

The moderating effect of living standards on the relationship between individual-level culture and life satisfaction: A value segmentation perspective

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ABSTRACT

Culture is one of the most fundamental determinants of a person's personality or motivational drives. Culture infuses personalities at both collective and individual levels and this influence affects the attitudes and behaviour of consumers and their experiences of life satisfaction. Life satisfaction has been found to be related to the consumption of material goods, making it an aspect of interest to marketers. Satisfaction with life has also been found to be related to income at aggregate cultural and national levels, but at an individual level, the relationship is weaker. Based on a nationally representative sample ($n = 2\,566$) of South African consumers, this study investigated the relationship between their individual-level culture and life satisfaction across different levels of living standards. It was found that living standards have a moderating effect on the relationship between allocentrism and life satisfaction, with the effect gradually changing from a significantly negative effect for low levels of living standards to significantly positive effects with higher levels of living standards. For low levels of living standards, the relationship between idiocentrism and life satisfaction were positive but weak, while the relationship was not significant for higher levels of living standards. Statistical analyses included multi-group second-order confirmatory factor analysis to assess the factorial validity and measurement equivalence of the instrument, while multi-group structural equation modelling was used to test the hypotheses of interest in the study. The results suggest that living standards have a moderating effect on the relationships between higher-order individual cultural values and life satisfaction.

INTRODUCTION

Consumption plays an essential role in many peoples' lives (Ganglmair-Wooliscroft and Lawson, 2011), and this role may become more entrenched, as more consumers are promised greater well-being in the promotion of many goods and services. Higgs (2007) contends that the maximising of well-being includes getting the most out of life. Happiness and well-being is what most people want and is therefore what marketers and advertising messages often promise if they intend to increase the perceived value of their products and services. This argument may explain why consumer researchers regard the relationship between consumption and subjective well-being as fundamental in understanding consumer behaviour (Ahuvia, 2002). Within-cultural differences at the level of individual culture and their effects on consumer behaviour, however, need to be considered (De Mooij, 2004) in order for marketers to maximise the efficiency of their marketing endeavours.

Although some marketers have used ethnic group membership for segmentation purposes, the need for alternative segmentation methods based on socio-economic development has led to the introduction of the well-known framework for market segmentation, known as the Living Standards Measure (LSM) (see Haupt, 2006). This segmentation approach was developed by the South African Advertising Research Foundation (SAARF), and the methodology has been found to be useful by both practitioners and scholars in understanding differences in media consumption patterns as well as consumer attitudes and behaviour (<http://www.saarf.co.za>). Ethnic group is not a segmentation variable in the LSM, which makes it more useful in post-apartheid South Africa with its fast changing socio-economic landscape.

Effective market segmentation allows marketers to focus their efforts on the subset of consumers that are most likely to purchase their products and services, thereby targeting marketing communications more efficiently, and creating marketing messages that match consumers' aspirations and expectations more effectively. Authors have long argued that the benefits of demographic segmentation are limited and should include more personal variables such as motivations, values and lifestyles (see Wells, 1975). Studies have also shown that psychometric segmentation can be valuable (Steenkamp and Ter Hofstede, 2002; Thompson and Kaminski, 1993; Novak and MacEvoy, 1990; Kahle and Kennedy, 1989) and improve marketing efficiency. More recently, in a domain-specific study, Doran (2009) used Schwarz's (2006; 1992) value classification to examine the relationship between value drivers and fair trade consumption, and found several significant relationships between values and consumption patterns. It is thus important to investigate variables such as personality and motivational drivers for the purpose of effective market segmentation, in addition to income or LSM grouping, or demographic variables.

Therefore, relationships between consumers' individual-level culture and their life satisfaction can be useful segmentation criteria to target specific products and/or services, and customise marketing messages, thereby enhancing the effectiveness of market segmentation.

OBJECTIVES OF THE STUDY

The primary objective of this study was to investigate the relationships between personality measures and life satisfaction across different groups of consumers, classified according to their living standards. To this end, the aim was to investigate whether there is a progressive change of the relationships between personality measures and life satisfaction across different levels of living standards.

RATIONALE OF THE STUDY

Al-Wugayan and Suprenant (2006) refer to a growing concern that most existing knowledge about consumer behaviour has been derived from research undertaken in America and a few Western European nations, comprising less than 6% of the world population. They have called for research that investigates whether and how psychological aspects such as individual-level culture relate to outcome variables such as life satisfaction in other countries such as South Africa. A study based on an intracultural approach to investigate consumer behaviour would provide insights into the South African consumer market, which corresponds with De Mooij's (2004) observation that intracultural differences and their effects on consumer behaviour need more exploration.

Higgs (2007) points out that South Africa is particularly suited to cross-cultural market research because of its

multicultural diversity. Culture is dynamic, and may change over time because of socio-economic changes and social changes such as industrialisation and modernisation (Wissing, Wissing, Du Toit and Temane, 2006; De Mooij, 2004). Such changes may lead to changes in the cultural orientation of South African consumers that cut across the individualist-collectivist assumption. Knowledge about these changes may provide valuable information to those interested in marketing products and services in a local context.

INDIVIDUAL-LEVEL CULTURAL VALUES AND LIFE SATISFACTION

This study investigates the contribution to effective market segmentation that can be made by studying the relationships between individual-level cultural values and life satisfaction amongst a representative sample of South African consumers across different levels of living standards. The literature review considers the ways in which satisfaction with life (SWL) is influenced by income, culture, personality and values.

Subjective well-being and satisfaction with life

Scholars interested in subjective well-being generally agree that an essential ingredient of the good life is that people like their lives (Diener, Lucas and Oishi, 2002). According to Sirgy (2002), life satisfaction, one of the components of subjective well-being, can be construed as a value that is universally shared and central to life. It may be regarded as a terminal value, a desired end-goal that consumers are striving to achieve.

Diener (1984) originally proposed that subjective well-being consists of three distinct components: life satisfaction, positive affect and negative affect. According to Gilman (2001), life satisfaction is regarded as a key indicator of subjective well-being as it is less fleeting than the affect component of subjective well-being. For Diener (2006), 'subjective well-being' is an umbrella term for different valuations that people make regarding their lives, bodies, minds and circumstances, as well as the events they experience, and it includes both affective and cognitive components.

According to Sirgy, Lee and Rahtz (2007), consumers may unconsciously evaluate products for their contribution towards their well-being and consequently their quality-of-life. Marketing endeavours influence consumers' quality-of-life because it affects their satisfaction in the consumer domain (Lee, Sirgy, Larsen and Wright, 2002).

Marketing messages frequently promise increased well-being or life satisfaction. The trend towards well-being marketing - a business philosophy that guides managers to develop and implement marketing strategies that focus on enhancing consumer well-being throughout the

consumer/product life cycle - has created opportunities to develop and expand market research beyond product and service satisfaction, to include the concept of life satisfaction (Sirgy and Lee, 2008).

According to Kasser (2004), consumers are bombarded with powerful messages that the good life is “the goods life”. Advertisements often imply that happiness and well-being emanate from attaining wealth, and from the purchase and acquisition of goods and services. Consumers may consequently believe that they need and want certain products and services to enhance their well-being. In fact, materialism - the importance ascribed to the ownership and acquisition of material goods - has been singled out as the dominant consumer ideology in modern consumer behaviour (Cross, 2004). According to Richins and Dawson (1992), material values include three domains: the use of possessions to judge success, how central possessions are in a person’s life, and how strongly a person believes those possessions lead to happiness and life satisfaction.

Higgs (2007) points out that an understanding of how people differ is essential in marketing research. In order to advertise more effectively, marketers need to know what the so-called “good life” means to consumers across various consumer segments.

The relationship between income and life satisfaction

It has been consistently confirmed in the subjective well-being (SWB) literature that a very strong relationship exists between income and subjective well-being at a national level (Diener and Biswas-Diener, 2002; Ahuvia, 2002). Ahuvia (2002: 25) summarises the relationship as follows: “economic development increases subjective well-being by creating a cultural environment where individuals make choices to maximize their happiness rather than meet social obligations.”

Despite not testing this notion empirically, support for it has been found by Chia, Egri, Ralston, Fu, Kuo, Lee, Li and Moon (2007) in a study that involved five Asian countries.

In search of a deeper understanding of the relationship between income and SWB, Diener, Sandvik, Seidlitz and Diener (1993) investigated whether absolute income or relative income relates more strongly to happiness. The absolute income argument was initially proposed by Veenhoven (1991), who claimed that higher levels of income enable people to meet basic needs, and therefore income, especially at lower levels, has a direct influence on happiness or life satisfaction. Findings reported by Diener *et al.* (1993) concur with this notion, suggesting that income above the level of subsistence living seems to be strongly related with SWB at the aggregate level.

The relationship between subjective well-being and income at the individual level is also positive, but it is not particularly strong, and the underlying mechanisms of this relationship are still not well understood. For instance, aspects such as personal values and motives need to be considered along with income.

The relative income idea initially investigated by Easterlin (1974), proposes that the effect of income on happiness must be seen relative to expectations, habits and social comparisons that influence the effect of income on subjective well-being. However, the findings of Diener *et al.* (1993) indicate that relative income does not seem to be related to long-term SWB.

The relationship between culture and life satisfaction

The issue of what makes a good life is fraught with cultural assumptions (Wierzbicka, 2009). Societies and individuals differ in the degree to which they believe that life satisfaction is a key attribute of the good life (Diener and Suh, 1997). International surveys of life satisfaction have shown that nations differ from each other, and that ethnic groups within nations differ from each other as well (Diener *et al.*, 1993). One factor underlying these differences is the cultural value dimension of collectivism versus individualism. Hofstede (1980) has defined the one end of this continuum as the extent to which group-oriented goals and needs are paramount (collectivism); at the other end the emphasis is solely on the individual’s needs (individualism).

Cultures that endorse individualism, such as those of the USA and Australia, value autonomy, competitiveness, achievement and self-sufficiency (Triandis, 1994). In contrast, the collectivism of Asian and African cultures characteristically value interpersonal harmony and group solidarity (Bond, 1986). Diener and Diener (1995) have found that the link between life satisfaction and satisfaction with the self is stronger in individualistic nations than in collectivistic countries.

Therefore, it seems that different criteria play a role in different cultures to judge satisfaction with one’s life, and these criteria are based on the values of the culture being studied (Oishi, Diener, Suh and Lucas, 1999). In collectivistic cultures, life satisfaction tends to be influenced by social and interpersonal concerns. Oishi and Diener (2001) have found that Asians report lower life satisfaction than Americans do from personal goals undertaken for fun and enjoyment, and benefit more from interpersonally-oriented goals designed to please friends and parents. For collectivists, attending to others’ concerns arouses pleasant other-oriented emotions and validates important others, as well as one’s sense of self. By contrast, the self-construal steered by individualistic cultures is defined more autonomously and is validated by acting in line with one’s values and interests (Hermann, Lucas and Friedrich, 2008: 157).

