures "price equals quality" focuses on consumer's orientation toward buying the more expensive, well-known national brand.
3. **Novelty and fashion –conscious consumer:** Consumers who are fashion conscious and also novelty conscious and are likely to gain excitement and pleasure in seeking out new things.
4. **Recreational and hedonistic consumer:** These are the consumers who find shopping pleasant; they shop for the fun of it.
5. **5. Price conscious and value for money consumer:** Consumers who for sales prices an appeal consciousness of lower prices and they are concerned about getting the best value for their money and are likely to be comparison shoppers.
6. **Impulsive and careless consumer:** This measures consumers who do not plan their shopping and appear to be unconcerned about how much they spend.
7. **Confused by over choice consumer:** consumers here are faced with many brands and stores from which to choose and have difficulty making choices and experience information overload.
8. **Habitual and brand-loyal consumers:** These are consumers who have favourite brands and stores and have formed habits in choosing these and this habitual behaviour.

For this study, the statements which measure the decision making styles have been re-arranged and rephrased to reflect the English or language used in the different countries (Bakewell & Mitchell, 2004). This was done as the original inventory contained ambiguous words such as “best” or “perfect” (Bakewell & Mitchell, 2004). It has been found that the CSI in its original configuration was applicable to capture male decision-making traits in German and this could be because the original sample was predominantly female student sample. (Mitchell & Walsh, 2004). It can be deduce that the samples were biased to females and to high school students and not the average consumer. The use of the original CSI is therefore limited and need to be adapted to specific environments, regions, cultures and international markets where gender interactions and their influence on shopping are different for example the traditional Muslim families where men often do the physical shopping but are given specific instructions by their wives (Mitchel & Walsh, 2004). The CSI inventory appears to be more applicable to the more developed countries like New Zealand and the USA than to the developing countries (Lysonski et al., 1996) and this could be attributed due to the differences in the retail environments and culture.

The CSI has been tested and validated in international settings including the USA, New Zealand, Greece, Korea, China and India and not in Africa. The consumer Styles Inventory investigated mainly in developed countries except for India and China and little research has been done in developing countries like South Africa. From the above, very little is known about the decision-making processes of consumers in various countries (Lysonski et al, 1996). If decision-making styles of consumers vary among countries, advertising and other elements of the marketing mix must be adjusted to accommodate these differences (Lysonski et al, 1996). This paper proceeded to establish the extent to which the following consumer decision-making styles are able to influence motor vehicle purchasing choices in the South African market: Price, Value and Quality Consciousness, Brand Consciousness and Loyalty, Fashion Consciousness, Recreational Shopping, Confused by choice of product and Impulsive Buying.

*Proposition: Consumers follow the CSI inventory in their in their choice of a service station.*

### **3. Methodology**

Understanding of consumer decision-making behaviours is critical for marketing strategies (Sinkovics et al (2010). In exploring factors influencing the choice of a service station for fuel purchases seven (7) factors were used. This was based on the fact that fuel is convenience product and location is critical factor in the decision making (Hawkins et al, 2004). Six factors were from the CSI inventory.

## *Overview*

For the purpose of this study, subjects were chosen based their availability at a service station on a particular day and their willingness to participate in the study. A total of 15 service stations were conveniently selected. The selection of an actual customer was convenient depending on willingness to participate. A further 60 self-completion questionnaires were distributed in an office park, and only 49 were returned, indicating a high response rate of 82%. This equated to a total of 349 self-completion questionnaires collected for data analysis. An accredited agency with multilingual consultants was used for data collection to limit administration errors such as permission to conduct the study, clear instructions, and sample unit. Due to strict policies of major players, certain service stations refused to participate in the research. This resulted in certain service stations replaced with any other brand in the vicinity. The total participants were as follows Engen (100), BP (80), Shell (60), Sasol (20), Caltex (20) and Parktown office park (49). There were 60 questionnaires which distributed to an office park and 49 were returned fully filled.

## *Design*

Consumer decision-making styles were measured using the 40-items of the Consumer Style Inventory (CSI) questionnaire developed by Sproles and Kendall (1986). The original scales were measured on a 5-point Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree) and the reliabilities of the CSI scale, ranged from 0.48 to 0.76, Sproles and Kendall (1986). A structured self-completion questionnaire based on Sproles and Kendall (1986) research, with 21 items out of the original 40, and six factors out of the original 8 was used. The seventh factor (location) was derived from the reviewed literature and is synonymous with convenience shopping. Four questions derived from previous studies, were used to identify this factor.

