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A comparative examination of consumer decision styles in Austria

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Abstract Mental orientations characterising a consumer's approach to making choices – in short, consumer decision styles – have attracted considerable interest from researchers and practitioners for their value in predicting purchasing behaviour. As a result, they play a key role for marketing activities such as market segmentation, positioning, and tailoring marketing strategies. To contribute to an internationally valid and reliable research instrument, this paper tests a well-documented and accepted research instrument, the Consumer Styles Inventory in another country context and, for the first time, with a sample ($n = 225$) representative of the general population. Results indicate that some dimensions seem to be universal, while national idiosyncrasies emerged as well.

Keywords consumer decision styles; cross-cultural research; scale development

Introduction

Globalisation drivers such as intensified levels of international exposure through international tourism, media coverage, and advanced technology have arguably contributed to homogenisation of consumer needs and wants (Levitt, 1983). From a company perspective, this trend has triggered an increasing number of product and store offerings, which in turn challenges marketers to become savvier in terms of understanding how consumers make decisions to buy products and which orientations they are taking when choosing among numerous options. The globalisation debate has not been uncontested, and thus the issue of cultural homogeneity versus cultural heterogeneity has come to the fore. Hence, it is questioned whether indeed consumers can be increasingly seen as a homogenous unit, transcending beyond cultural boundaries, or whether companies must learn to work with increasingly fragmented units of analysis (Firat, 1997; Firat & Shultz, 1997; Wickliffe, 2004), suggesting multitudes of products, lifestyles, and experiences.

In this context, the concept of consumer decision styles (CDS) and their measurement using the Consumer Styles Inventory (CSI) play a pivotal role. The CSI is a method for measuring the type of mental characteristics that are present when consumers make purchasing decisions. It is used in this study to examine its comparative usefulness and

applicability in a country context, which has until now been unexplored. Thus this study contributes to the examination of the validity of the concept. We argue that issues observed in multicultural societies may not only reside within culturally diverse societies, but can also arise in cross-cultural communication and understanding activated within a culturally homogenous society and, as a result, globalisation triggers the cross-border mobility of products, brands, services, information, and consumers. To this end, the comparative examination of CDS in Austria is a meritorious contribution to the debate about the usefulness of the concept.

Purpose of this research

For a number of years, the way in which consumers approach purchasing decisions has attracted considerable research attention (e.g. Bettman, 1979; G.B. Sproles, 1985; Thorelli, Becker, & Engeldow, 1975; Westbrook & Black, 1985). Findings show that consumers approach complex purchasing decisions by displaying particular information search, learning, and decision patterns (E.K. Sproles & Sproles, 1990). These 'mental orientations characterising a consumer's approach to making choices' (G.B. Sproles & Kendall, 1986) are crucial, as they are closely linked to the actual purchasing behaviour (Mitchell & Bates, 1998). A number of studies have investigated the decision-making styles in particular contexts, for example, the relationship between product involvement and decision-making styles (Bauer, Sauer, & Becker, 2006), whether the purchase is online (Cowart & Goldsmith, 2007), whether the purchase is of a domestic or foreign brand (Wang, Siu, & Hui, 2004), and shopping Mall consumer behaviour (Wesley, LeHew, & Woodside, 2006). To this end, their insights are relevant for both academics and managers, who may use this information for segmentation and targeting activities. This research on consumer decision making also touches on cultural dimensions and has implications for cross-cultural research (Hofstede, 1983).

Most of the previous CSI studies have looked at the United States (G.B. Sproles, 1985; G.B. Sproles & Kendall, 1986), with some studies providing evidence from the UK (Bakewell & Mitchell, 2006; Mitchell & Bates, 1998; Mitchell & Walsh, 2004), Germany (Mitchell & Walsh, 2004; Walsh, Mitchell, & Hennig-Thurau, 2001), South Korea (Hafstrom, Chae, & Chung, 1992), India, Greece, New Zealand (Lysonski, Durvasula, & Zotos, 1996), China (Fan & Xiao, 1998; Wang et al., 2004), Taiwan (Yang & Wu, 2007), and Iran (Hanzaee & Aghasibeig, 2008). These cross-national applications of CSI have been highly meritorious in terms of establishing the usefulness of the concept in the respective country and cultural contexts. However, following Durvasula, Lysonski, and Andrews (1993), it is important to establish the applicability of consumer research measures to further contexts and societies. There is also a danger of simply using 'borrowed scales' (Douglas & Nijssen, 2003) in cross-national research, and further replication and extension studies are thus strongly recommended to minimise the detrimental effects of wrong conceptualisation and operationalisation. Specifically, cross-national consumer-research instruments are sensitive to the nature of the attitudinal constructs, the nationality of the respondents, and the country-of-origin effects examined in the research. The instrument is also sensitive to lower-order interactions between these factors. Parameswaran and Yaprak (1987) encourage cross-national work and discuss ways to facilitate more rigorous comparative work.

