

DEMOGRAPHIC DIFFERENCES IN ADULT CONSUMERS' DECISION-MAKING STYLES IN TSHWANE, SOUTH AFRICA

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OPSOMMING

Verskeie faktore beïnvloed die manier waarop verbruikers optree en hoe besluite geneem word. Dit staan ook bekend as 'n verbruiker se besluitnemingstyl. 'n Besluitnemingstyl kan beskryf word as 'n psigiese-oriëntasie wat kenmerkend is van 'n verbruiker se benadering tot besluitneming. Die hoofdoel van hierdie studie is om die besluitnemingstyle van Suid-Afrikaanse volwassenes te ondersoek tydens die aankoop van algemene huishoudelike items. Moontlike verskille in die besluitnemingstyle van die volwassenes van verskillende etniese agtergronde, geslag, opleiding en ouderdomsverskil, is ook ondersoek. Anders as vorige studies, wat reeds in die veld gedoen is, fokus hierdie navorsing nie net op studente wat in stedelike gebiede woonagtig is nie, maar ook op alle volwassenes wat in stedelike, sowel as landelike gebiede, woonagtig is. Sproles en Kendall (1986) het 'n verbruikersbesluitnemingindeks (VBI) ontwikkel om verbruikers se besluitnemingstyle te bepaal. Die VBI bestaan uit agt verskillende faktore of style, naamlik: handelsmerkbewustheid; nuutheid/modebewustheid; keuse-verwardheid; prys/waardebewustheid; ontspanning/hedonisme; perfeksonisme; impulsiwiteit/agterlosigheid en gewoonte/handelsmerkgetrouheid. 'n Gerieflikheidssteekproef is gebruik en 344 bruikbare vraelyste is ingesamel. Die resultate van die studie het slegs ses van die oorspronklike agt VBI faktore bevestig, maar het ook 'n bykomende besluitnemingstyl geïdentifiseer, waardebewustheid, wat bygevoeg en verder ondersoek moet word in die Suid-Afrikaanse konteks. Alhoewel die vlak van opleiding geen betekenisvolle verskille opgelewer het nie, is betekenisvolle verskille wel gevind tussen geslag, ouderdom, etniesiteit en besluitnemingstyle. Besluitnemingstyle is van belang vir bemarkers omdat dit verbruikersgedrag bepaal, stabiel is oor tyd en dus relevant is vir marksegmentering. Besluitnemingstyle en die VBI kan ook gebruik word om bemarkers te help om 'n profiel te skep van verbruikers se besluitnemings-eienskappe.

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INTRODUCTION

People perform transactions daily to purchase goods or services, as for example, in a shopping centre or online. Consumers play an important role in any business, as they create a demand for goods or services, which then leads to business growth and profitability (Yee & Hooi, 2011).

Decision-making is more complex and even more important for consumers today than it was in the past. Consumer behaviour is triggered by needs (Cant *et al*, 2006:193). Each individual consumer is subject to different influences, such as lifestyle, personality, attitudes, demographics, friends, culture, social status and situations – all of which influence the products and services they purchase to satisfy their needs (Babin & Harris, 2012:25).

Decision-making styles are also linked to purchase behaviour and sales (Mitchell & Bates, 1998). Decision-making styles are important to marketers because they determine consumer behaviour, are stable over time, and are thus relevant for market segmentation. Decision-making styles can also be used to help marketers to profile the consumer's decision-

making characteristics, and to aid families in their financial management (Mokhlis, 2009; Radder *et al.*, 2006; Sproles & Kendall, 1986).

Sproles and Kendall (1986) defined consumer decision-making styles as a mental orientation that characterises a consumer's approach to making choices. The first study that developed a scale that measured the characteristics of consumer decision-making styles was carried out by Sproles and Kendall in 1986. This Consumer Style Inventory (CSI) scale was reproduced and replicated in various studies across many countries, such as America (Wesley *et al.*, 2006), China (Hiu *et al.*, 2001), England (Bakewell & Mitchell, 2004), Malaysia (Mokhlis, 2009), Germany (Walsh *et al.*, 2001) and South Africa (Radder *et al.*, 2006).

This was done in an attempt to better understand the consumer decision-making processes styles within different cultures, and to refine the measurement instrument for cross-cultural application.

Despite the obvious impact of factors, such as lifestyle, life stages, income, age and gender on consumer behaviour, relatively few studies have focused on such narrow areas as decision-making styles. Furthermore, Lyonski *et al.*, (1996) suggested that demographics could affect decision-making styles and purchase preferences.

Research evidence also suggests that gender and cultural differences exist in the aids used to arrive at buying decisions, the rules guiding decisions, as well as in the decisions themselves (Mitchell & Walsh, 2004; Hafstrom *et al.*, 2002). Hiu *et al.* (2001) argue that profiling consumers by combining their decision-making styles and demographic variables could provide a more meaningful way to identify and understand various consumer segments, and to target each segment with more focused marketing strategies.

However, little attention has been given to possible demographic differences in consumer decision-making styles, even though this could be of great interest to marketers and retailers – given the degree to which many markets are segmented based on demographics.

The original US study of Sproles and Kendall has been reflected on and extended in several countries, using mainly student samples, but little consideration has been given to non-

student samples. Radder *et al.* (2006) investigated the decision-making styles of students when purchasing clothing in the South African context; and these authors suggested that further South African studies are needed to confirm the general applicability of the CSI in the South African context – and that such studies ought to have a more general focus – such as on convenience goods.

Hafstrom *et al.* (1992) also reported that the focus of many CSI studies has been on student populations; and these authors emphasised the importance of including other samples as well. Extensive research on previous studies done through Google Scholar, Emerald, EbscoHost and other databases have shown that even though there is information available on decision-making styles, very little information can be found on consumer decision-making styles using a non-student sample and therefore the decision to focus on a non-student sample.

Demographical differences, such as those evident in ethnic background, education, age and gender groups in adult South African's decision-making styles comprise another unexplored field. Sproles and Kendall (1986) argued that a decision-making style are based on general consumer decision-making traits – which are stable across the contexts of different decisions and are not product or category-specific; and it was, therefore, decided to focus on adult consumers' decision-making styles, when purchasing general household items.