## *Procedure*

This stage involves the fieldwork and collection of the required information (Baines and Chansarkar 2002). In this study, a self-administered questionnaire, administered in English language only, was used for data collection. The respondent read the survey questions and recorded his or her own responses without the presence of a trained interviewer (Hair et al., 2006). At all the service stations, a multilingual interviewer was present if an explanation of concepts was required by a respondent. The completion of the questionnaire was done on site to improve the response rate and was administered by a multilingual field worker. This method assured confidentiality in that field workers did not know the customers and the questionnaire did not require customers to record their identification details. . The use of multilingual field workers and on site completion countered the disadvantages associated with this procedure, low response rate and possible misinterpretation of the questions depending on the reading and writing skills of the participants. The open-ended qualitative component of the questionnaire for both the customer and the dealers addressed the challenge of limited information. A major disadvantage experienced from the dealers and customers is that they were often in a hurry with some refusing to complete surveys. This may have impacted on the quality of their submissions, biased the sample and it definitely made the data collection process longer.

#### 4. Empirical results and discussion

To achieve the goals of this study, statistical analytical tools were employed. These were descriptive analysis and factor analysis. The analyses were conducted on the total sample 349 subjects. Analysis was conducted to identify in order of preference the highest ranked CSI factor to the lowest ranked CSI factor by customers.

##### *Descriptive analyses.*

Respondents were spread as follow, Engen (100), BP (80), Shell (60), Sasol (20), Caltex (20) and 49 from the office park and total subjects were 349. Tools used are outlined below in terms of gender, 12.3% were from the age of 18 to 25 and 214 were aged between 26 to 45, with equal numbers between 26 to 35 and from 36 to 45 respectively. Nineteen. 5 % (19.5%) were aged 46 to 55 and the rest were aged over the age of 56. In terms of gender, 64% were males and 36% were females. Eighty percent (280 of the 389 of the subjects were black, 11.2% were white, 4.9 were coloured and 3.7 were Indians. Income classification of the subjects was based on the range of yearly income. About 50% of the participants earned below R200, 000, 19.2% between R200, 000 and R300, 000. Only 15.2% earn between 300,000 and 400,000. The rest earned over R500, 000. About 13.8% of subjects had no matric condition and about 40% had matric. Only about 10% had a degree and over 30% had a post matric certificate or diploma.

Results from the measure of sampling adequacy (Kaiser-Meyer-Olkin Measure was .725 which is significant. Analysis of the measurement properties of rating scales. In this section, the reliability and validity of the CSI rating scales was investigated and the Cronbach's Alpha was .55

##### **Factor Analysis**

Factor analysis is one of the procedures used in the evaluation of psychological measures particularly multi-item inventories, designed to measure personality, attitudes, behavioural styles and other constructs of interest (Floyed & Widaman, 1995). Factor analysis was the best option has there has been any studies done to test the CSI in the fuel industry in South Africa.

Factor analysis was used to identify the underlying variables or factors influencing the choice of service stations. Factor analysis tried to explain the patter of correlations within the observed variables; this was to identify the main factors that explain the choice of a service station.

Factor 1: Convenience

LOCATION3: I mostly shop at the first available service station	.688
LOCATION4: It does not matter to me where the service station is located	.614
BRAND3: All major petrol brands are the same	.531
QUALITY2: there is no difference in the quality of fuel sold by oil companies	.503
RECREATION3: To get variety, I shop at different stores	.454

The results indicate that consumers seek convenience as the rating for shopping at the available service station is .688. Suggestion is made that the brand of the service station is not important as consumer's view that petrol brands are not different from each other. These factors explain a percentage total of 56.65%. Factors 1 and 2 are suggesting that consumer are looking for convenience and speed though location is important also.