Unfortunately, replications – while from an epistemological perspective an important part of research and vital to scientific progress (Collins, 1985; Easley, Madden, & Dunn, 2000; Evanschitzky, Baumgarth, Hubbard, & Armstrong, 2007; Hubbard & Armstrong, 1994) – are not very popular, especially in marketing, consumer behaviour, and advertising research (Hubbard & Armstrong, 1994; Madden, Easley, & Dunn, 1995). Hubbard and Armstrong (1994, p. 236) define replication as ‘duplication of a previously published empirical study that is concerned with assessing whether similar findings can be obtained upon repeating the study’.

The specific contribution of our work to cross-national research and the consumer behaviour literature is thus on an epistemological ground, in that we test a well-documented and accepted research instrument, the CSI (G.B. Sproles & Kendall, 1986), in another country context (Berry, 1980; Douglas, Morrin, & Craig, 1994; Hui & Triandis, 1985). Particularly in the context of multicultural research, replications make an important contribution to the advancement and generalisation of marketing results (Koçak, Abimbola, & Özer, 2007), and this paper takes the CSI forward and examines it in the Austrian consumer context. Furthermore, results are compared with previous studies from Germany, the UK, the United States, South Korea, China, and so on. It is interesting to compare the mental characteristics of CSI across countries, as it will be beneficial for MNEs to understand local consumers’ decision-making behaviour and help them to identify target customers and segment them. Based on a sample of 225 Austrian consumers, representative of the general population, the instrument is probed for its validity beyond student samples. Next, an overview of the existing literature, methodology, and outcome of the empirical work are presented. The findings are discussed in the light of results previously obtained with the CSI and are followed by recommendations for future research.

Background

From a managerial perspective, CDS lend themselves extremely well to key marketing activities such as market segmentation and positioning or tailoring marketing strategies. What applies in the domestic context is even more vital in an international setting. The international marketing mix either allows standardisation or requires differentiation, depending on the variations in CDS across borders. However, this calls for an ‘internationalisation’ of marketing research tools, such as psychographic scales, as well. As Theodosiou and Leonidou (2003) observe, customer preferences is one of the antecedent factors that determines whether a company would use standardisation or follow the adaptation approach. It follows that a research instrument to profile CDS needs to produce valid and reliable results across consumer populations and independent of national contexts.

In contrast to this demand, empirical research on decision-making styles to date has concentrated primarily on US consumers. Only a few studies have extended their focus beyond the US context (Durvasula, Lysonski et al., 1993; Fan & Xiao, 1998; Mitchell & Bates, 1998; Walsh, Hennig-Thurau, Wayne-Mitchell, & Wiedmann, 2001), and even fewer have engaged in multi-country comparisons (e.g. Kaynak & Kucukemiroglu, 2001; Lysonski et al., 1996). Therefore, an internationally valid and reliable research instrument is not yet in place. In addition to the limited geographical reach, previous studies have all been based on student samples. Although we do agree with Campbell (1986, p. 276) that ‘college students really are people’ and do not want

to 'throw out the baby with the bath water' (Dobbins, Lane, & Steiner, 1988; Slade, Gordon, Dobbins, Lane, & Steiner, 1988), we feel that using student samples clearly limits the research instrument's generalisability across consumer populations.