CONSUMER DECISION-MAKING AND DECISION-MAKING STYLES

Consumer decision-making

The decision-making process of a consumer can be described as the process followed by an individual who has a specific need, and is evaluating alternative products or services with different brands and prices, in order to find the best solution to meet that need. The decision-making process is divided into five stages (Cant *et al.*, 2006:193; Blythe, 2008:259-260). Problem recognition occurs when a consumer has a specific need, but is not sure how to satisfy this need. After a consumer realises that a need has arisen, the consumer starts gathering information on possible ways to satisfy that need. The evaluation of the various options involves identifying alternative solutions to a problem and assessing the positive and negative aspects or merits of each alternative.

During this stage, the prices and quality of the different products will, in all probability, be weighed up. Stage three (the evaluation of alternatives) and stage four (selecting the most desirable choice) are influenced by consumers' decision-making styles.

Different consumers employ different decision-making styles, when they evaluate alternative products and services. This style is dependent on the criteria used, such as price, quality or branding, to name but a few, and the importance of these criteria during the whole decision-making process. When selecting the most desirable alternative, which involves making a choice, the consumer now has two options: to buy the product or service, or not to buy the product or service. The process concludes with the post-purchase evaluation, when the consumer assesses the purchase – and may then respond either positively, negatively or in a neutral manner.

Decision-making styles

Research suggests that when consumers engage in the marketplace, they display relatively consistent decision-making styles, by employing certain purchasing strategies and rules to guide their decisions. As consumer decision-making styles are supposed to represent an enduring cognitive orientation towards shopping and purchasing that dominates consumer choices (Sproles & Kendall, 1986), they should be important to marketers because they are inextricably linked to purchase behaviour and sales

According to the Sproles and Kendall's scale, the Consumer Style Inventory (CSI), eight decision-making styles can be identified using 40 items. Each of these styles is associated with certain consumer characteristics. Consumers can be classified according to their different styles, and may be grouped as follows (Sproles & Kendall, 1986):

- Novelty- and fashion-conscious consumers find excitement and pleasure in new items; they need to be up-to-date with the latest styles and trends.
- Perfectionist consumers seek the very best quality products, have high expectations for consumer goods, and are concerned with the functionality and quality of products. Quality-conscious consumers are not satisfied with items that are 'good enough'. They need to find the best quality products that are

available.

- Confused by too many choices' are those consumers that have difficulty in making choices; and these consumers often experience information overload.
- Recreational, hedonistic consumers go shopping because it is an enjoyable activity, and they are considering buying a fun activity. They also enjoy the stimulation of looking for and choosing products.
- Impulsive, careless consumers do not plan their shopping trips, and are unconcerned about how much they spend, but they often regret the purchases they have made.
- Habitual and brand-loyal consumers have favourite brands and shops; and they make a habit of choosing these brands and shops.
- Brand-conscious consumers tend to buy the better-known brands that are also more expensive, as they feel that higher prices equate to better quality. They prefer 'upmarket' department stores and speciality stores, where they buy well-known brands.
- Price-conscious or value-for-money consumers look for the lowest-priced products, and often compare products and processes.

The research by Sproles and Kendall (1986) was ground-breaking work in the sense that many researchers used the CSI scale. Fan and Xiao (1998) tested the CSI with Chinese students, and proposed the following styles: brand consciousness, fashion consciousness, quality consciousness, price consciousness, impulse buying and two additional styles, information utilisation and time consciousness. Yet another study conducted in the Chinese market (that of Hiu *et al.*, 2001) concluded that not all CSI factors are relevant to all markets/countries, as they found only five factors to be valid and reliable for the Chinese market (Hiu *et al.*, 2001).

These factors were divided into three categories: trendy and perfectionist, traditional and pragmatic, and confused by over-choice. Baoku *et al.* (2010) conducted a study on rural consumers in China; and the results of the study showed that only 25 of the 40 items on the CSI could be used, but that all eight factors remained valid. For young Koreans, brand consciousness, perfectionists, recreational, confused by over-choice and impulsiveness constituted the five styles confirmed (Hafstrom *et al.*, 1992). Mokhlis (2009) investigated different decision-making styles of young adults in Malaysia, and found that seven of the original eight factors were reliable. The seven factors

were: the novelty and fashion conscious consumers, the brand-conscious consumer; the perfectionist, high-quality-conscious consumer; the consumer confused by over choice; the recreational, hedonistic consumer; the impulsive careless consumer; the variety-seeking and habitual, brand-loyal consumer.

A South African study done by Radder *et al.* (2006) used the CSI scale to determine the decision-making style of local and international students studying at South African tertiary institutions when buying fashion clothing. Their study focused on Chinese students, Motswana (students from Botswana with an African background) and Caucasian students. Differences were found in the applicability of the scale, as only three decision-making styles: perfectionist, recreational and habitual, could be confirmed across all three groups of students that they tested.

It is thus evident that different results were found and varying numbers of styles were confirmed in different studies, raising the question of the applicability of the CSI. Radder *et al.* (2006) contend that the CSI scale tends to be applicable to more-developed countries. A study by Lyonski *et al.* (1996) conducted in four different countries investigated the applicability of the CSI in economically developed and developing countries. Research was done in two economically developed countries (USA and New Zealand) and two economically developing countries (India and Greece). According to Lyonski *et al.* (1996), the CSI is more applicable in developed countries than in the developing countries. In all four countries, three of the factors proved to be stable; they were: 'brand conscious', 'novelty and fashion conscious' and 'habitual/brand loyalty'. Mokhlis (2009) conducted a study among young adults in Malaysia. The results of the study reflected similarities between U.S. consumers and Malaysian consumers. The two most prevalent styles, as identified by Mokhlis (2009), were the brand-conscious style; and the perfectionist/high-quality conscious style. These were also among the top-three factors in the studies of Sproles and Kendall (1986), Hafstrom *et al.* (1992), Canabal (2002) and Fan and Xio (1998) studies.