#### Factor 2: Speed of Service

RECREATION1: I do not spend much time shopping for best buys at service stations	.758
RECREATION2: I make my shopping trips fast	.733
PRICE2: The price of fuel influences my decision to by an item at a service station	-.524
BRAND2: I buy grocery items at a service station because of the fuel brand	-.484
LOCATION2: I mostly shop at a service station that has easy access in and out	.433

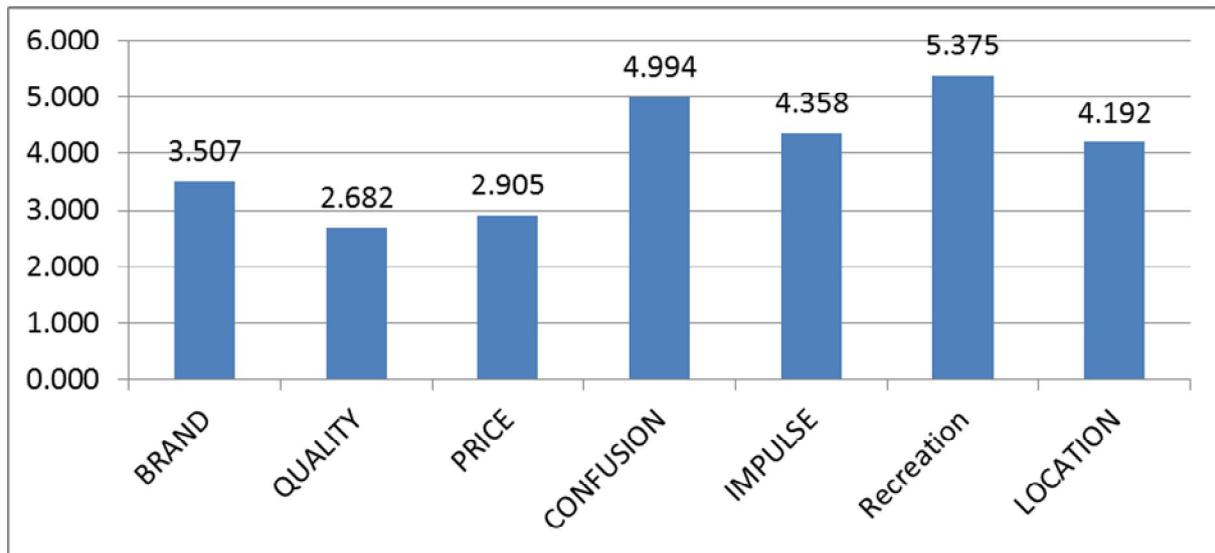
The results above indicate that consumers are looking for a service station where the service is fast and they do not need to spend a lot of time.

#### Factor 3: "Confused"

CONFUSION2: There are so many fuel brands to choose from that I often feel confused	.757
CONFUSION1: the more I learn about fuel products, the harder it seems to choose the best	.714
CONFUSION3: Sometimes it is hard to choose which service station to fill and shop at	.630

The next set of factors indicates that consumers do not mind to fill up at any filling station. The confusion constructs scored high and the results suggest that consumers are not particular where they fill up as price, brand and quality of the fuel is seen to be same and no differentiation. Confused over choice results corresponds to other results obtained in other countries like the Austrian case ( Sinkovics et al, 2010) as there too many brands to choose from.

**Figure 1. Means on Ranking factors on the choice to purchase at a service station: 1 to 7 (1 the best and 7 the least)**



Consumers were asked to rank the factors and the results indicate that, to get variety, consumers shop at different stores. The ranking indicates four strong factors, recreation or variety seeking, confusion and impulse and location and the rest are weaker.

## **5. Conclusions and recommendations**

This paper tried to test the applicability of the CSI in the fuel retailing sector in South Africa. The sample was drawn from the general population and hence the results can be generalised. The results of this study performing factor analysis indicates that the factors not necessary congruent to the CSI factors. For the choice of the fuel service station in South Africa, the CSI consumer behaviour model results did not provide strong insights in understanding consumer behaviour. The results suggest that location is important in the decision making and this is in line with the literature (Hawkins et al, 2004).

The study did provide some insights in those consumers are looking for speed and convenience. Payment methods can be explored to include paying with mobile based technology as currently consumers use cash or card or petrol and consumers or customers have to pay using payment machines brought to customer or walk in store to pay. The other alternative is to have service stations expand in other convenience facilities. Surprisingly, the brands of the different fuel stations was significantly influencing the choice

### **Limitation of the study**

The limitation of the study is that customers were not asked if they were driving petrol or diesel car. Diesel is unregulated and is mostly discounted by dealers to draw customers.