Individuals in a culture are likely to differ in the degree to which they adopt a more collectivist or individualist set of values. Fadil, Williamson and Knudstrup (2009) therefore believe that a theoretical framework based on personal values must consider intracultural variability, particularly as national cultural values tend not to be stable over time, slowly changing because of the global influences that affect cultures. The work of Triandis, Leung, Villareal and Clack (1985) and Triandis, Bontempo, Villareal, Asai and Lucas (1988) are helpful in explaining these differences at the individual level of analysis. According to Triandis (1989), the terms 'idiocentrism' and 'allocentrism' should rather be used to accommodate the deviations from the aggregate culture's position in the individualist/collectivist continuum conceptualised by Hofstede (1980). The terms 'idiocentrism' versus 'allocentrism' refer to person-level individualism and person-level collectivism respectively. Idiocentrics are characterised by an independent self, and they consider their own attitudes, personal needs and rights more than do allocentrics, who tend to emphasise the interdependent self, leading to a greater consideration of norms, obligations, and duties (Fadil *et al.*, 2009).

Findings related to idiocentrism versus allocentrism (individualism-collectivism) at the individual level have been inconsistent. In some studies idiocentric individuals reported higher degrees of well-being, while the reverse was true in other studies. According to Ratzlaff, Matsumoto, Kouznetsova, Raroque and Ray (2000), the relationship between individual-level culture and life satisfaction is probably more complex than can adequately be accounted for in a uni-dimensional direct relationship. The concept of cultural fit proposed by Lu (2006) may explain some of the contradictory findings on the culture-life satisfaction congruency, because context issues also need to be considered. For example, if the larger cultural milieu is individualistic, idiocentric individuals may find it easier to experience life satisfaction (Ratzlaff *et al.*, 2000).

Hofstede's (1980) cultural dimensions should be treated as two ends of a continuum, and individual consumers may vary within each dimension as well (Yang, 2004). That said, earlier studies identified differences between idiocentric and allocentric consumers in terms of the product attributes and advertising appeal type that they prefer (Dutta-Bergman and Wells, 2002). Zourrig, Chebat and Toffoli (2009) further incorporate consumers' idiocentrism and allocentrism tendencies as moderators in their conceptual model of consumer 'revenge behaviour'. In similar vein, Yang (2004) points out that segmentation based on the idiocentrism-allocentrism dimension should improve targeting and create more effective marketing communications. Triandis *et al.* (1988; 1985) point out that people classified as idiocentric or as allocentric are found in different proportions in all cultures, and across socio-economic groups. This distinction may also influence South African consumers' life satisfaction, particularly because different relationships between

idiocentrism-allocentrism and life satisfaction have been reported (Ratzlaff *et al.*, 2000). This relationship, however, is complicated in that individuals and societies differ in the importance that they attach to life satisfaction (Suh, 2000).

Culture as an individual psychological construct

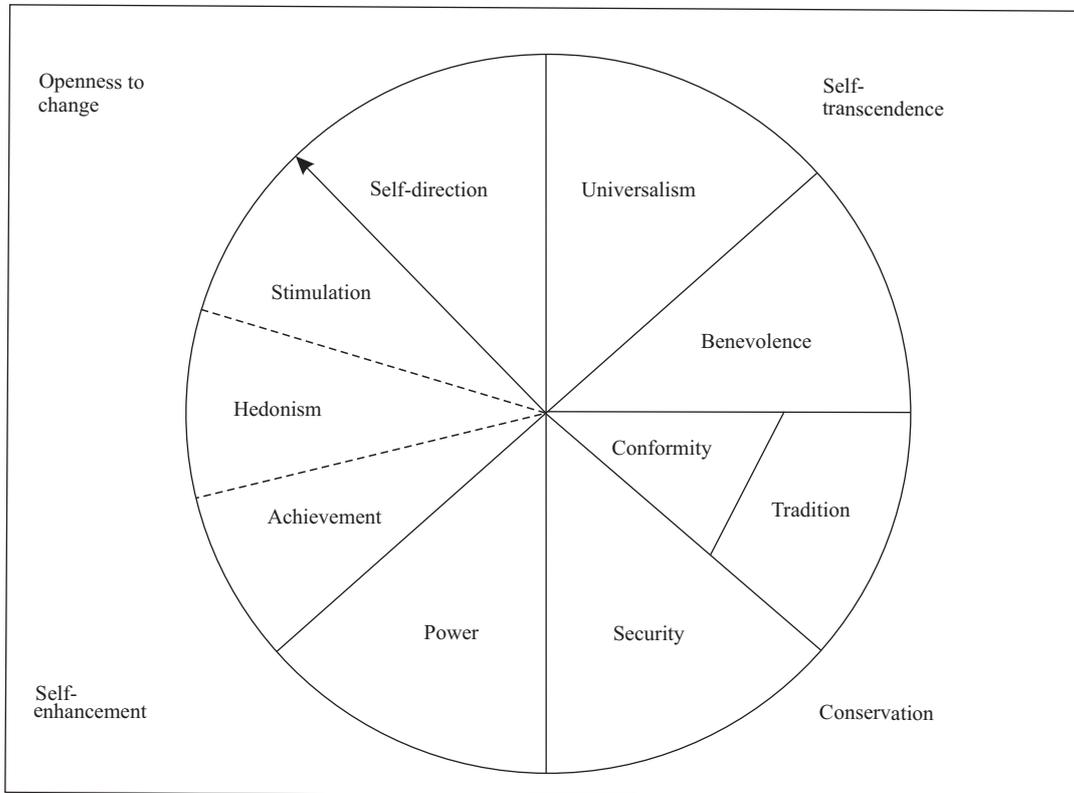
Ratzlaff *et al.* (2000) use the term 'ecological culture' to refer to the cultural context(s) or national culture of an individual (at aggregate cultural and demographic levels), and 'individual culture' to reflect an individual's degree of participation in the values, beliefs, and traditions of those cultural contexts. Because people in a particular culture may differ in the degree to which they adopt and engage in the attitudes, values, beliefs and behaviours representing that culture, their individual culture may be either similar to, or different from the larger ecological culture. At the ecological level, Allik and McCrae (2004) cluster white South Africans as being individualistic and black South Africans as being collectivistic in cultural orientation.

As pointed out earlier, individualism-collectivism is regarded as an essential determinant of cultural variability. Triandis (1989) terms the individual levels of analysis of the constructs *idiocentrism* and *allocentrism* to refer to the person-level personality attributes that correspond to individualism and collectivism on the cultural level. A person with an allocentric (interdependent) orientation will prefer him- or herself to be embedded in social contexts, and not to be too different from others. Someone with an idiocentric (independent) view of the self will wish to be autonomous and independent, and value his or her unique personality (Stromberg and Boehnke, 2001).

Work by Triandis *et al.* (1988; 1985) demonstrates that there is a psychological level or a personality dimension to idiocentrism, which reflects an individualist orientation, while allocentrism reflects a collectivistic orientation. Previous studies have found a positive relationship between idiocentrism and both self-reliance and self-achievement, while allocentrism is related to social support. In addition, these relationships vary between cultural groups (Fadil *et al.*, 2009).

According to Ratzlaff *et al.* (2000), several studies demonstrate the importance of identifying individualism-collectivism as both individual-level and ecological-level constructs. By doing so, individual differences on this dimension can be distinguished in larger cultural groups, and relationships between it and other psychological constructs on the individual level can be investigated. An understanding of individualism-collectivism at the individual level may thus consequently also be useful in market segmentation. Dutta-Bergman and Wells (2002) also point out that although idiocentrism and allocentrism have been studied in different areas of applied psychology, their potential role in consumer behaviour and individual lifestyle issues has not yet been investigated substantially.

FIGURE 1
THEORETICAL MODEL OF RELATIONS AMONG MOTIVATIONAL TYPES
OF SCHWARTZ'S VALUE ORIENTATIONS



(Schwartz, 1994: 24)

The relationship between psychographic variables and life satisfaction

In a search for a deeper understanding of the underlying factors, in addition to income, that could explain subjective well-being, Diener, Suh, Lucas and Smit (1999) reviewed the results of various researchers spanning 30 years, and found substantial evidence across several studies that personality was one of the most consistent predictors of subjective well-being at the individual level, although the relationships were not always particularly strong. Their review of the literature once again confirmed that there is a very strong positive association between income and subjective well-being across and within nations at aggregate levels, where the individual differences are averaged out, which almost artificially creates relatively strong correlations between income and well-being across nations, but at individual level, the relationships are positive but weak, and even among extremely rich individuals, income is not a strong indicator of subjective well-being.

Motivational personal values according to Schwartz's values theory

Schwartz (2006; 1992) presents a theory of the basic values that people in all cultures recognise. It identifies ten motivationally distinct value orientations and specifies the dynamics of opposition and congruence among these values, as reflected in the circular structure shown in Figure 1.

Schwartz (2006) views values as being organised along two bipolar dimensions. As is evident from Figure 1, one dimension refers to 'openness to change' versus 'conservation'. This dimension emphasises one's own independent thought and action and favouring change (self-direction and stimulation), against submissive self-restriction, the preservation of traditional practices, and stability (security, conformity and tradition).

The second bipolar dimension deals with 'self-enhancement' versus 'self-transcendence'. The discrepancy here is

between an acceptance of others as equals, and concern for their welfare (universalism and benevolence) on the one hand, as opposed to pursuing dominance over others, and one's own relative success (power and achievement) on the other. The two ends of these bipolar dimensions embody values that are postulated in this study to be the closest to the allocentric versus idiocentric view of individual culture that is probably more familiar to researchers than the bipolarity of 'self-enhancement' versus 'self-transcendence'.

In this study, the focus is limited to the four value constructs, achievement and power on the one extreme of Schwartz's continuum of values, and universalism and benevolence at the other extreme of the axis.

According to Levenson, Jennings, Aldwin and Shiraishi (2005), self-transcendence involves a reduced attachment to one's own point of view, and an increased concern for others, including both past and future generations. These values are termed 'universalism' and 'benevolence' in the self-transcendence dimension in Schwartz's model. According to Schwartz (1992), 'universalism' refers to an understanding, appreciation, tolerance and protection of people and nature. Indicative of benevolence is a concern for the welfare of close others and for positive interactions with them (Hofer, Busch, Chasiotis and Kiessling, 2006).

At the polar opposite to self-transcendence, the two values that represent self-enhancement are firstly 'power', which is defined as the attainment of social status and dominance over people and resources (Schwartz, 1992), and secondly 'achievement', which is defined as the pursuit of success through demonstrating competence according to social standards (Le, 2011).

As noted before, Triandis *et al.* (1988; 1985) suggested that allocentrism reflects a collectivistic orientation, which we postulate in Schwartz's theory of values are most closely related to the self-transcendence orientation, a higher-order dimension of universalism and benevolence. On the other extreme, Triandis *et al.* (1988; 1985) defined idiocentrism to be typical of an individualist orientation, which we postulate is most closely approximated by self-enhancement, the higher-order dimensions of power and achievement.

This study proposes that self-transcendence and self-enhancement can be viewed as two higher-order dimensions from which the lower-order constructs emanate (universalism and benevolence for self-transcendence; and achievement and power for self-enhancement). However, instead of using the terms 'self-transcendence/self-enhancement', the terms 'allocentrism/idiocentrism' are preferred, since these terms are more familiar in the broader literature of individual culture than the bipolar dimensions of 'self-transcendence' versus 'self-enhancement'.