THE ROLE OF DEMOGRAPHICS IN CONSUMER DECISION-MAKING STYLES

Demographics can be described as consumers' personal details, such as gender, education,

ethnic group and age. Demographics affect consumer decision-making; and findings from prior research support the view that gender, age, and income could all influence the adoption of specific consumer decision-making styles (Kamaruddin & Mokhlis, 2003; Walsh *et al.*, 2001). Brown *et al.* (2011) also explored cultural, gender and age differences between the decision-making styles of consumers in Australia, Malaysia and Singapore – using conflict models – and they found various age, gender and cultural differences.

Gender

According to Hoyer and MacInnis (2001:384), gender roles, are changing; and males and females differ in terms of their consumer traits, information processing, decision-making styles and buying patterns. Arnould *et al.* (2004:516) are of the opinion that gender influences purchase and consumption situations, as physiological differences between males and females may lead to specialised service-product needs. Evidence suggests that gender difference exist in the aids used to arrive at buying decisions, as well as in the decisions themselves (Wiedmann & Walsh, 2000).

Males and females want different products, and they are likely to have different ways of thinking about obtaining these products (Mitchell & Walsh, 2004). Wesley *et al.* (2006) reported that when comparing shopping mall behaviour, females were more recreation-conscious, fashion-conscious and perfectionist consumers than males. Chen *et al.* (2012) also found differences between male and females decision-making styles of Taiwanese and American consumers across various product categories.

Mitchell and Walsh (2004) found only four common CSI decision-making styles in males and females. Their results confirmed that females were more recreational, novelty and fashion conscious, and quality-conscious; while two additional styles, variety and time-saving, were identified for male shoppers. Another study by Bakewell and Mitchell (2004) was done in England on male decision-making styles; and this author confirmed the eight existing CSI styles, in addition to four additional shopping styles: time-energy conserving, confused time-restricted, store-loyalty/low-price seeking and store-promiscuous. These shopping styles were not evident in female shoppers. It is, therefore, hypothesised that:

H₁: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for both males and females.

Age

Generation theorists propose that as the macro-environment changes, there are concomitant and distinct changes in the patterns of consumer behaviour in different age groupings (Strauss & Howe, 1997:101). Bakewell and Mitchell (2003) propose that younger consumers are more likely to develop different shopping styles to older generations. For example, they found that younger females tend to be more recreational shoppers, as well as more easily confused by over-choice than older females.

Furthermore, Weiss (2003) reported that younger consumers are “more likely to buy a product on the spur of the moment and change brands”; whereas older consumers (27 to 39 years) are “looking for products that are less mass-marketed, while also being affordable”. It is consequently hypothesised that:

H₂: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for different age groups.

Education

A study by Hoyer (1984) found that education did not affect the consumer decision-making process, when repurchasing a common convenience product. However, Vinson *et al.* (1977) reported that values vary according to age, income and education, and that these differences in values influenced the behaviour of consumers when choosing products and brands.

More recently, Wang *et al.* (2004) reported that Chinese consumers who prefer imported branded clothing tend to have a brand-loyal, brand-conscious and a quality-conscious decision-making style. In addition, this specific segment tends to be younger, but also more educated, than the other segments. Therefore, it is hypothesised that:

H₃: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for different levels of education of consumers.

Ethnic differences

Ethnic group refers to the genetic heritage group a person is born into. Arnould *et al.* (2004:495) define ethnicity in terms of frequent patterns of association and identification with common national and cultural origins of subgroups found within the larger society. Consumers from different ethnic groupings present different purchasing behaviours and attitudes (De Mooij & Hofstede, 2011). Burton (2009:26) explains that individuals in different countries share similar values, and that individuals from different ethnic groups within a society also share similar values.

Marketing is, therefore, a very complex issue in a country like South Africa, with its multicultural society. Simpson and Dore (2007:11) state that there is a growing market in South Africa, known as the “black diamonds”. This group of consumers consists of middle-class African consumers; and a distinctive characteristic of this group is that they have an ongoing commitment to their specific culture. The contradictions in the findings of the applicability of the CSI in decision-making could also be attributed to the different cultural groups, such as Chinese, American, Greek, and Korean. Hafstrom *et al.* (1992) reported similarities – but also differences – between the decision-making styles of young Korean consumers and American consumers. ‘Brand conscious’ and ‘perfectionist’ styles were in the top-three decision-making styles for both groups. However, ‘time-energy conserving’ was an additional style identified for Koreans. Mokhlis (2009) also identified some cultural differences between Indian, Korean, Chinese and American consumers.

The ‘brand-conscious’ style was number one for Korean, Chinese and Indian students, and second for the US sample. However, a style, such as ‘confused by over-choice’ was relatively more common among Indian consumers than the other three. The results also indicated that the ‘price/value’ style was more important for US and Chinese consumers than for Indians and Koreans (Mokhlis, 2009). Kamaruddin and Mokhlis (2003) also reported significant differences between ethnicity and decision-making styles. In terms of ethnicity, Chinese adolescents, compared with Malaysian adolescents, are less likely to display social and recreational decision-making styles. The finding suggests that Chinese students are less brand-conscious, less fashion-conscious and less

recreation-oriented towards shopping activities than their Malaysian counterparts. On the other hand, Indian students are less likely to display impulsive and quality-conscious styles.

A South African study done by Radder *et al.* (2006) showed that different ethnic groups within a country can be responsible for different decision-making styles. It was found that Chinese students in South Africa tend to be habitual shoppers; Motswana students are image- and quality-conscious; while Caucasian students are price-conscious shoppers. Based on the above, the following hypothesis could be formulated:

H₄: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI between African and Caucasian consumers.

AIM OF THE RESEARCH

The primary aim of the study is, therefore, to ascertain whether factors of the CSI could be confirmed in the South African context, and to explore the decision-making styles of adults when buying general household items, as well as investigating possible differences in decision-making styles of adults, based on their demographic variables such as gender, age, education and ethnic grouping.

METHODOLOGY

Focus and sample

The target population for the study consisted of adults from two different ethnic groups residing in Tshwane. Due to the low representation of other ethnic groups, such as Indians (2%) and Coloureds (2%) in this area, the study only focused on the two main ethnic groups, namely: African respondents, as they represent 69% of the population in Tshwane and Caucasian respondents, representing (27%) of the population (All Media and Products Survey (AMPS), 2012).