### **Further study**

To understand the applicability and the factors that influence consumer decision making in the choice of service station, other consumer behaviour models should be used. A wider sample could be used to attain generalisation. Further testing and validation of CSI in other industries can be considered. The results call for the revision of the CSI inventory as indicated in this study, it might not be applicable in all sectors. (Sinkovics et al, 2010)

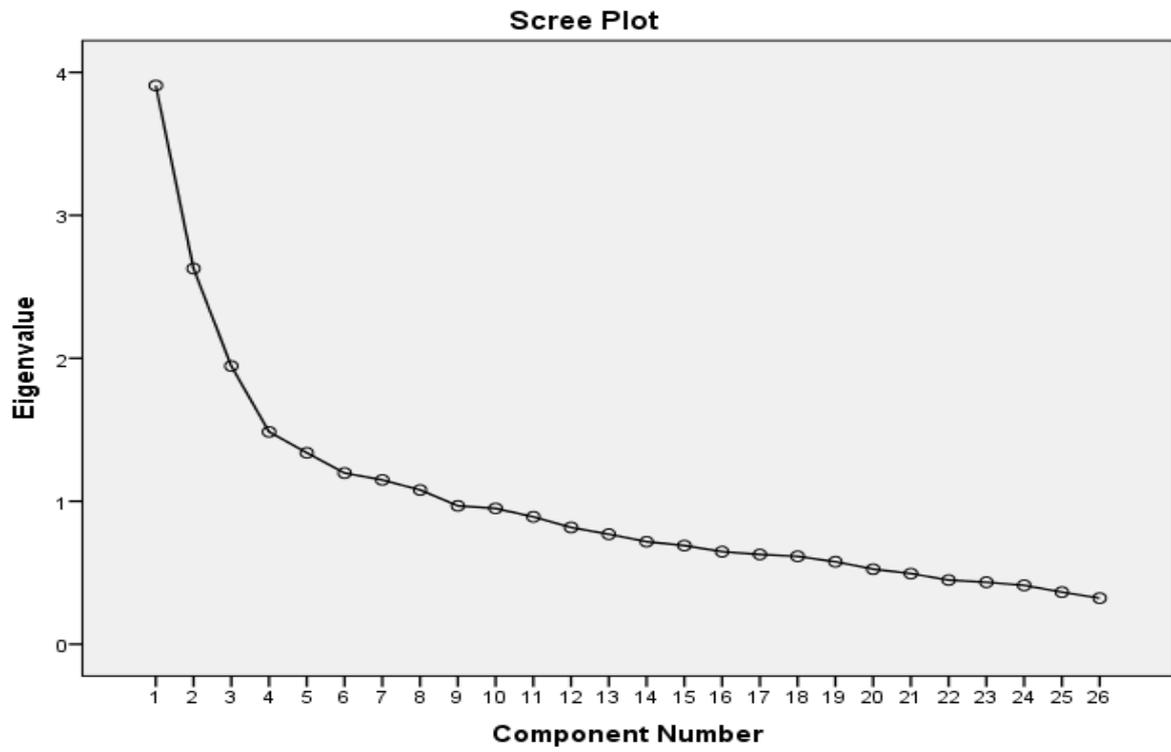
## Appendix1

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.908	15.030	15.030	3.908	15.030	15.030	2.403
2	2.627	10.104	25.135	2.627	10.104	25.135	2.250
3	1.946	7.483	32.618	1.946	7.483	32.618	2.223
4	1.485	5.713	38.331	1.485	5.713	38.331	2.070
5	1.339	5.148	43.479	1.339	5.148	43.479	1.923
6	1.197	4.605	48.084	1.197	4.605	48.084	1.493
7	1.149	4.419	52.503	1.149	4.419	52.503	1.224
8	1.079	4.151	56.654	1.079	4.151	56.654	1.145
9	.967	3.721	60.375				
10	.950	3.655	64.030				
11	.891	3.428	67.458				
12	.817	3.141	70.599				
13	.769	2.959	73.558				
14	.717	2.757	76.315				
15	.690	2.655	78.970				
16	.648	2.490	81.460				
17	.628	2.415	83.875				
18	.615	2.366	86.241				
19	.577	2.219	88.460				
20	.525	2.020	90.480				
21	.494	1.901	92.381				
22	.449	1.726	94.107				
23	.433	1.667	95.774				
24	.412	1.585	97.359				
25	.364	1.402	98.760				
26	.322	1.240	100.000				

Extraction Method: Principal Component Analysis.

## Appendix 2: Scree Plot



## References

Bakewell C & Mitchell V W (2003) Generation Y female consumer decision-making styles, *International Journal of Retail & Distribution Management*; 31 2/3; 95-106.

Bakewell C & Mitchell V W (2004) Male Consumer Decision-making Styles, *International Review of Retail, Distribution and Consumer Research*, 14(2), 223-240.