The relationship between the Schwartz's value constructs and satisfaction with life

Different value constructs relate differently to well-being, depending on the specific motivational orientation of individuals (Sagiv and Schwartz, 2000). Studies that include the value dimensions on the openness to change versus conservation bipolar dimensions have been replicated across different samples and cultures (Schwartz, 1994), and have been found to correspond consistently in expected ways to subjective well-being (Roccas, Sagiv, Schwartz and Knafo, 2002). The relationship between life satisfaction and the self-transcendence versus self-enhancement (or allocentrism versus idiocentrism) bipolar dimension, however, is still open to debate. In addition, a person's income is strongly related to life satisfaction, and how both income and personality interact to affect life satisfaction has not been adequately investigated.

A number of authors have used Schwartz's (1992) theory of personal values to investigate whether the pursuit of specific values as individual goals can be associated with increased levels of well-being. According to Le (2011), several studies have revealed significant positive relationships between the openness value dimension and life satisfaction, and significant negative relationships between the security dimension and life satisfaction.

However, the linkage between power values and life satisfaction is not that clear. Hofer, Busch, Bond, Li and Law (2010) have found power motives to be positively related to well-being or life satisfaction, whereas Hofer, Chasiotis and Campos (2006) have found power motives to be negatively related to well-being. Similarly, Le (2011) on the other extreme of the power dimension, has found no significant relationship between self-transcendence and life satisfaction. Therefore, no consistent relationship has been found between life satisfaction and the power and achievement motive dimensions (described as 'self-enhancement' at a higher-order level by Schwartz and Boehnke, 2004), or between SWL and the universalism and benevolence motive dimensions (described as 'self-transcendence' by Schwartz and Boehnke, 2004); (also see Sagiv and Schwartz, 2000).

Self-transcendence is regarded as a personality trait by Piedmont (1999), as a dimension of values by Schwartz (1994), and as a developmental process by Levenson *et al.* (2005), who argue that it involves a change in perspective in relation to other people, to objects and to social status. It is likely to promote satisfaction with life because of lower self-centredness and lower egocentrism (Levenson and Crumpler, 1996).

It seems as if Hofer *et al.* (2006) would concur, as they have found greater levels of life satisfaction arising from a concern for close interpersonal relationships

(benevolence), independent of an individual's cultural origin. This relationship is predicted by self-determination theory (Deci and Ryan, 1985) because well-being depends strongly on the pursuit of intrinsic goals. Similarly, Bilsky and Schwartz (1994) have argued that importance given to values representing growth relates positively to well-being when the goals are attained (also see McGregor and Little, 1998). Enhanced well-being arises from realising group goals that satisfy relatedness or allocentric goals. The following hypothesis is thus proposed:

H¹: The higher (lower) the second-order motivational value of allocentrism (self-enhancement) is for individuals, the higher (lower) their satisfaction with life.

The relationship between satisfaction with life or well-being at the polar opposite to self-transcendence, namely self-enhancement or idiocentrism (represented by power and achievement), is less clear. In contrast with the intrinsic goals associated with universalism and benevolence, the pursuit of goals relating to the extrinsic need for power and status may relate to lower well-being as suggested by Ryan, Sheldon, Kasser and Deci (1996), which is also aligned with self-determination theory (Deci and Ryan, 1985). Therefore the following hypothesis is proposed:

H²: The higher (lower) the second-order motivational value of idiocentrism (self-enhancement) is for individuals, the lower (higher) their satisfaction with life.

In the present study, the focus is limited to four value constructs of Schwartz (1992), namely achievement and power on the one extreme of Schwartz's continuum of values, and universalism and benevolence at the other extreme of the axis. These constructs and their relationship with life satisfaction are investigated across different groups of living standards, as represented in the LSM classification of the respondent. The model proposed is to represent the motivational values of Schwartz as a second-order confirmatory factor analysis (2CFA) model with the two dimensions of allocentrism versus idiocentrism as second-order latent variables emanating from the four first-order latent variables universalism and benevolence versus achievement and power, as shown in Figure 2.

The advantage of this model is that the lower-order values are simplified to their higher-order motives, in line with the suggestion by Schwartz and Boehnke (2004: 252) that the "motivational continuum of values gives researchers the freedom and flexibility to choose higher-order combinations of adjacent values particularly suited to the topics they study." Since higher-order models simplify the number of relationships to be studied, it offers a more parsimonious and robust approach to modelling, when the

higher-order model is theoretically justified. At best, a higher-order model can fit the data as well as a lower-order model, but because it is more restrictive, it can never fit the data better than the lower-order model that forms its base. The justification of the higher-order model should be more firmly based on the theoretical rationale for the model, than on an evaluation of model fit alone (Marsh and Hocevar, 1985).

The role of living standards in life satisfaction and personal values

As mentioned earlier, several studies have consistently found very strong relationships between income and life satisfaction at national level (Diener *et al.*, 1993; Veenhoven, 1991; and Chia *et al.*, 2007). The relationship is also consistently positive, although weaker at individual level. Therefore, if there are relationships between motivational values and life satisfaction, these are likely to be moderated by income.

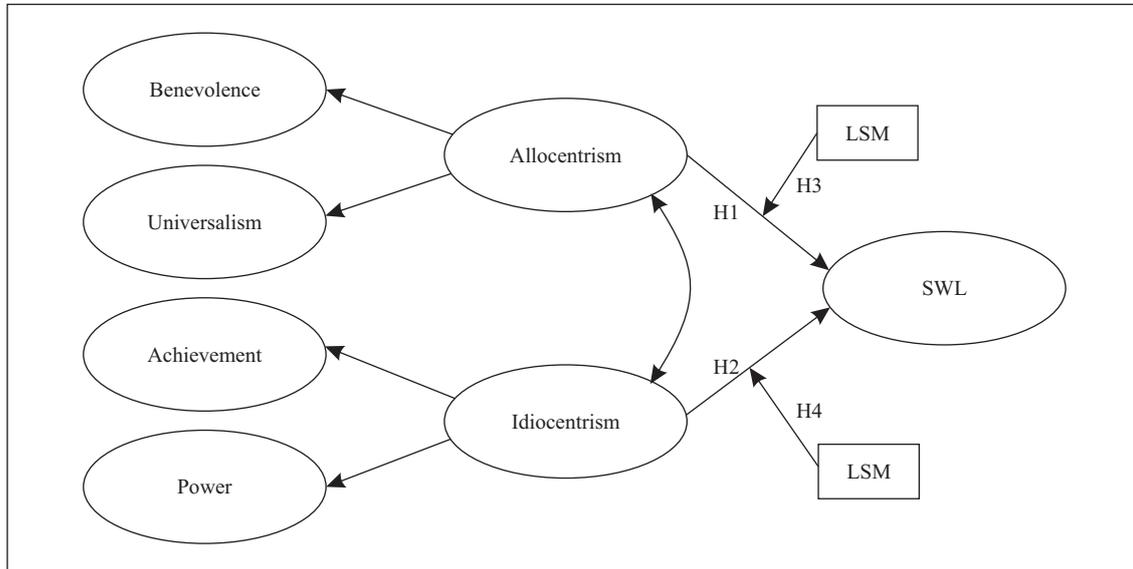
One way of bringing income into the picture is to consider the living standards measure as an approximation of prosperity. LSM is not the same as income, but could be viewed as an approximation of economic progress. Although there is a consistent progression of resources derived from material goods as one moves from the lower LSM groupings I and II to the higher LSM categories III and IV, the distinction is not always that clear. Some households may have high income, but by choice invest very little in material goods, and thereby be classified in a lower LSM category. Another factor to keep in mind, is that smaller households may have smaller houses, and less economic means and less physical space to accommodate material goods. Therefore, the LSM grouping, although very useful, can only be considered a rough approximation of income.

As mentioned before, Veenhoven (1991) suggested that income enables individuals to meet basic needs, and therefore income has a direct influence on happiness. Building on this argument it is further hypothesised that the following may hold:

H³: The relationship between the second-order dimension allocentrism and life satisfaction is moderated by LSM, in such a way that the relationship is stronger for individuals with a higher standard of living compared to those with a lower standard of living

H⁴: The relationship between the second-order dimension idiocentrism and life satisfaction is moderated by LSM, in such a way that the relationship is weaker for individuals from a higher standard of living compared to those from a lower standard of living

FIGURE 2
PROPOSED STRUCTURAL EQUATION MODEL
THE MODERATING EFFECT OF LIVING STANDARDS (LSM) ON THE RELATIONSHIP BETWEEN
PERSONAL VALUES AND LIFE SATISFACTION (SWL)



RESEARCH OBJECTIVES

The primary purpose of this study was to test whether the relationships between the allocentric values of South African consumers (specifically the two values benevolence and universalism), and idiocentric values (specifically achievement and power), with life satisfaction, are equivalent across four groups with different living standards, using the LSM classification system as developed by the South African Advertising Research Foundation. The objective of the study therefore was to fit the proposed model that relates idiocentrism and allocentrism with satisfaction with life simultaneously across LSM groupings.

At one end of the continuum, the model represents Schwartz’s motivational values universalism and benevolence, emanating from the higher-order dimension of allocentrism, and at the opposite end of the continuum, Schwartz’s motivational values of achievement and power emanating from the higher-order dimension of idiocentrism. The purpose was to investigate whether the key relationships between allocentrism and life satisfaction, as well as idiocentrism and life satisfaction, remain constant when tested across groups with different standards of living, or whether there is a progressive change of the relationship parameters according to living standards. When the relationship parameters change for different levels of living standards, this finding would suggest that living standards have a moderating effect on the relationship investigated. If so, this change will have

implications for the use of LSM categories as segment variables.

METHODOLOGY

Research design

The research design was a quantitative research design, using a cross-sectional survey. The population for this study was defined as South African adults (16 years and older) who are primary consumers of fast moving consumer goods. A stratified probability sample of 3 500 adults was selected. The primary stratification variable was geographical region, using the nine provinces as a basis. The second stratification variable was community size, which included cities, large towns, small towns, villages and rural areas. The metro sample was a stratified probability sample consisting of 2 000 adults living in metropolitan areas. The non-metro sample also consisted of a stratified probability sample of 1 500 adults, but living in non-metropolitan areas. This sampling process resulted in 3 500 face-to-face, in-house interviews being undertaken with respondents in both metro and non-metropolitan areas. The research questionnaire included a screening question requiring respondents to indicate whether they were mainly responsible for purchasing fast-moving consumer goods for their households. This exclusion criterion resulted in a final sample of 2 566 adult South African household purchase decision-makers being suitable for analysis in this study.

Measurement

The Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale (SWLS) is a five-item scale developed by Diener, Emmons, Larson and Griffin (1985), and it was used to measure the life satisfaction of consumers in this study. Life satisfaction is measured on a cognitive-judgemental level (Wissing and Van Eeden, 2002) by evaluating their life satisfaction subjectively when examining their life as a whole in response to the SWLS. The rationale for using this scale was its brevity, which is desirable in a large survey measuring several variables (Pavot and Diener, 1993).

The SWLS has been found to be a valid and reliable scale for measuring life satisfaction by Pavot and Diener (1993) and several other researchers, including Oishi (2000). However, a contentious issue in cross-cultural research, is always whether measures developed in Western nations are valid in non-Western cultures. Diener (2000) found the SWLS to be valid and reliable for various cultural groups. Within South Africa, Wissing, Thekiso, Stapelberg, Van Quickelberge, Chaobi, Moroeng and Nienaber (1999) found that the SWLS was reliable and valid within a Setswana speaking group. Therefore, there was adequate support for the use of the scale within the culturally diverse sample targeted in this study.