For the purpose of this study, an adult is defined as a person between the age of 18 and 65; and this excludes students. The sampling units were the individual adults residing in Tshwane. Since the respondents resided in the same area, they were exposed to the same marketing environment. Non-probability, convenience sampling was used, since the characteristics of this method have particular appeal due to

financial and time restraints. A sample size of 344 respondents was realised.

Data collection

A self-administered survey questionnaire was distributed to adults via e-mail and Facebook, using SurveyMonkey®, and a traditional paper-and-pencil self-administered questionnaire was administered to adults that did not have access to computers, with a fieldworker facilitating the process. SurveyMonkey® is an on-line tool that helps to design, distribute and capture electronic surveys. The fieldworkers approached people at natural gathering points, such as shops and churches, with the pen-and-paper questionnaire; and they waited while respondents independently filled out the questionnaire. A screening question was used to ensure that students were excluded from the study and respondents were instructed to use their shopping trips for general household items as a frame of reference.

The questionnaire consisted of demographic questions and 40 five-point Likert scale items ranging from: (1) strongly disagree to (5) strongly agree. These 40 items measured the eight constructs developed by Sproles and Kendall (1986); the 40 items were replicated. Although a reliability of 0,74 was observed for the original scale, some factors had relatively low values. For example, impulsiveness 0,41 (Sproles & Kendall, 1986).

To eliminate bias, the 40 items were scrambled – and not grouped together, according to the eight factors. Before being finalised, the questionnaire was pretested to ensure that the respondents understood and interpreted the questions correctly – using the participant pre-test method – with a total of 20 respondents. Participant pretesting requires that the questionnaire be field-tested by sample participants with similar backgrounds and characteristics as the desired respondents (Cooper & Schindler, 2011:358).

As the pre-test revealed no serious problems or concerns with the wording or English language used only the wording of three statements were slightly altered to ensure more clarity for South African respondents. However, care was taken not to alter the basic meaning of the statements. no adjustments were carried out. No incentives for completing the questionnaires were provided, and participation was entirely voluntary.

TABLE 1: DEMOGRAPHIC DISTRIBUTION OF THE SAMPLE

	N	%
GENDER		
Male	167	48,5
Female	177	51,5
AGE		
18-25	96	27,9
26-30	81	23,5
31-40	69	20,1
41-60	98	28,5
EDUCATION		
Schooling or matric	137	39,8
Post school diploma	71	20,7
University degree	136	39,5
ETHNICITY		
African	149	43,3
Caucasian	195	56,7
TOTAL	344	100

RESULTS

Demographic profile of respondents

The demographic data of the respondents in the sample are presented in Table 1.

Key characteristics of the sample are that the majority (71%) of the respondents were below the age of 41; there were almost equal numbers of male and female respondents; while Caucasian respondents contributed to just over 56% of the sample. More than 60% of the sample had some form of post-matric qualification.

Decision-making styles of adults

The 40-item Consumer Styles Index that Sproles and Kendall developed was used to determine whether the same eight factors could be found in the South African context. Initially, a confirmatory factor analysis using AMOS 21 was used, in an attempt to confirm the factor structure. The original factor structure imposed on the model is shown in Figure 1. Note that for the sake of clear presentation, measurement errors, as well as covariances between the latent variables, were omitted in the figure.

The results of the confirmatory factor analysis, even after the exclusion of problematic items with low squared multiple correlations and large estimated measurement errors, were very disappointing. As was noted by Byrne (1998:7-8), it is only very seldom that researchers

conduct an analysis in a strictly confirmatory manner. Initially, in the analysis, the approach is strictly confirmatory; and only thereafter, usually by considering alternative models, a model-generating approach is adopted.

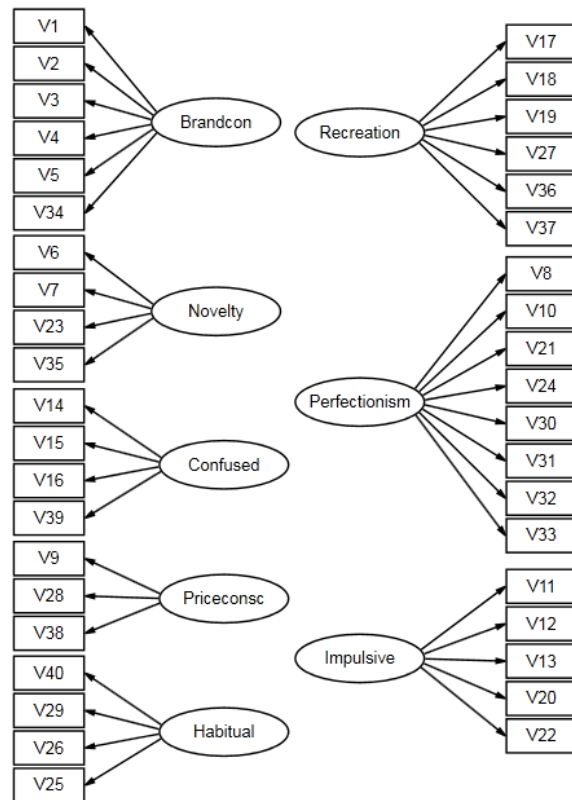
According to Hu and Bentler (1999), several fit measures should be considered to decide whether a model is an adequate representation of the data. Ideally, IFI, TLI and CFI should ideally be 0,95 and higher for excellent fit, and RMSEA should be below 0,05. After the confirmatory and model-generating phases were exhausted in the analyses, with the best obtained fit measures being IFI=0,850; TLI=0,815; CFI=0,847 and RMSEA= 0,067, the researchers deemed it more appropriate to revert back to exploratory factor analysis, than to be tempted to be data-driven in the analysis.

The rationale for this is further supported by the fact that the population in which decision-making styles were tested in this study, is different from that of previous studies; and it may, therefore, be possible that the factor structure could not replicate very well. Several previous studies such as Mitchell and Walsh (2004) and Radder *et al.* (2006) also made use of exploratory factor analysis when testing the applicability of the CSI.

Principal component exploratory factor analysis was performed on the 40 items measuring the decision-making styles; and the results are shown in Table 2. A ten-factor solution with oblique rotation offered a clear factor pattern that was fairly consistent with the patterns found by Sproles and Kendall, with *eigenvalues* ranging from 5,725 to 0,806; and the ten-factor solution accounted for 70,9% of the variance. In the analysis, items with communality estimates of less than 0,50 were omitted. Therefore, only 31 items remained in the final analysis.