Bauer H H, Sauer E N & Becker C (2006) Investigating the relationship between product involvement and consumer decision-making styles, *Journal of Consumer Behaviour*, 5: 342-354

Blackwell, R. D., Miniard, P. W., Engel, J. F. (2006). *Consumer Behaviour*. 10th edition. Mason, Ohio: Thomson Higher Education, United States of America.

Briley, D. A., Morris, M. W., and Simonson, I. (2000). Reasons as Carriers of Culture: Dynamic versus Dispositional Models of Cultural Influence on Decision Making. *The Journal of Consumer Research*, Vol. 27, No. 2 (Sep., 2000), pp. 157-178

Dunk, A.S. (2004) Product life cycle cost analysis: the impact of customer profiling, competitive advantage and quality of IS information, *Management Accounting Research*, 15(4), pp. 401-414.

Durvsula A, Lysonski S & Andrews C J (1993) Cross-Cultural Generalizability of a Scale for Profiling Consumer's Decision-Making Styles, *The Journal of Consumer Affairs*, 27(1), 55-64

Engel, J. F., Blackwell, R. D., and Miniard, P. W. (1995). *Consumer Behaviour*. International ed. Florida. Dryden

Floyd J F & Widaman F K (1995) Factor Analysis in the development and refinement of Clinical Assessment Instruments. *Psychological Assessment*, (3), 286-299.

Greenstone Marketing (2012) Customer needs segmentation. <http://greenstone-marketing.com/index.php>

Hafstrom, J. J., Chae, J. S., & Chung, Y. S. (1992). Consumer decision-making styles: comparison between United States and Korean young consumers. *The Journal of Consumer Affairs*, 26 (1), 146-158.

Hawkins, D.I., Best, R.J. and Coney, K.A. (2004). *Consumer behaviour: building marketing strategy* (9th ed.) New York: McGraw Hill.

Hui Y S A, Sie, Y M N, Wang CL C & Chang M K L (2001) An Investigation of decision-making styles of consumers in China, *Journal of Consumer Affairs*, 35 (2), 326-345.

Holly E. L., Armstrong, G. A. & Durkin. G. M. 2007. Using behavioural and motivational thinking in food segmentation. *International Journal of Retail & Distribution Management*, 35 (9): 691-702.

Leo, C., Bennett, R., and Hartel, C. E. J. (2005) Cross-Cultural Differences in Consumer Decision-Making Styles. *Cross Cultural Management* 12(3):pp. 32-62.

Lysonski, S., Durvasula, S. and Zotos, Y. (1996), "Consumer decision-making styles: a Multi-country investigation", *European Journal of Marketing*, Vol. 30 (12), pp. 10-21.

Mishra, A. A. (2010). Consumer Decision Making Styles and Young Adult Consumers: An Indian Exploration. *Management and Marketing Journal*. Volume III, Issue 2. Pp. 229 – 246.

Mitchel V W & Walsh G (2004) Gender differences in German Consumer Decision-making Styles, *Journal of Consumer Behaviour*, 3(4), 331-346.

Sapia (2010) Annual Financial Report. <http://www.sapia.com>.

Sinkovics R.R, Leelapanyalert K.M. and Yamin M (2010). *Journal of Marketing Management*. Vol. 26, Nos. 11–12, October 2010, 1021–1036

Sproles B G & Kendall (1986) A Methodology for Profiling Consumer's Decision-Making Styles. *The Journal of Consumer Affairs*, 20 (2); 267-279.

Stone P G (1954) City Shoppers and Urban Identification: Observations on the Social Psychology of City Life, *The American Journal of Sociology*, 60 (1), 3645

Vrontis D & Thrassou A (2007) A new conceptual framework for business-consumer relationships. *Marketing Intelligence & Planning*. 25(7) p 789-806.

Walsh G , Henning-Thurau T, Wayne-Mitchell V and Wiedmann Klause-Pere P(2001) Consumer's decision-making style as a basis for market segmentation, *Journal of Targeting, Measurement and Analysis for Marketing*, 10 (2), 117-131.

Wang C L, Siu Y M N & Hui S Y A (2004) Consumer decision-making styles on domestic and imported brand clothing, *European Journal of Marketing*, 38(1/2), 239-252.

Yang C & Wu C C (2007) Gender and Internet Consumer's Decision-making, *Cyber Psychology & Behaviour*, 10 (1),86-91