The original SWLS required respondents to indicate how strongly they agreed with the items on a seven-point Likert scale. It was deemed appropriate for the purpose of this study, to adapt the response format of the SWLS because the broad South African population probably relates better to simplified response categories, than the original sample of college students which Diener *et al.* (1985) used when developing the SWLS. A five-point scale was therefore used in this study, with the response categories ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Despite this change, the reliability and validity corresponded satisfactorily to that of the original SWLS, thereby providing support for Pavot's (2008) observation that the SWLS is useful for the assessment of people across a wide range of educational levels and ages. The five items of the SWLS are provided in Appendix 1.

The Portrait Values Questionnaire (PVQ)

In an extensive study, Schwartz, Melech, Lehmann, Burgess, Harris and Owens (2001) adapted and validated the Portrait Values Questionnaire (PVQ), a set of 29 items to determine people's value priorities in low literate populations. The PVQ is based on the original Schwartz Value Survey or SVS scale (Schwartz, 1992, 1994) which "demands a high level of abstract thought and presents value concepts outside of any specific context" Schwartz, *et al.* (2001:520). The 29-item PVQ was used to

measure respondents' personal values (see Appendix 2), which has the advantage that its language level was considerably simplified during its development. Even 11-year-olds in various countries understood all items. It can easily be completed within 10 minutes in a face-to-face interview. The PVQ used a scale ranging between 1 = "very much like me"; 2 = "like me"; 3 = "somewhat like me"; 4 = "a little like me"; 5 = "not like me"; 6 = "not at all like me"; and 7 = "do not know". In the analysis, items were reverse coded so that high scores indicated a high tendency to pursue the particular value. If a respondent chose category 7, the response was coded as a missing value.

The LSM measure

In this study, the new SAARF Universal LSM[®] scale that consists of 29 variables was used to determine in which one of ten LSM classifications a respondent is categorised. For the purpose of this study, to simplify the application within a multi-group confirmatory factor analysis, and to reduce sampling variability, four LSM[®] groupings were formed, which were labelled LSM I, LSM II, LSM III and LSM IV. In this study therefore, the Roman numerals I to IV are used to represent the SAARF Universal LSM groupings with LSM 1 to LSM 3 classified as LSM I; LSM II to represent LSM 4 and LSM 5; LSM III to represent LSM 6 and LSM 7; and LSM IV to represent LSM 8 to LSM 10. The groups were formed to obtain groups of roughly similar sizes and that are approximately homogeneous with respect to standards of living. Descriptions of these segments are provided in Appendix 3.

Data collection

The data were collected by a leading marketing research company based in Johannesburg. The original English questionnaire was translated into isiZulu, isiXhosa, Setswana, Sesotho, Sepedi and Afrikaans. In order to ensure that all translations were accurate, all questionnaires were back-translated to English and controlled for accuracy, in line with methods recommended by Van de Vijver and Leung (1997). Interviews were conducted in the language of preference of the respondent. All interviewers had at least a Senior Certificate qualification and were trained and thoroughly briefed before they conducted any interviews. The interviewers were representative of the South African society. All black interviewers were required to be proficient in four languages, while white, coloured and Indian interviewers were required to have a command of at least two languages. Although all interviews were conducted under the constant supervision of trained and experienced supervisors, a minimum of 20% back-checking on each interviewer's work was conducted to ensure accuracy and consistency, to prevent falsification of information, and to verify sampling accuracy.

Data analysis

The model proposed in this study is a second-order confirmatory factor analysis (2CFA) model. It has allocentrism as a second-order latent variable of benevolence and universalism; and idiocentrism as a second-order latent variable of achievement and power on the measurement part of the model, representing the exogenous variables in the final SEM model. In the SEM part of the model, the relationships between the two correlated higher-order constructs with life satisfaction are investigated, thereby testing the relationship hypothesised by H^1 and H^2 simultaneously.

The advantage of the proposed model is that it allows one to simplify the testing of relationships to only two relational hypotheses, instead of a model with four correlated first-order latent variables, each with a path to life satisfaction. A further advantage of the 2CFA model is that the relationships between variables can be studied simultaneously over multiple groups.

The SEM model in Figure 2 shows the final model to be tested. This model can be considered as a multiple regression model with SWL as the y-variable or endogenous variable being a 1CFA model with a single latent variable, and with two correlated x-variables or exogenous variables that constitute a 2CFA model with two second-order latent variables. The complete SEM model with indicators and error terms is shown in Figure 4.

An investigation of the relationship between an exogenous and an endogenous variable involves the means, intercepts and the slopes across the groups in a multi-group structural equation modelling approach (MG SEM). In this model, with four LSM groups and two exogenous variables, the path from one of the second-order latent variables to SWL involves four mean values of the exogenous variables, four intercepts and four slope parameters, which adds up to twelve parameters in total. For the procedure that was followed to test different combinations of these hypotheses, refer to Strasheim (in press, 2012).

TABLE 1
DEMOGRAPHIC PROFILE OF RESPONDENTS

		LSM grouping				All groups %
		I %	II %	III %	IV %	
LSM	1	5.7				
	2	13.8				
	3	13.7				33.2
	4		12.9			
	5		13.1			26.0
	6			10.9		
	7			5.6		16.5
	8				5.1	
	9				6.8	
	10				12.4	24.3
Race	Black	95.4	89.8	67.1	11.6	68.9
	Coloured	3.9	9.4	19.9	16.4	11.0
	Indian	0.2	0.6	7.3	11.2	4.2
	White	0.5	0.1	5.7	60.8	15.9
Gender	Male	43.5	44.3	37.8	42.4	42.5
	Female	56.5	55.7	62.2	57.6	57.5
Home language	Afrikaans	4.5	8.7	19.6	41.6	17.1
	English	0.4	1.8	14.9	47.8	14.7
	African	95.2	89.1	65.0	9.5	67.8
	Other	0.0	0.4	0.5	1.1	0.5
Sample size	Total	852	668	423	623	2566

**TABLE 1
DEMOGRAPHIC PROFILE OF RESPONDENTS (cont.)**

		LSM grouping				All groups
		I	II	III	IV	
Occupation	Refuse	0.5	0.4	0.5	0.2	0.4
	None	57.0	60.0	54.1	42.5	53.8
	Unskilled	26.9	14.4	8.7	0.3	14.2
	Self employed	2.8	2.2	3.3	6.7	3.7
	Semi skilled	6.5	10.0	10.2	4.0	7.4
	Clerical	3.3	7.2	9.9	15.9	8.5
	Tradesperson	2.1	4.6	9.2	10.4	6.0
	Professional	0.8	0.7	2.6	10.6	3.5
	Refuse	0.5	0.4	0.5	0.2	0.4
Marital Status	Separated	1.6	1.3	0.9	0.5	1.2
	Divorced	2.1	2.2	2.6	6.6	3.3
	Widowed	8.1	7.8	6.6	5.0	7.0
	Partner	18.8	15.1	7.8	3.0	12.2
	Single	38.7	42.2	33.3	13.8	32.7
	Married	30.6	31.3	48.7	71.1	43.6
Age	16 19	6.6	7.3	3.5	3.9	5.6
	20 29	24.4	26.0	21.7	14.4	22.0
	30 39	25.7	29.0	29.6	23.1	26.6
	40 49	19.2	15.9	21.0	25.4	20.1
	50 59	12.0	12.7	12.3	15.9	13.2
	60+	12.1	9.0	11.8	17.3	12.5
	Total	852	668	423	623	2566

**TABLE 2
CRONBACH'S ALPHA COEFFICIENTS**

Measures	LSM grouping				All groups
	I	II	III	IV	
SWL	0.802	0.784	0.803	0.821	0.832
Allocentrism	0.737	0.766	0.769	0.773	0.766
Idiocentrism	0.616	0.626	0.620	0.712	0.643

RESEARCH RESULTS

Demographic variables

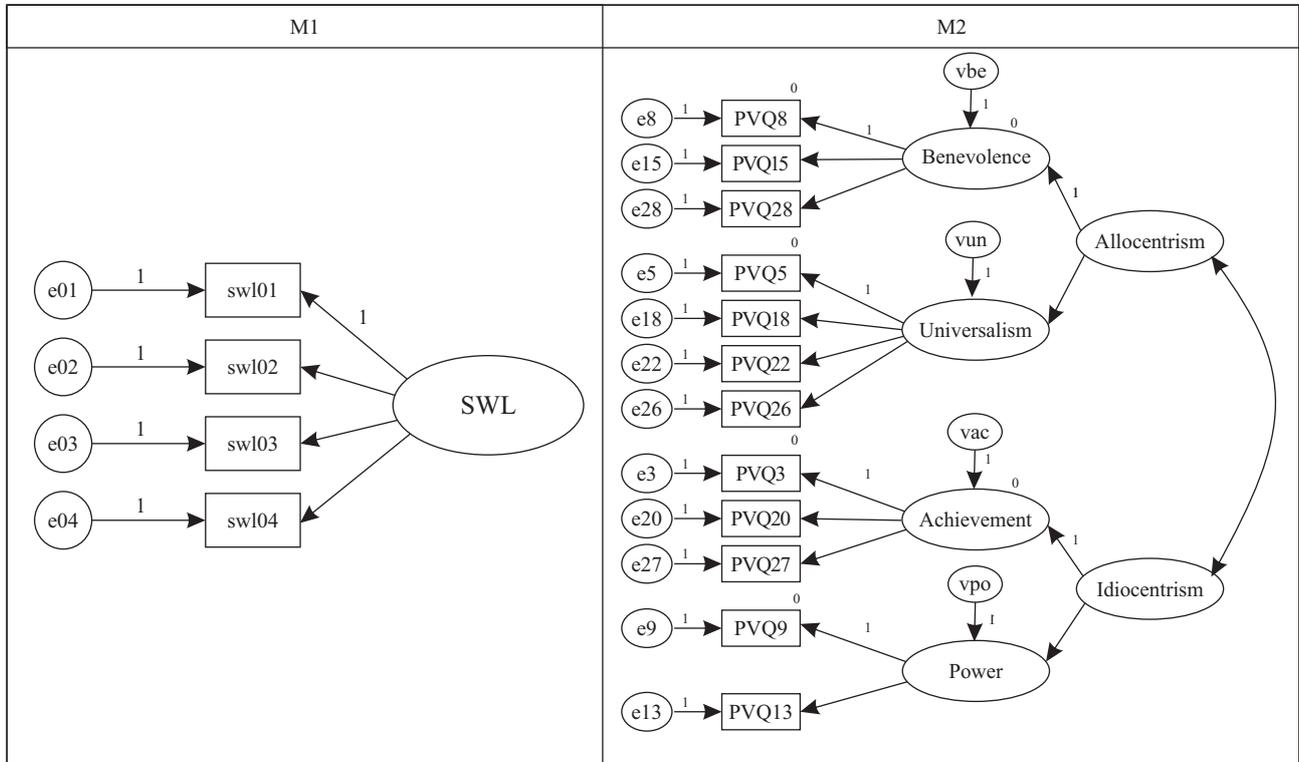
The demographic profile of the sample described in Table 1 shows how the SAARF groups LSM1 to LSM10 were used to form the four LSM I to LSM IV groupings.