Six factors were consistent with the original factors or the factors suggested by Sproles and Kendall. However, somewhat different from their suggested factor pattern the factors of impulsiveness and carelessness were found to be two separate factors in this study; whereas these were a single combined factor in the original Sproles and Kendall study. In addition, the price consciousness factor manifested as two separate factors with value consciousness, emerging as an additional factor.

The items that loaded on each of the factors were then tested for internal consistency



*Note that for the sake of simplicity, measurement errors and covariances between latent variables are not shown on the diagram.

FIGURE 1: MEASUREMENT MODEL TESTED IN CONFIRMATORY FACTOR ANALYSIS

reliability, using Cronbach's alpha coefficient. The coefficients are also provided in Table 2; and they range between 0,50 and 0,80. Six of the ten factors reported Cronbach alpha coefficients above 0,7; three were close to 0,6, but these factors contained only a limited number of items; and one factor had a reliability coefficient equal to 0,50.

The factors with reliabilities lower than 0,60 were: Factor 7 (habitual and brand loyalty), Factor 9 (careless shopper) and Factor 10 (impulsiveness). According to Hair *et al.* (1998:118), reliability coefficients above 0,60 are satisfactory for exploratory research; those above 0,70 are acceptable; and those above 0,80 are good. Therefore, only six of the original decision-making styles could be confirmed. It should, however, be noted that the results are consistent with other studies, showing low reliability for many of the CSI measures (Bakewell & Mitchell, 2004).

The seven reliable factors that describe the multi-dimensional nature of decision-making styles of the South African consumers in this study were: perfectionist, recreational shoppers, confused by over-choice, novelty/fashion consciousness, brand-consciousness, value-consciousness and price-consciousness. The three factors with low reliability that could not be confirmed were habitual/brand loyalty, impulsiveness and carelessness. The low reliability of these factors could be attributed to the fact that the item wording could be a bit confusing in the items measuring the construct, or could suggest that more items should be developed to measure these factors more accurately.

Although only seven factors were reliable, all the composite scores were calculated, since the three factors with low reliability might possibly be replicated in future studies; and therefore, they could form a base for comparison. Further, the convenience sampling method that was utilised in this study could also be a factor in the low reliabilities obtained. When few items load to a scale, then in exploratory work, it is acceptable to lower the cut-off criterion for the reliability coefficient (Hair *et al.*, 1998:349).

The results are in line with those of previous studies that used the CSI and did not manage to confirm all eight original decision-making styles (See for example Hiu *et al.*, 2001 and Hafstrom *et al.*, 1992), who both confirmed five styles in their studies in China and Korea). Mokhlis (2009) confirmed seven of the original eight styles in a Malaysian study; while a previous South African study by Radder *et al.* (2006) only confirmed six, four and two of the styles for Caucasian, Chinese and Motswanan students, respectively.

The results furthermore confirmed two of the three styles (brand-consciousness and novelty/fashions-consciousness) that proved to be stable for the USA, New Zealand, India and Greece samples (Lysonski *et al.*, 1996).

The factors that factor analysis produced were subjected to further analyses, in order to study the variations in the consumer decision-making styles across different demographic variables.

Demographics and decision-making styles

The objective of a MANOVA is to test for differences in the mean values of several dependent variables simultaneously (Lattin *et*

TABLE 2: PRINCIPAL COMPONENT ANALYSIS OF DECISION-MAKING STYLES

FACTORS	ITEM LOADING
Factor 1: Quality consciousness (Perfectionism)	$\alpha = 0,78$
V32: My standards and expectations for the products I buy are very high	0,82
V24: Getting very good quality is important to me	0,70
V30: I make a special effort to choose the very best quality products	0,69
V10: In general, I usually try to buy the best overall quality	0,63
V08: When it comes to purchasing products, I try to get the best	0,44
Factor 2: Recreational shopping	$\alpha = 0,75$
*V17: Shopping is not a pleasant activity to me	-0,85
*V18: Shopping at different stores wastes my time	-0,70
V19: Shopping is one of the enjoyable activities in my life	0,70
V37: I enjoy shopping just for the fun of it	0,59
*V27: I make my shopping trips fast	-0,47
V36: It's fun to buy something new and exciting	0,33
Factor 3: Confused by over-choice	$\alpha = 0,80$
V15: All the information I get on different products confuses me	0,86
V14: There are so many brands to choose from that I often feel confused	0,82
V16: The more I learn about products, the harder it is to choose the best	0,74
Factor 4: Novelty/fashion consciousness	$\alpha = 0,70$
V06: I keep my wardrobe up-to-date with the changing fashion	0,85
V07: Fashionable, attractive products are very important to me	0,79
V35: I usually have one or more outfits in the very latest style	0,70
V34: Nice department and speciality stores offer me the best products	0,43
Factor 5: Brand consciousness	$\alpha = 0,70$
V03: I prefer buying the best-selling brands	0,72
V05: The higher the price of a product, the better the quality	0,71
V04: The most-advertised brands are usually my choice	0,70
V01: The well-known national brands are usually my choice	0,48
V02: The more expensive brands are usually my choice	0,44
Factor 6: Value consciousness	$\alpha = 0,73$
V11: I carefully watch how much I spend	0,81
V09: I look carefully to find the best value for money	0,71
V13: I take time to shop carefully for the best buys	0,62
Factor 7: Habitual and brand loyalty	$\alpha = 0,59$
V25: I go to the same stores each time I shop	0,76
V26: Once I find a product or brand I like, I stick with it	0,69
V40: I have favourite brands I buy over and over	0,62
Factor 8: Price consciousness	$\alpha = 0,62$
V38: I buy as much as I can of my products at sale prices	0,67
V28: The lower priced products are usually my choice	0,63
V39: Sometimes it is hard to choose which stores to shop at	0,53
V23: To get variety, I shop at different stores and buy different brands	0,46
V29: I regularly change brands	0,44
Factor 9: Carelessness	$\alpha = 0,58$
V33: A product does not have to be perfect or the best to satisfy me	0,86
V31: I really don't give my purchases much thought or care	0,55
Factor 10: Impulsiveness	$\alpha = 0,50$
V20: I am impulsive when purchasing	0,75
V12: I should plan my shopping more carefully than I do	0,66
V22: Often I make careless purchases I later regret	0,52

*Items were reverse-coded for Cronbach's alpha and composite score calculations

al., 2003:389). Before a MANOVA test can be conducted, three assumptions on the nature of the data need to be addressed: the observations need to be independent; the set of dependent variables must be multivariate and normal; and the variance-covariance matrices must be comparable for all treatment groups (Hair *et al.*, 1998:347). Preliminary assumption testing was conducted without any serious violations noted. Slight violations of these assumptions have little impact on larger sample sizes (Tabachnick & Fidell, 2001:329; Hair *et al.*, 1998:349).