It is clear from Table 1 that the racial composition of the lower LSM groupings I and II are mostly black, with more white respondents in groupings III and IV. These profiles, in addition to occupational categories, are consistent with the expected profile given the nature of the LSM variable and the typical socio-economic profile in the country.

It is also appropriate to investigate the item reliability of the items loading to the different constructs of each LSM group and for the entire group. The results of Cronbach's alpha coefficient of reliability are provided in Table 2.

As can be seen in Table 2, the reliabilities for idiocentrism are somewhat low (between 0.62 and 0.71). However, for the allocentrism construct, all alpha values were above 0.7. Although a value of 0.7 is commonly considered to be a good cut-off criterion (Peterson, 1994), with few items as indicators of a construct, it is acceptable to lower this cut-off criterion, as was done by Schwartz and Boehnke (2004) who reported much lower alpha values, and nevertheless continued with their analysis.

FIGURE 3
M1 - THE MEASUREMENT MODEL FOR LIFE SATISFACTION (SWL)
AND M2 - THE SECOND-ORDER MEASUREMENT MODEL OF THE PERSONAL VALUES (PVQ)



Invariance of measurement models

Before any meaningful analyses can proceed, it is essential to establish whether the PVQ and SWLS are valid and equivalent measures across major subgroups included in the sample. When these analyses reveal non-equivalence, the validity of research findings are threatened (Van de Vijver and Leung, 1997). In this study, before the main models were tested, multi-group confirmatory factor analysis was applied, using the approach described in Strasheim (2011) to test various aspects of validity of the PVQ and the Satisfaction with Life Scale (SWLS) specifically models M1 and M2 as shown in Figure 3.

Race is a key variable in this study, because people’s cultural value orientation tends to be influenced by their cultural heritage (Wissing *et al.*, 2006). In terms of South Africa’s main ethnic groups, the sample consisted mainly of black people, while the other ethnic groups were not represented as strongly: 69% of respondents were black, 16% white, 11% coloured and 4% were Indian. Although this distribution is representative of the demographic profile in the country, it is nevertheless essential to consider how race may have introduced bias in the data, especially since there is an uneven representation of race groups across LSM groupings.

Therefore it was essential to test for measurement invariance across race groups to ensure that cultural response bias, which could be an artefact of measurement, is not a major concern. In addition to this, because the questionnaires were translated, it is also important to test for measurement invariance across language groups to ensure that method bias was not introduced due to differences in translations. The PVQ instrument has a male and a female version, and field workers were trained to use the appropriate version, depending on the gender of the interviewee. Although the interviewers were well trained, it is still possible that method bias could have been introduced due to the two different versions of the PVQ. Previous research also found substantive differences in the motivational values of males and females within and across nations. More specifically, Schwartz and Rubel (2005) found that men attributed significantly more importance to the power and achievement dimensions, whereas females attributed significantly more importance to benevolence and conformity values. It is therefore important to test for measurement invariance across gender groups to rule out gender bias in the instrument, although substantive differences might still have been present.

TABLE 3
RESULTS OF INVARIANCE TESTING OF MEASUREMENT MODELS

M1: SWL measurement model	Race	Language	Gender	LSM
M1_0: Unconstrained model	Yes	Yes	Yes	Yes
M1_1: Measurement weights	Yes	Yes	Yes	Yes
M1_2: Measurement intercepts	Yes	Yes	Yes	Yes
M1_3: Latent means	No	No	Yes	No
M1_4: Structural covariances, means free	Yes	Yes	Yes	No
M1_5: Measurement residuals, means free	No	No	Yes	No
Model implied means of SWL for LSM grouping Based on M1_4	LSM I	LSM II	LSM III	LSM IV
SWL	2.982	3.304	3.555	3.810
M2: PVQ 2 CFA measurement model	Race	Language	Gender	LSM
M2_0: Configural invariance	Yes	Yes	Yes	Yes
M2_1: Measurement weights	Yes	Yes	Yes	Yes
M2_2: Measurement intercepts	Yes	Yes	Yes	Yes
M2_3: Equal second order loadings	Yes	Yes	Yes	Yes
M2_4: Equal second order intercepts	Yes	Yes	Yes	Yes
M2_5: Equal latent means (2 nd order)	No	No	Yes	No
M2_6: Structural covariances, means free	Yes	Yes	Yes	Yes
M2_7: Structural residuals, means free	No	No	Yes	Yes
M2_8: Measurement residuals, means free	No	No	Yes	No

The measurement model 1 (M1) of the SWLS (Left portion of Figure 3) was investigated for the entire sample. The fifth item was found to have a very low squared multiple correlation (when modelled as a single latent variable) with the other items in the model, and was therefore excluded. Upon further investigation, by using Cronbach's coefficient alpha to test for the reliability of the five items, the item-total correlation of the fifth item also suggested that exclusion of the fifth item would be justified. In addition, the wording of Item 5, (see Appendix 1) was quite different from the wording of the other four items. Therefore, only the first four items were used as indicators of SWL, which is the endogenous latent variable in the final model in Figure 4. The measurement model (M2) which is a 2CFA model (see Figure 3, right) in the exogenous part of the final SEM model, was tested for invariance across race, language, gender and LSM groups, using the procedure described by Chen, Sousa and West (2005) and further detailed in Strasheim (in press, 2011). The results of the measurement invariance testing are summarised in Table 3.

The cut-off criteria for deciding whether the model fitted the data used a combination of fit measures, which included the Chi-square/df ratio to be less than 3, the comparative fit index (CFI), the Tucker and Lewis index (TLI) and incremental fit index (IFI) to be more than 0.90; and the RMSEA to be less than 0.05 (Hu and Bentler, 1999). When all the criteria mentioned fall within an

acceptable range, it is indicated by "Yes" in Table 3, which implies that the invariance constraints at that specific level of invariance was tenable, since the constrained model yielded a satisfactory fit to the data.

From Table 3 it is clear that for both measurement models, M1 and M2, configural invariance, metric invariance and scalar invariance can be assumed across all the grouping variables investigated. The latent means in both measurement models were not equivalent. It is therefore necessary to relax the constraint of equal latent means in the next phases when the moderating effect in the structural model is investigated. Using models M1_2 and M2_6 as bases will therefore be valid in order to continue to the next phase of investigating the relationships between the PVQ dimensions and life satisfaction in the final SEM model.

When a SEM model is fitted, it is important to impose constraints on some parameters for the purpose of model identification. When the method is used where one indicator per latent variable is set equal to 1, and the corresponding intercept is constrained equal to zero, the unobserved latent variable, which has no measurement units, is thereby set to have the same units as that of the scaling indicator. In an application where the indicator variables have the same units, it is very helpful in the interpretation of model-implied parameter estimates, such as the estimated means of the latent variables. For SWL, the first item was used as a scaling indicator, and the items

were measured on a five-point scale, thereby setting SWL to a scale that ranges from 1 to 5. Similarly, in the 2CFA model, certain items had regression coefficients constrained equal to 1, thereby setting the scale for the latent variables in this model as ranging from 1 to 6, which was the scale used in the PVQ instrument. Estimated means of the PVQ latent variables can therefore be interpreted relative to a scale ranging between 1 and 6.

In Table 3, the model implied means for the SWL scale are provided, and it increased gradually from approximately 3.0 for LSM I, 3.3 for LSM II, 3.6 for LSM III to 3.8 for LSM IV. Average satisfaction with life therefore increased from lower to higher LSM groupings, which is consistent with the findings of Veenhoven (1991); Diener *et al.* (1993) and Chia *et al.* (2007).

In summary therefore, in the last phase of the analysis, it is assumed that configural, metric, scalar invariance and structural invariance parameter restrictions can be introduced, thereby reducing the complexity of the final phase of the data analysis. This also provides the assurance that the analysis is valid, since the instruments that were used are understood similarly across all major groupings. The findings up to this stage support the assumption that neither the operationalisation of Schwartz's theory of basic human values (the PVQ dimensions) nor of the satisfaction

with life scale are questionable in this study, and it would therefore be valid to test whether LSM grouping moderates the relationships between idiocentrism and SWL and allocentrism and SWL.

Testing the research hypotheses of the SEM model over different groups of living standards

The relationships hypothesised by H¹ and H² are supported when the path coefficients between allocentrism and SWL and idiocentrism and SWL are in the proposed direction and are significant. In the invariance testing, Model M2 5, which constrained the means of allocentrism and idiocentrism equal across groups, has measures of fit that are worse overall when compared to models where the means were freely estimated, such as M2 4 and M2 6, and therefore we can assume that there are significant differences in the mean values of allocentrism and idiocentrism across the four LSM groupings.

In the final phase of the study, the testing procedure for H³ and H⁴ which investigates the moderating effect of the LSM on the relationships between allocentrism and SWL and between idiocentrism and SWL. The procedure employed makes use of eleven increasingly restrictive MIS hypotheses (see Strasheim, in press, 2012).