This was the case in this study; and with a sample size of 344, it was decided to continue with the MANOVA analysis.

The ten composite scores that were consistent with the groupings of the factor analysis were calculated. A Multivariate Analysis of Variance (MANOVA) was performed on the ten factors found in this study – with the main effects being: gender, ethnic orientation, education and age group. MANOVA allows one to conduct an omnibus test, as well as univariate tests that are individual hypotheses about the mean differences on each of the ten factors, and for

the four demographic variables. The omnibus hypotheses tested simultaneously were:

H₁: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for both males and females.

H₂: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for different age groups.

H₃: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI for different levels of education of consumers.

H₄: There are significant differences in the mean levels of consumer decision-making styles across the factors of the CSI between African and Caucasian consumers.

These four hypotheses can be tested simultaneously by a MANOVA model, where the ten CSI factors are the dependent variables, and the independent variables are gender, age group, educational level and ethnic orientation. The advantage of using a MANOVA analysis is that it assesses the differences between groups

TABLE 3: RESULTS OF MANOVA MULTIVARIATE TESTS

EFFECT	VALUE	F	HYPOTHESIS DF	ERROR DF	DF	SIG.
Intercept	Pillai's Trace	0,993	4768,276 ^b	10	327	0,000
	Wilks' Lambda	0,007	4768,276 ^b	10	327	0,000
	Hotelling's Trace	145,819	4768,276 ^b	10	327	0,000
	Roy's Largest Root	145,819	4768,276 ^b	10	327	0,000
Gender	Pillai's Trace	0,143	5,447 ^b	10	327	0,000
	Wilks' Lambda	0,857	5,447 ^b	10	327	0,000
	Hotelling's Trace	0,167	5,447 ^b	10	327	0,000
	Roy's Largest Root	0,167	5,447 ^b	10	327	0,000
Age	Pillai's Trace	0,208	2,455	30	987	0,000
	Wilks' Lambda	0,802	2,500	30	960,5	0,000
	Hotelling's Trace	0,234	2,544	30	977	0,000
	Roy's Largest Root	0,166	5,461 ^c	10	329	0,000
Education	Pillai's Trace	0,079	1,356	20	656	0,137
	Wilks' Lambda	0,922	1,355 ^b	20	654	0,138
	Hotelling's Trace	0,083	1,353	20	652	0,139
	Roy's Largest Root	0,055	1,799 ^c	10	328	0,060
Ethnicity	Pillai's Trace	0,231	9,827 ^b	10	327	0,000
	Wilks' Lambda	0,769	9,827 ^b	10	327	0,000
	Hotelling's Trace	0,301	9,827 ^b	10	327	0,000
	Roy's Largest Root	0,301	9,827 ^b	10	327	0,000

a. Design: Intercept + Gender + Age + Education + Ethnicity

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

TABLE 4: MEAN LEVELS AND ANOVA RESULTS FOR DIFFERENT MALES AND FEMALES

DECISION-MAKING STYLES	MALE	FEMALE	ANOVA ¹ SIGNIFICANCE
Quality consciousness	3,94	3,81	0,079
Recreational shopping	2,93	3,40	0,000***
Confused by over-choice	2,69	2,90	0,036**
Novelty/fashion consciousness	2,94	3,13	0,019**
Brand consciousness	3,15	3,06	0,258
Value consciousness	2,83	2,77	0,242
Habitual and brand loyalty	3,54	3,53	0,913
Price consciousness	3,11	3,22	0,052*
Carelessness	3,51	3,39	0,203
Impulsiveness	3,07	3,08	0,943

*** Significant at $\alpha=0,01$

** Significant at $\alpha=0,05$

* Significant at $\alpha=0,10$

¹ For two groups, Anova and independent t-test results are identical

collectively, as well as individually, by using univariate tests. The MANOVA test results are provided in Table 3.

The Wilks' lambda is one of the tests that is most immune to violations of the assumptions underlying MANOVA, without compromising on power (Hair *et al.*, 1988:35). The Wilks' lambda value indicates a significant difference ($p < 0,05$) for three of the four main effects in the model. The MANOVA results in Table 3 show that the data seem to provide support for H_1 (gender), H_2 (age group) and H_4 (ethnic group). Therefore, it may be inferred that the data in this study support the notion that consumer decision-making – as measured on the ten CSI factors – are significantly different for gender, age and ethnic groups, but educational level does not seem to have any significant effect on consumer decision-making style at the multivariate level of analysis.

Because the multivariate test of MANOVA shows only an overall significant difference, where a significant Wilks' lambda result was found, it was followed with Duncan's pairwise comparison tests. The results of the individual tests are presented in Tables 4 to 7.

Gender differences The mean values of the two gender groups and the ANOVA results for each of the ten dependent variables are shown in Table 4.

From the mean values in Table 4, it is evident that the dominant decision-making style of both gender groups is quality consciousness,

followed by habitual/brand loyalty. Although males had slightly higher mean values for quality consciousness and brand loyalty, these differences were not significant. Females tend to engage significantly more in recreational shopping than males do ($\alpha=0,01$); they are significantly more novelty/fashion-conscious ($\alpha=0,05$); and tend to be more price-conscious than men ($\alpha=0,10$). Females were significantly more confused by over-choice than males ($\alpha=0,05$).

Age differences The ANOVA results for the ten CSI factors, as well as the *post hoc* comparisons, are set out in Table 5 for the different age groups.