**FIGURE 4
PROPOSED MODEL WITH INDICATOR VARIABLES**

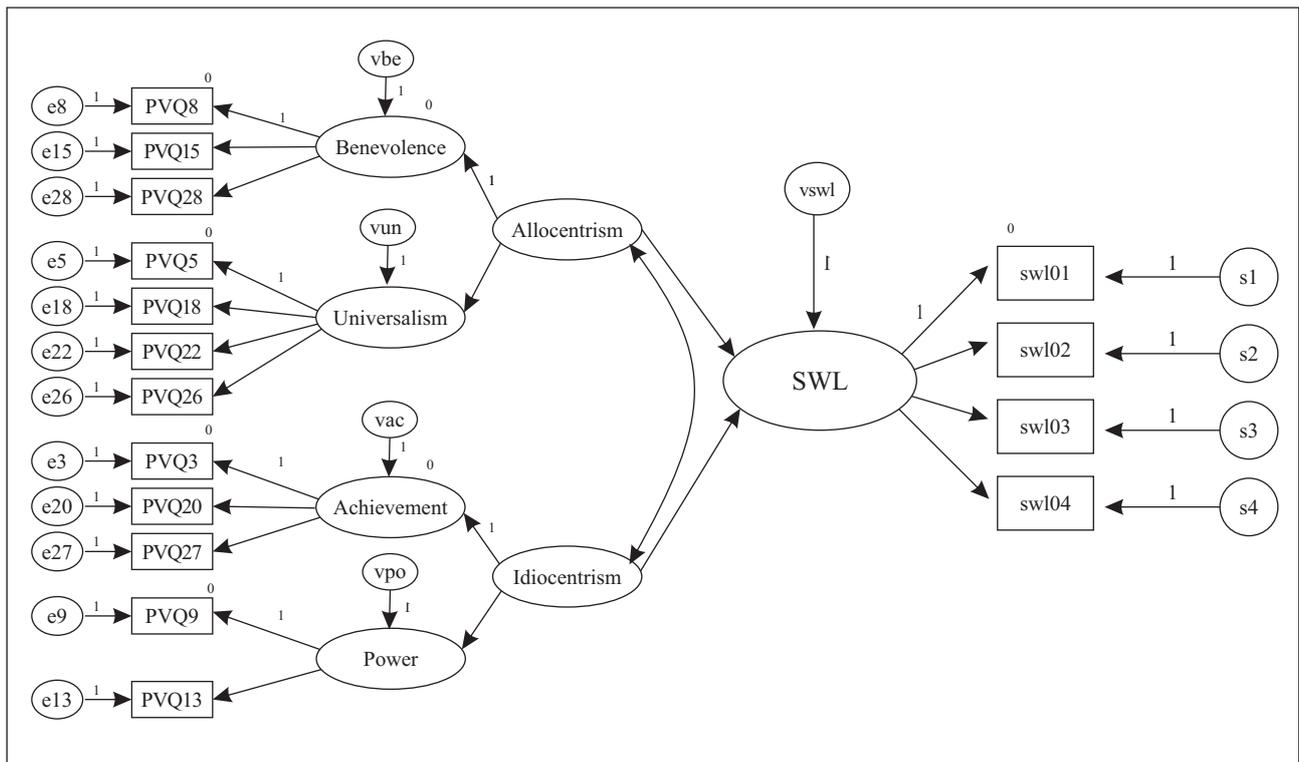


TABLE 4
MEASURES OF FIT FOR 11 MIS HYPOTHESES FOR THE PROPOSED MODEL

SEM Model	npar	Chi-Sq	df	Chi/df	BIC
MIS1: Means free, intercepts free, slopes free	128	1392.9	480	2.90	243.5
MIS2: Means equal, intercepts free, slopes free	122	1538.1	486	3.17	118.8
MIS3: Means free, intercepts equal, slopes free	125	1394.3	483	2.89	252.4
MIS4: Means equal, intercepts equal, slopes free	119	1539.3	489	3.15	127.8
MIS5: Means free, intercepts free, slopes equal	122	1415.8	486	2.91	241.1
MIS6: Means equal, intercepts free, slopes equal	116	1561.6	492	3.17	115.7
MIS7: Means free, intercepts equal, slopes equal	119	1550.4	489	3.17	116.7
MIS8: Means equal, intercepts equal, slopes equal	113	1703.2	495	3.44	15.6
MIS9: Means free, intercepts equal, slopes zero	117	1609.4	491	3.28	64.5
MIS10: Means equal, intercepts free, slopes zero	114	1600.3	494	3.24	83.8
MIS11: Means equal, intercepts equal, slopes zero	111	1755.2	497	3.53	60.8
Saturated model	608	0.0	0		0.0
Independence model	128	9747.8	480	20.31	8111.3
SEM Model	IFI	TLI	CFI	PCFI	
MIS1: Means free, intercepts free, slopes free	0.901	0.901	0.901	0.901	
MIS2: Means equal, intercepts free, slopes free	0.886	0.888	0.886	0.898	
MIS3: Means free, intercepts equal, slopes free	0.902	0.902	0.902	0.907	
MIS4: Means equal, intercepts equal, slopes free	0.886	0.889	0.887	0.903	
MIS5: Means free, intercepts free, slopes equal	0.900	0.901	0.900	0.911	
MIS6: Means equal, intercepts free, slopes equal	0.884	0.887	0.885	0.907	
MIS7: Means free, intercepts equal, slopes equal	0.885	0.888	0.885	0.902	
MIS8: Means equal, intercepts equal, slopes equal	0.869	0.874	0.870	0.897	
MIS9: Means free, intercepts equal, slopes zero	0.879	0.882	0.879	0.899	
MIS10: Means equal, intercepts free, slopes zero	0.880	0.884	0.881	0.906	
MIS11: Means equal, intercepts equal, slopes zero	0.864	0.869	0.864	0.895	
Saturated model	1.000		1.000	0.000	
Independence model	0.000	0.000	0.000	0.000	
SEM Model	RMSEA	Lo 90		Hi 90	
MIS1: Means free, intercepts free, slopes free	0.027	0.026		0.029	
MIS2: Means equal, intercepts free, slopes free	0.029	0.027		0.031	
MIS3: Means free, intercepts equal, slopes free	0.027	0.025		0.029	
MIS4: Means equal, intercepts equal, slopes free	0.029	0.027		0.031	
MIS5: Means free, intercepts free, slopes equal	0.027	0.026		0.029	
MIS6: Means equal, intercepts free, slopes equal	0.029	0.028		0.031	
MIS7: Means free, intercepts equal, slopes equal	0.029	0.027		0.031	
MIS8: Means equal, intercepts equal, slopes equal	0.031	0.029		0.032	
MIS9: Means free, intercepts equal, slopes zero	0.030	0.028		0.031	
MIS10: Means equal, intercepts free, slopes zero	0.030	0.028		0.031	
MIS11: Means equal, intercepts equal, slopes zero	0.031	0.030		0.033	
Saturated model					
Independence model	0.087	0.085		0.088	

The fit measures for the eleven MIS models that are relevant for testing moderation effects are provided in Table 4. From these tables it is clear that MIS3 provided the best fit to the data. The Chi/df ratio is the smallest, the Bayesian Information Criterion (BIC) has the largest negative number, and the incremental fit index (IFI),

Tucker and Lewis index (TLI) and comparative fit index (CFI) are the largest and above 0.90. The RMSEA and the 90% upper limit of the RMSEA are smaller than 0.05. The estimated model parameters of MIS3 for the SEM model are provided in Tables 6 and 7.

TABLE 5
NESTED MODEL COMPARISONS FOR THE PROPOSED MODEL

Model MIS1 to be correct	df	CMIN	P
MIS2: Means equal, intercepts free, slopes free	6	145.1	0.000
MIS3: Means free, intercepts equal, slopes free	3	1.3	0.719
MIS4: Means equal, intercepts equal, slopes free	9	146.3	0.000
MIS5: Means free, intercepts free, slopes equal	6	22.9	0.001
MIS6: Means equal, intercepts free, slopes equal	12	168.7	0.000
MIS7: Means free, intercepts equal, slopes equal	9	157.5	0.000
MIS8: Means equal, intercepts equal, slopes equal	15	310.3	0.000
MIS9: Means free, intercepts equal, slopes zero	11	216.5	0.000
MIS10: Means equal, intercepts free, slopes zero	14	207.4	0.000
MIS11: Means equal, intercepts equal, slopes zero	17	362.3	0.000
Model MIS3 to be correct	df	CMIN	P
MIS4: Means equal, intercepts equal, slopes free	6	145.0	0.000
MIS7: Means free, intercepts equal, slopes equal	6	156.1	0.000
MIS8: Means equal, intercepts equal, slopes equal	12	308.9	0.000
MIS9: Means free, intercepts equal, slopes zero	8	215.1	0.000
MIS11: Means equal, intercepts equal, slopes zero	14	360.9	0.000

TABLE 6
ESTIMATED REGRESSION WEIGHTS AND INTERCEPTS OF THE SEM MODEL

Hypothesis		LSM I	LSM II	LSM III	LSM IV
H3: SWL ← Allocentrism	b	0.209	0.062	0.216	0.256
	p	0.011	0.466	0.033	0.000
	sig	α 0.05	n.s. ¹	α 0.05	α 0.001
H4: SWL ← Idiocentrism	b	0.476	0.177	0.002	0.007
	p	0.000	0.128	0.988	0.945
	sig	α 0.001	n.s.	n.s.	n.s.
Allocentrism Idiocentrism	means	5.056	5.091	5.278	5.357
	means	3.656	3.718	3.706	3.631
	sig	Means significantly different			
	intercept	2.368			
	sig	Intercepts constrained equal			

n.s. not significant

It is also interesting to consider the nested comparative fit measures as shown in Table 5. The table provides the differences in the chi-square statistics, the differences in the degrees of freedom for the models compared, as well as the corresponding significance. For the SEM model, if it is assumed that model MIS1 is correct, the comparisons show that only model MIS3 does not fit the data significantly worse than Model MIS1 - the p-value is 0.719, which is not significant. Therefore MIS3 represents the most parsimonious solution, when compared to MIS1. When the remaining models are compared to the MIS3 model, all the models MIS4, MIS7, MIS8, MIS9 and MIS11 fit the data considerably worse than MIS3. This result provides further support for reporting the results of MIS3.

Model MIS3 stipulates that the means of the latent variables are not equal and the slopes of the regression lines are not equal. However, the intercepts can be assumed to be equal. In the measurement part of the model, all the indicator weights and slopes are constrained equal over the four LSM groupings, as well as the variances and the covariances of the latent variables.

When the results of the SEM model are considered, it is clear that the LSM grouping moderates the effect between the two bipolar dimensions of allocentrism versus idiocentrism and life satisfaction, although not quite as postulated in the hypotheses H³ and H⁴. Table 6 contains the estimated parameters in the structural part of the model, based on model MIS3.

TABLE 7
ESTIMATED MAXIMUM LIKELIHOOD ESTIMATES IN THE MEASUREMENT PART OF THE PROPOSED MODEL

Item	Latent variable	Group ¹	b	p	Intercepts	i	Sig
Power	← Idiocentrism	All	1.000 ²		Power	0.000 ³	
Achievement	← Idiocentrism	All	1.568	***	Achievement	1.202	0.020
Universalism	← Allocentrism	All	1.000		Universalism	0.000 ³	
Benevolence	← Allocentrism	All	1.048	***	Benevolence	0.354	0.178
PVQ8	← Benevolence	All	1.000 ²		PVQ8	0.000 ³	
PVQ15	← Benevolence	All	0.973	***	PVQ15	0.248	0.254
PVQ28	← Benevolence	All	1.082	***	PVQ28	0.504	0.036
PVQ5	← Universalism	All	1.000 ²		PVQ5	0.000 ³	
PVQ18	← Universalism	All	1.001	***	PVQ18	0.312	0.214
PVQ22	← Universalism	All	0.901	***	PVQ22	0.121	0.618
PVQ26	← Universalism	All	1.160	***	PVQ26	0.943	***
PVQ3	← Achievement	All	1.000 ²		PVQ3	0.000 ³	
PVQ20	← Achievement	All	1.087	***	PVQ20	0.302	0.263
PVQ27	← Achievement	All	1.215	***	PVQ27	1.029	***
PVQ9	← Power	All	1.000 ²		PVQ9	0.000 ³	
PVQ13	← Power	All	1.129	***	PVQ13	0.410	0.277
Swl01	← SWL	All	1.000 ²		swl01	0.000 ³	
Swl02	← SWL	All	1.335	***	swl02	1.346	***
Swl03	← SWL	All	1.315	***	swl03	1.067	***
Swl04	← SWL	All	1.114	***	swl04	0.316	***
Covariances			Estimate	Sig	Variances	Estimate	Sig
Idiocentrism	↔ Allocentrism	All	0.146	***	Allocentrism	0.312	***
					Idiocentrism	0.189	***

¹ Note that the parameters were constrained to be equal across all four LSM groups

² The path coefficients were constrained equal to 1 for the purpose of model identification

³ The corresponding intercept term was constrained equal to zero for purposes of model identification and to support direct interpretation of the means