From Table 5, it is evident that all four age groups seem to be quality-conscious and habitual shoppers, with the age group 41-60 years being the most quality-conscious. Younger consumers (aged 18-25 and aged 26-30) tend to be more price-conscious, while the older consumers tend to be more brand-loyal.

The follow-up ANOVA univariate analyses showed that age differences were significant for the following dependent variables: recreational shopping, impulsive shoppers and novelty/fashion consciousness. The Duncan *post hoc* tests revealed interesting differences. The younger consumers are significantly more prone to be directed by recreational shopping decision styles compared with older consumers ($\alpha=0,01$). Not surprisingly, younger consumers are also significantly more fashion-conscious than the older consumers ($\alpha=0,01$), with the age group of

TABLE 5: HOMOGENEOUS SUBSETS AND ANOVA RESULTS FOR AGE GROUPS

CSI DIMENSION	AGE	N	SUBSETS ¹			ANOVA SIG
			1	2	3	
Quality consciousness	18-25	96	3,773			
	26-30	81	3,852			
	31-40	69	3,901			0,680
	41-60	98	3,933			
	Sig.		0,152			
Recreational shopping	41-60	98	2,940			
	31-40	69	2,978			
	26-30	81		3,342		0,000***
	18-25	96		3,365		
	Sig.		0,736	0,837		
Confused by over-choice	18-25	96	2,646			
	41-60	98	2,769			
	26-30	81	2,872			0,237
	31-40	69	2,903			
	Sig.		0,099			
Novelty/Fashion consciousness	41-60	98	2,796			
	31-40	69	2,964	2,964		
	18-25	96		3,107	3,107	0,000***
	26-30	81			3,293	
	Sig.		0,144	0,213	0,105	
Brand consciousness	18-25	96	3,013			
	31-40	69	3,093			
	26-30	81	3,128			0,726
	41-60	98	3,151			
	Sig.		0,234			
Value consciousness	41-60	98	2,772			
	26-30	81	2,819			
	31-40	69	2,831			0,568
	18-25	96	2,899			
	Sig.		0,132			
Habitual and brand-loyal	18-25	96	3,497			
	41-60	98	3,527			
	26-30	81	3,535			0,172
	31-40	69	3,662			
	Sig.		0,172			
Price consciousness	41-60	98	3,071			
	31-40	69	3,165			
	18-25	96	3,179			0,235
	26-30	81	3,185			
	Sig.		0,182			
Careless	18-25	96	3,370			
	41-60	98	3,418			
	31-40	69	3,420			0,454
	26-30	81	3,580			
	Sig.		0,157			
Impulsive	31-40	69	2,913			
	41-60	98	2,973			
	18-25	96	3,132	3,132		0,007***
	26-30	81		3,230		
	Sig.		0,077	0,400		

*** Significant at $\alpha = 0,01$ ** Significant at $\alpha = 0,05$ * Significant at $\alpha = 0,10$ ¹ Duncan subsets with $\alpha = 0,05$

TABLE 6: HOMOGENEOUS SUBSETS AND ANOVA RESULTS FOR EDUCATION GROUPS

SCI DIMENSION	EDUCATIONAL LEVEL	N	SUBSETS ¹		ANOVA SIG
			1	2	
Quality consciousness	University	136	3,796		0,834
	Post school diploma	71	3,868		
	Schooling or matric	137	3,927		
	Sig.		0,174		
Recreational shopping	Schooling or matric	137	3,134		0,413
	Post school diploma	71	3,171		
	University	136	3,183		
	Sig.		0,652		
Confused by over-choice	University	136	2,662		0,271
	Post-school diploma	71	2,765		
	Schooling or matric	137	2,920		
	Sig.		0,056		
Novelty/Fashino- conscious	Post school diploma	71	2,919		0,156
	University	136	2,963	2,963	
	Schooling or matric	137		3,162	
	Sig.		0,668	0,054	
Brand consciousness	University	136	2,941		0,097*
	Post-school diploma	71	3,020		
	Schooling or matric	137		3,288	
	Sig.		0,405	1,000	
Value consciousness	Post-school diploma	71	2,756		0,644
	Schooling or matric	137	2,759		
	University	136		2,941	
	Sig.		0,962	1,000	
Habitual and brand-loyal	Schooling or matric	137	3,484		0,881
	Post-school diploma	71	3,512		
	University	136	3,630		
	Sig.		0,164		
Price consciousness	University	136	3,010		0,020**
	Post-school diploma	71		3,203	
	Schooling or matric	137		3,254	
	Sig.		1,000	0,460	
Careless	Post school diploma	71	3,416		0,647
	Schooling or matric	137	3,431		
	University	136	3,471		
	Sig.		,671		
Impulsive	University	136	2,870		0,015**
	Post school diploma	71		3,094	
	Schooling or matric	137		3,246	
	Sig.		1,000	0,149	

*** Significant at $\alpha=0,01$

** Significant at $\alpha=0,05$

* Significant at $\alpha=0,10$

¹ Duncan subsets with $\alpha=0,05$

26-30 years being the most fashion-conscious. Younger consumers are also significantly more impulsive than older consumers ($\alpha=0,01$).

Educational differences The ANOVA results for the different levels of education are provided in Table 6.

Respondents' highest qualification reported was used as an indicator of their level of education.

TABLE 7: MEAN LEVELS AND ANOVA RESULTS FOR DIFFERENT ETHNIC GROUPS

DECISION-MAKING STYLES	ETHNIC GROUP		ANOVA ¹
	AFRICAN	CAUCASIAN	SIG.
Quality consciousness	3,952	3,793	0,054*
Recreational shopping	3,268	3,067	0,028**
Confused by over-choice	2,872	2,720	0,190
Novelty/Fashion-conscious	3,222	2,852	0,000***
Brand-conscious	3,322	2,888	0,000***
Value-conscious	2,626	2,980	0,000***
Habitual and brand-loyal	3,362	3,699	0,000***
Price consciousness	3,232	3,097	0,032**
Careless	3,510	3,385	0,252
Impulsive	3,175	2,980	0,041**

*** Significant at $\alpha=0,01$

** Significant at $\alpha=0,05$

* Significant at $\alpha=0,10$

¹ For two groups, Anova and independent t-test results are identical

Respondents with schooling or matric qualifications were slightly ($\alpha=0,10$) more brand-conscious than those with some post-school qualifications; those with university qualifications were significantly less price-conscious ($\alpha=0,05$); and they were also significantly less impulsive ($\alpha=0,05$) than those with a post-school diploma or some schooling and matric.

Ethnic differences Table 7 provides the mean values for the two ethnic groups and the ANOVA results for each dependent variable.

From the mean values, it seems as if African consumers are slightly more quality-conscious ($\alpha=0,10$); they engage significantly more in recreational shopping ($\alpha=0,05$); are significantly more novelty/fashion-conscious ($\alpha=0,01$); and they are significantly more brand-conscious ($\alpha=0,01$), price-conscious ($\alpha=0,05$); and significantly more impulsive than their Caucasian counterparts ($\alpha=0,05$). However they are significantly less value-conscious ($\alpha=0,01$) and they are significantly less habitual and brand-loyal ($\alpha=0,01$).

DISCUSSION

The primary purpose of the study was to explore the decision-making styles of adults, in order to establish whether the CSI decision-making styles could be replicated in the South African context. Furthermore, demographic differences in decision-making styles were explored. The results suggest that the majority of the factors of the CSI are useful within the South African context; but within a more mature adult (over 60)

context, other factors or styles could possibly still emerge.

The results in Table 2 shows that the results for the internal consistency reliability, Cronbach's alpha coefficient, are mostly above 0,7. The results confirmed six of the original proposed eight CSI factors; and they thus provide evidence that the CSI is useful in the South African context. In addition, the factor of impulsiveness and carelessness were found to be two separate factors in this study; while they comprised a single factor in the original CSI (Sproles and Kendall, 1986). A tenth factor emerged in this study, namely value-consciousness.

The literature suggests that male and female shoppers have different decision-making styles. The results confirm this view and shows that female shoppers tend to engage significantly more in the recreational decision-making style; and they are significantly more novelty- and fashion-conscious than males.

The finding by Bakewell and Mitchell (2004), that men are price-conscious shoppers was confirmed; but it was found that female shoppers ($M=3,22$) are slightly ($p=0,052$) more price-conscious than men ($M=3,11$) in this study. The study's findings are also in line with those of Wesley *et al.* (2006), who found that females were more prone to recreational shopping and more fashion-conscious than men.

However, the South African results suggest that

males are slightly more perfectionist or quality-conscious than females. And these findings are the exact opposite of Wesley's findings.

Hypothesis 1 stated that male and female adults have different decision-making styles. Based on the aforementioned evidence, the null hypothesis is rejected, and Hypothesis 1 is supported.

Age difference also yielded interesting results. Younger consumers tend to be significantly more driven by recreational shopping styles, and are significantly more fashion-conscious, and also more impulsive than older consumers. Hypothesis 2 is thus supported. These results echo the findings of Bakewell and Mitchell (2003), who found that younger consumers are more recreational shoppers.

However, Bakewell and Mitchell (2003) also found that younger consumers are more 'confused by over-choice'; but these results were not confirmed in the South African study.

The MANOVA results depicted in Table 3 indicate that consumers' educational level does not have any significant effect on consumer decision-making styles. However, some significant differences were identified at univariate level (ANOVA) level. Consumers with lower levels of education (schooling or matric qualifications) were slightly more brand-conscious; and those with higher levels of education (university qualifications) were significantly less price-conscious and less impulsive than those with lower levels of education.

The last hypothesis stated that adults from different ethnic groups differ in their decision-making styles. It is evident from the findings that the decision-making styles of African and Caucasian consumers are significantly different. This study supports the overall view by Radder *et al.* (2006); however, Radder *et al.* (2006) found that Caucasian shoppers are more price-conscious. The current research found that both Caucasian and African consumers are price-conscious shoppers; although Caucasian shoppers ($M=3,097$) were found to be significantly less price-conscious than African consumers ($M=3,232$). African consumers are more quality-conscious, they engage in recreational shopping, are more novelty/fashion- and brand-conscious, and more impulsive than Caucasian consumers.

IMPLICATIONS

The dimensionality and structure of decision-making styles of adult consumers were explored in this study; and the findings were compared with those of previous studies. Several similarities; and a few small differences were identified. The results of this study provide useful information to marketers who are interested in the decision-making styles of South African adult consumers, in order to be more successful in their marketing and segmentation efforts. Consumer decision-making styles can also be useful because they can offer insights into underlying product- and service-preferences.

For example recreation-focused female shoppers present an attractive target group, as they like shopping just for the fun of it, and are more likely to respond positively to up-market shopping centres with different stores, leisure activities and restaurants. These women are also likely to respond to recreational facilities. The study confirmed that relatively few men associate shopping with enjoyment and recreation.

The six decision-making styles that were replicated in the South African study were: perfectionist, recreational shoppers, confused by over-choice, novelty/fashion-conscious, and brand-conscious, value-conscious and price-conscious although value and price conscious manifested as two separate styles.

The adult consumers in Tshwane take time to search for the best buys in terms of value for money; and they also keep a watchful eye on their spending. Consumers that are value-conscious are looking for 'value-for-money' products and 'best buys'.

Consumers can use their own score in the CSI to identify their decision-making style. For example, those that score high on components of the 'perfectionist' style need to look for real measures of quality rather than perceived quality, based merely on price and brand.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

A limitation of this study is that the results cannot be generalised to the broader population of South Africa, since non-probability sampling was used, and the data were collected on a convenience basis. Owing to time and financial

constraints, only a limited geographical area was covered. For future research, a larger geographical area should be covered, in order to include a large sample from different ethnic groups in South Africa.

Future studies could also consider including income variables or proxies to income variables, such as the Living Standards Measure (LSM) (Haupt, 2006). In addition, personal values, such as Schwartz's values (Schwartz, 1992:60) could prove useful in explaining the underlying reasons for different decision-making styles; and this has not yet been explored.

Ungerer and Strasheim (2011) found that LSM moderates the relationship between personal values and satisfaction with life; and it may therefore, be worthwhile to explore the relationship between personal values and decision-making styles, together with the possible intervening effect of demographic variables on the nature of such a relationship.

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