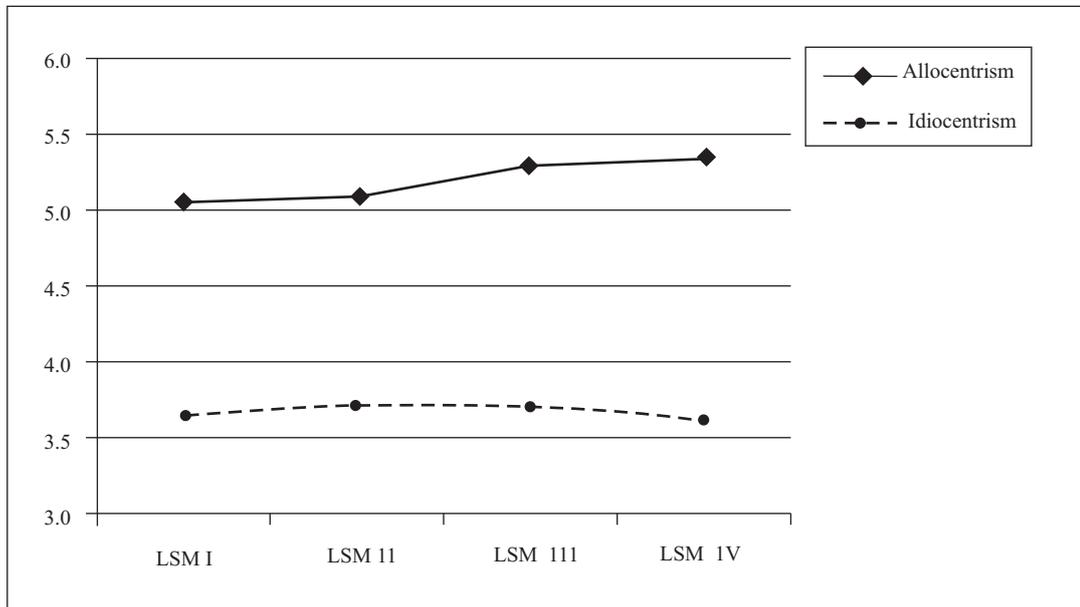
As can be seen from Table 6, the estimated means for allocentrism increases from a level of approximately 5.1 for LSM I and II to approximately 5.3 and 5.4 for LSM III and LSM IV respectively. In addition, (see Table 6) the regression slope parameters for the path between allocentrism and SWL also change in a systematic pattern. For LSM I the slope is negative, and significant at $\alpha=0.05$; for LSM II it changes to a non-significant slope (meaning that it is not significantly different from zero and therefore there is no effect), then the slope is significant ($\alpha = 0.05$) and positive for LSM III; and a very significant ($\alpha = 0.001$) positive slope for LSM IV. Therefore, H³ is supported for LSM III and LSM IV, it is not significant for LSM II, and the relationship is negative for LSM I. Overall, it is clear that living standard does moderate the relationship between allocentrism and life satisfaction. In this study, the relationship gradually changes from a negative relationship for lower levels of living standards to a positive relationship for higher levels of living standards.

Table 6 also shows that the estimated means for idiocentrism are approximately 3.6 for LSM I and IV and

approximately 3.7 for LSM II and LSM III. When the path coefficients between idiocentrism and SWL are considered, it is positive and highly significant ($\alpha = 0.001$) for LSM I, and not significant for LSM II, III and IV. Therefore, H⁴ is not supported by our findings. Although living standards has a moderating effect on the relationships, the directions and order are contrary to what was hypothesised in H⁴. Although living standards seem to moderate the effects, the relationship between idiocentrism and life satisfaction is not significant for the moderate to higher levels of living standards, and it is positive for the lowest level of living standards.

Table 7 contains the estimated regression weights between the indicator variables and the corresponding latent variables for the measurement part of the model, and these are all highly significant and in the expected direction. In line with the invariance testing conducted earlier, these were constrained equal across groups. The estimated intercept terms are also provided and so are the estimated covariances between the latent variables and the estimated variances of the latent variables.

FIGURE 5
MODEL IMPLIED MEANS OF SECOND-ORDER FACTORS



DISCUSSION OF RESULTS

When the results of the SEM model, in which allocentrism is modelled as a higher-order dimension of benevolence and universalism, and idiocentrism as a higher-order dimension of achievement and power, are considered, different relationships with SWL are found across LSM groupings. For LSM I, the regression coefficient mapping allocentrism to SWL is negative and significant at $\alpha = 0.05$, which means that in this group, allocentric values seem to be negatively related to life satisfaction. For LSM II, the regression coefficient is not significant. For LSM III, the coefficient is positive and significant at $\alpha = 0.05$, so that it seems that within this group, the higher the level of allocentrism, the higher the satisfaction with life. In LSM IV, the coefficient is also positive and even more significant at $\alpha = 0.001$. These findings suggest that living standards, as represented in this study as LSM groupings, have a moderating effect on the relationship between allocentrism and life satisfaction.

Furthermore, the relationship between idiocentrism and life satisfaction is significant and positive only for the LSM I group. In the other groups, there are no significant relationships, again suggesting that living standards have a moderating effect on the relationship between the idiocentric higher-order personality dimension and satisfaction with life, although not in the hypothesised direction.

When the model implied means of the second-order latent variables in Table 6 are considered (see Figure 5), it is clear that the mean level of allocentrism increases slightly across LSM groups, whilst the mean levels of idiocentrism remain relatively stable across groups. The implications of the findings are easier to follow by interpreting Figures 6 and 7.

Figure 6 shows that the higher the allocentric value dimension of individuals, the higher their corresponding satisfaction with life for LSM groups II, III and IV. However, for LSM I, the higher the allocentric value, the lower the satisfaction with life. The graph further shows that the means on allocentrism increases gradually across the four groups, and are significantly different, thereby showing the moderating effect of LSM grouping on the relationship between allocentrism and satisfaction, with the relationship becoming stronger from lower to higher LSM groupings.

Figure 7 shows the interpretation for idiocentrism. Based on model fit, the mean levels across the four LSM groupings are significantly different on the idiocentrism value dimension, although the differences seem practically speaking not meaningful. The only group that has a statistically significant regression coefficient between idiocentrism and life satisfaction is LSM I. Although there seems to be a small effect for LSM II, it is not significant due to a large standard error of the estimate. For LSM III and IV, there are no relationships between idiocentrism and life satisfaction.

FIGURE 6
RELATIONSHIPS BETWEEN ALLOCENTRISM AND LIFE SATISFACTION
FOR DIFFERENT LEVELS OF LIVING STANDARDS

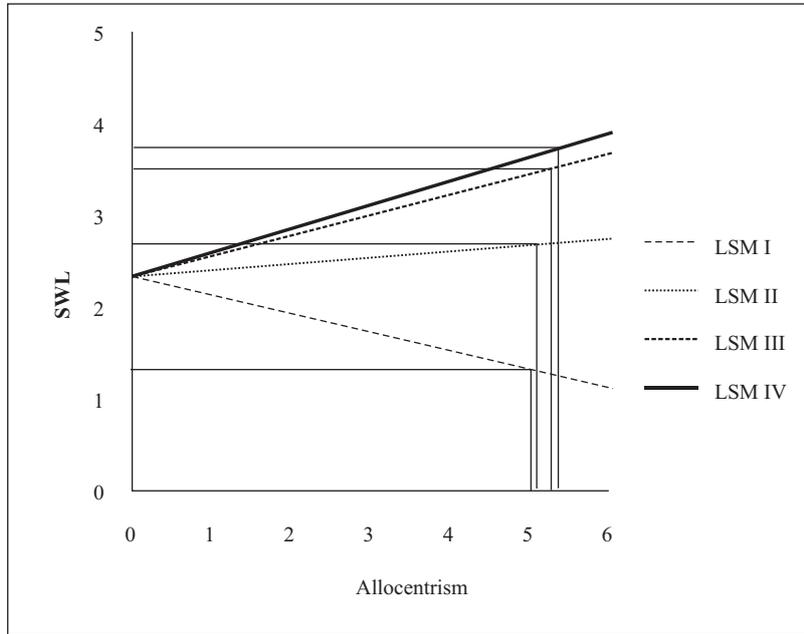
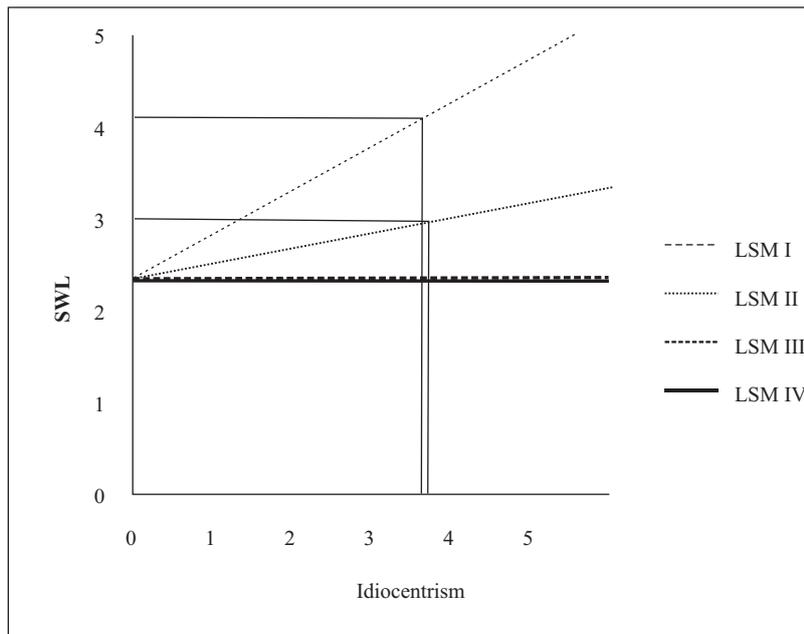


FIGURE 7
RELATIONSHIPS BETWEEN IDIOCENTRISM AND LIFE SATISFACTION
FOR DIFFERENT LEVELS OF LIVING STANDARDS



DISCUSSION

From a consumer behaviour perspective, the results suggest that, contrary to the common belief that lower LSM groupings will have a stronger average tendency to pursue allocentric values, there is a gradual increase in the mean allocentric motivational drives from the lower LSM groupings to the higher LSM groupings. This finding is contrary to what was expected, since the majority of individuals in the lower LSM groups were black, who at the ecological level, have a strong collectivistic culture. The lower levels of an allocentric orientation could possibly be because people in the lower LSM categories have barely enough for themselves, while those in the higher LSM categories displayed higher levels of allocentrism, which could be because they simply have more to share with others.

In addition to the mean differences in allocentrism across LSM categories, the relationship of allocentrism with life satisfaction is different for each LSM grouping. LSM I has a negative relationship between the two constructs, and LSM II no relationship, while LSM III has a positive relationship; and LSM IV an even stronger positive relationship. This suggests that although the mean level of allocentrism is higher for the higher LSM groupings, the effect of income seems to modify the relationship between allocentrism and life satisfaction from lower to higher levels of living standards, starting from a negative relationship, and ending with a positive relationship. In terms of idiocentrism, only the LSM I grouping had a positive relationship with life satisfaction, suggesting that it was only in this group that a stronger individualistic (or perhaps selfish) motivational drive was positively associated with increased life satisfaction. This may suggest that at a very low level of economic means, self-serving idiocentric behaviour seems to lead to higher levels of satisfaction. This result is contradictory to findings reported by Hofer *et al.* (2006; 2010).

As far as marketing communications and segmentation practices are concerned, our results suggest that marketing messages and products that appeal to the intrinsic motivations of an allocentric nature, such as sharing and social embeddedness, may have more impact on higher LSM groupings than on lower LSM groupings. In the lowest LSM grouping, such communications and or products could be perceived by consumers to be associated with lower levels of life satisfaction and may therefore fail in their purpose when LSM I and LSM II are targeted.

In contrast, products and services that appeal to the intrinsic motivations of an idiocentric nature, such as autonomy, independence and valuing the uniqueness of the person, may only be successful in the LSM I grouping, and may have little effect in LSM group II, and even no effect if LSM III or LSM IV are targeted.

Psychographic segmentation allows the marketer to create groupings of consumers that are homogeneous on one or more personality measures, which could include motives,

lifestyle and needs. When psychographic segmentation is used in combination with traditional segmentation approaches, it creates opportunities to identify segments that have the highest market potential. Marketers can create positions that are relevant to individual motivations and drives, thereby aligning marketing offerings with the personal objectives of targeted segments. This in turn may produce more productive relationships between marketers and customers, thereby allowing the organisation to employ tactics that have optimal impact.

In terms of statistical modelling, our results showed that a higher-order model was useful to simplify the number of relations to investigate. This could be because in this study, the higher-order model presented deeper levels of motivational drives, which underly the first-order motivations, and which are in turn indicated by the responses on items that correspond to the motivational values. Tapping into the deeper levels of motivational drives helped to gain insights that could be obscured by an excess of model parameters.

LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In this study, the mean allocentric values increased from LSM I to LSM IV albeit only slightly. It may be that socially desirability bias may be present in the data. This possibility is highly likely, since levels of education increase with higher LSM groupings, and groups with higher levels of education may be more prone to providing socially desirable responses, especially during personal interviews.

Another limitation of this study is that race groups were not evenly distributed across LSM groupings, thereby confounding LSM and race-specific individual values. Although the measurement instruments were invariant across race groups, the means were still significantly different across race-groups. This could have had an unknown effect on our findings, by either artificially inflating or deflating personal value scores. Future research that investigates individual level culture should rather use quota sampling across race groups within each LSM group.

The relationship between individual-level culture and subjective well-being may be more complex than portrayed in this study. This relationship cannot adequately be accounted for in a single-dimensional, direct relationship. Other mediating variables may impact on the relationship between individual levels of culture and subjective well-being, and one of these may be ethnic grouping.

A further recommendation is to make use of later developments on the measurement of Schwartz's value dimensions. When similar studies are considered, other possibly useful measuring instruments to investigate the constructs could also be used (see Ratzlaff *et al.*, 2000).

An even better alternative is to consider the personal cultural orientations scale recently developed and validated by Sharma (2010). This scale may be more useful, since it was specifically developed to be used within a marketing context and the nomological validity of the scale was confirmed across different settings and cultural groups with well-established marketing constructs.

In addition to the impact of individual culture on life satisfaction or subjective well-being, the relationship between culture and consumption motives and other dimensions of consumer behaviour may provide useful insights for future research. Relationships between personalities or individual cultural values and consumer attitudes, preferences or behaviours, could be better understood and thereby improve segmentation and targeting. Such research should be carefully designed to avoid bias that could be introduced by unbalanced representations of ethnic groups in the sample.

Value priorities are stable and should yield stable segments in international (Steenkamp and Ter Hofstede, 2002) as well as in multi-cultural marketing contexts, because the values scale of Schwarz has high construct equivalence across and within countries (Schwarz, 1992). This study showed how known segments (the LSM groupings) differ in terms of higher-order values of Schwarz, and showed how the values differ across segments. Unfortunately, because very little is known about the media profile of segments based on motivational values, the lack of knowledge about preferred media and exposure to media for persons pursuing different values, leads to low accessibility of these segments to marketers. In addition, little is known about how value segments and consumption of products and services interact. Therefore, unless an understanding of how media usage and exposure overlap with value segments, and the types of services and products preferred by different value segments, using value segmentation is still not clearly actionable for marketers to pursue effectively.

CONCLUSION

Considerations of the effect of culture at the individual or personal level can be helpful in shedding more light on consumer behaviour. According to De Mooij (2004), the mental and social processes that drive behaviour vary across cultures, and most motivations are shaped by culture. Understanding the variations in what motivates people is important for explaining buying behaviour and brand preference, and for developing effective advertising. Different cultural dimensions, for instance, explain specific buying motives for specific product categories. De Mooij (2004) points out that Hofstede's (1980) cultural dimensions (such as power distance and individualism versus collectivism), combined with national wealth, can explain more than half of the differences in consumption and consumer behaviour across countries. Zourrig, *et al.*

(2009) point out that the individualism-collectivism dimension or idiocentrism-allocentrism dimension at individual level, is regarded as the key determinant of cultural variability in both cultural psychology and consumer behaviour literature, and therefore merits further investigation.

This study investigated individual motivational value drives that compel people to survive and find solutions to daily problems. Satisfying these drives by acquiring goods and services may lead to increased levels of life satisfaction. Different motivational drives have different effects on consumer attitudes and preferences, and in turn this has an effect on their product and service choices. In a market flooded with products and services, the economic means of acquiring those goods and services may inhibit the effect of the acquisition of such goods on life satisfaction. These unsatisfied needs and desires, mostly induced by limited incomes, may frustrate individuals, thereby having a decreased effect on life satisfaction derived from the "goods life".

This study provided evidence of the moderating effect of living standards on the relationship between motivational drives and life satisfaction, and showed that some motivational drives may enhance satisfaction with life while other motivational drives have little or no effect, and that living standards moderate all these effects.

ACKNOWLEDGEMENTS

The authors would like to thank Mr Peter Southey who has reworked the manuscript and assisted us in streamlining our arguments, as well as for proofreading the final manuscript. The comments of two anonymous reviewers were also very helpful, and we appreciate their effort and time in reviewing this paper.

The research was funded by a domestic general research grant from the College of Economic and Management Sciences, Unisa.

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**APPENDIX 1
THE SATISFACTION WITH LIFE SCALE (SWLS)**

SWL1	In most ways, my life is close to my ideal.
SWL2	The conditions of my life are excellent.
SWL3	I am satisfied with my life.
SWL4	So far I have got the important things I want in life.
SWL5	If I could live my life over, I would change very little.

**APPENDIX 2
THE 29 PVQ ITEMS AND THEIR CONSTRUCTS**

Higher-order dimension	PVQ first-order dimension	Items
Self transcendence	Benevolence	PVQ8; PVQ28
	Universalism	PVQ5; PVQ18; PVQ22; PVQ26
Self enhancement	Achievement	PVQ3; PVQ20; PVQ27
	Power	PVQ9; PVQ13
Openness to change	Self direction	PVQ2; PVQ11; PVQ24
	Stimulation	PVQ6; PVQ14
	Hedonism	PVQ10; PVQ17;
Conservation	Security	PVQ7; PVQ16; PVQ21
	Conformity	PVQ1; PVQ15; PVQ19; PVQ25
	Tradition	PVQ4; PVQ12; PVQ23; PVQ29

APPENDIX 3

Using the 2011 descriptions of the SAARF, the typical descriptors of the four LSM groupings are used for the purpose of this study

LSM I:	Members of this group includes most age groups, and have a very low and often a single household income of between R1500 and R2500 per month, are majority female, live in traditional huts or small houses, shacks or town houses, and have very little or no school education, although some have high school education, very few have matric. Their possessions do not include many durables, except for radios, TV's and stoves. Their main free time activities are pleasure seeking and watching television and DVD's. Group members are active radio listeners to mainly African Language services and watch SABC 1 and 2. They live mostly in rural areas or in townships.
LSM II:	Members of this group have either a single or multiple household income from about R2 500 to R5 000 per month. Their educational level is mostly high school or matric. They are balanced in terms of males and females, tend to be slightly younger, like to be outdoors, have better access to basic services and own more durables that include hi fi sets and fridges, over and above the items owned in LSM I. Radio stations are predominantly African, and television channels are mainly SABC 1, 2, 3 and e.tv, and they read local newspapers.
LSM III:	Members of this group are slightly older than the members of LSM II, have matric or even higher levels of qualifications and consist of more females. Their incomes are typically between R5 000 and R12 000 per month, many are dual incomes, and they own many durables and some have motor vehicles. Radio listening includes a wide range of community and commercial stations; and television viewing includes SABC 1, 2, 3, e.tv and M Net. They often have internet access, computers and satellite dishes and may go to the cinema and enjoy the outdoors. They read magazines and newspapers and enjoy a wide range of activities.
LSM IV:	This group includes all age groups, with mostly dual incomes ranging between R12 000 and R30 000 per month, and it has slightly more males than females. Most of them have more than matric as a qualification. They own a large variety of durable goods and have cars, computers, internet access, satellite dishes, and access the full range of radio and television channels. Compared to all other LSM groups they dominate in terms of watching DSTV. They mostly live in and close to large cities or towns and engage in the full range of possible activities.

The descriptions in this table were interpreted by the authors of this study

PVQ ITEMS

Response categories are:

1 "very much like me"; 2 "like me"; 3 "somewhat like me"; 4 "a little like me"; 5 "not like me";
6 "not at all like me"; and 7 "do not know"

PVQ1	It is important to her to be polite to other people all the time. She believes she should always show respect to her parents and to older people.
PVQ2	Thinking up new ideas and being creative is important to her. She likes to do things in her own original way.
PVQ3	Being very successful is important to her. She likes to stand out and to impress other people.
PVQ4	She thinks it is important to do things the way she learned from her family. She wants to follow their customs and traditions.
PVQ5	She thinks it is important that every person in the world should be treated equally. She wants justice for everybody, even for people she does not know.
PVQ6	She likes surprises and is always looking for new things to do. She thinks it is important to do lots of different things in her life.
PVQ7	The safety of her country is very important to her. She wants her country to be safe from its enemies.
PVQ8	She always wants to help the people who are close to her. It is very important to her to care for the people she knows and likes.
PVQ9	She likes to be in charge and tell others what to do. She wants people to do what she says.
PVQ10	She really wants to enjoy life. Having a good time is very important to her.
PVQ11	She likes to make her own decisions about what she does. It is important to her to be free to plan and to choose her activities for herself.
PVQ12	She thinks it is important not to ask for more than what you have. She believes that people should be satisfied with what they have.
PVQ13	It is important to her to be rich. She wants to have a lot of money and expensive things.
PVQ14	She looks for adventure and likes to take risks. She wants to have an exciting life.
PVQ15	Honesty is very important to her. She believes she must be honest in any situation and always tell the truth.
PVQ16	It is important to her that everything is clean and in order. She does not want things to be a mess.
PVQ17	She looks for every chance she can to have fun. It is important to her to do things that gives her pleasure.
PVQ18	She strongly believes that people should care for nature. Looking after an environment is important to her.
PVQ19	She believes that people should do what they are told. She thinks people should follow rules at all times, even when no one is watching.
PVQ20	She likes people to know that she can do well. She is ambitious and ready to work hard to get ahead.
PVQ21	Her family's safety is extremely important to her. She would do anything to make sure her family is always safe.
PVQ22	It is important to her to listen to people who are different from her. Even when she disagrees with them she still wants to understand them and to get along with them.
PVQ23	She does not like to boast or draw attention to the things she does. She wants to be modest.
PVQ24	She thinks it is important to be interested in things. She is curious and tries to understand everything.
PVQ25	She wants to avoid doing anything people would say is bad or wrong. It is important to her to do things the right way.
PVQ26	She thinks everyone should work to get people in the world to live together peacefully. Peace everywhere in the world is important to her.

Note: The masculine form for the statements is used when the respondent is a male