Starting in the 1950s, the concept of CDS became popular and has been used in numerous studies (e.g. Darden & Reynolds, 1971; Moschis, 1976, 1977; Stone, 1954; Thorelli et al., 1975; Wells, 1975). However, it was not until the late 1980s that cross-country comparisons were undertaken (e.g. Durvasula, Lysonski et al., 1993; Fan & Xiao, 1998; Hafstrom et al., 1992; Lysonski et al., 1996; Mitchell & Bates, 1998; G.B. Sproles, 1985; G.B. Sproles & Kendall, 1986). Despite some overlaps in the scale content, most studies pertain to different areas, resulting in different research instruments. In their article, Lysonski et al. (1996) provide a valuable categorisation of the existing research in this area. They distinguish three different approaches: (1) the consumer typology approach (Darden & Reynolds, 1974; Moschis, 1976); (2) the psychographics/lifestyle approach (Lastovicka, 1982; Wells, 1975); and (3) the consumer characteristics approach (E.K. Sproles & Sproles, 1990; G.B. Sproles, 1985; G.B. Sproles & Kendall, 1986). In general, these approaches revolve around the several dimensions a consumer has to consider simultaneously when making a decision. Specifically, issues such as the right time for deciding, the amount of information to be collected, the time spent on searching, the amount to be paid, as well as the importance of brands and product quality, are included. The consumer characteristics approach was attributed the highest explanatory power, as it maps consumers' affective and cognitive orientation within the decision-making process (Lysonski et al., 1996).

Among the research work pertaining to the consumer characteristics approach, G. B. Sproles and Kendall's (1986) CSI received the most attention. For two reasons, the CSI was judged particularly qualified for comparative work: (1) the existence of a robust questionnaire and (2) the availability of prior research for comparison (Durvasula, Lysonski et al., 1993; Hafstrom et al., 1992; Lysonski et al., 1996; G.B. Sproles & Kendall, 1986). Therefore, based on our research intentions, we have used the CSI for the underlying contribution. Table 1 gives an overview of earlier CDS studies and the CSI traits identified in these. Based initially on six traits, G.B. Sproles and Kendall (1986) developed a more parsimonious version resulting in eight dimensions mapping consumer decision making. This eight-factor structure has been replicated in most other studies so far. Some studies have deviated slightly on the dimensions of the decision-making styles. For example, Hafstrom et al. (1992) and Fan and Xiao (1998) identified a 'Time-Energy Conservation' dimension. However, this trait seemed to be specific to the particular cultural setting from which these studies originating (Korea and China). Walsh Hennig-Thurau et al. (2001) found seven characteristics in the German case and, in particular, identified 'variety seeking' as one of the CSI dimensions in Germany. Thus, according to this study, Germans are particularly prone to look for more product variety. Later studies look at CSI in different genders (Bakewell & Mitchell, 2004, 2006; Mitchell & Walsh, 2004). Bakewell and Mitchell (2004) found 'recreation shopping consciousness' in male shopping behaviour in the UK, and emphasise the importance of the 'efficiency shopping process' for male consumers. They also found 'store-loyalty/low-price seeking' in male shopping behaviour, and thus identified an opportunity to maintain loyalty by using loyalty cards and price-related activities (Bakewell & Mitchell, 2004, 2006). Mitchell and Walsh (2004) found that the seven characteristics that they had previously found in their CSI research in Germany (Walsh, Mitchell et al., 2001) were valid for females. Only four could be confirmed in the male German case.

Table 1 Studies using the Consumer Styles Inventory (CSI) and traits identified.

G.B. Sproles (1985)	G.B. Sproles and Kendall (1986)	Hafstrom, Chae, and Chung (1992)	Durvasula, Lysonski, and Andrews (1993)	Lysonski, Durvasula, and Zotos (1996)	Mitchell and Bates (1998)	Fan and Xiao (1998)	Siu, Wang, Chang, and Hui (2001)
United States	United States	South Korea	United States	Greece, India, New Zealand, United States	UK	China	China
Perfectionism	Perfectionism	Perfectionism	Perfectionism	Perfectionism	Perfectionism	Quality Oriented	Perfectionism
Value	Price-Value	Price-Value	Price-Value		Price-Value	Price-Value	
Consciousness	Consciousness	Consciousness	Consciousness		Consciousness	Consciousness	
Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand
Consciousness	Consciousness	Consciousness	Consciousness	Consciousness	Consciousness	Consciousness	Consciousness
Novelty-Fashion	Novelty-Fashion		Novelty-Fashion	Novelty-Fashion			Novelty-Fashion
Consciousness	Consciousness		Consciousness	Consciousness			Consciousness
Shopping							
Avoidance							
Confused by	Confused by	Confused by	Confused by	Confused by	Confused by	Information	
Over-choice	Over-choice	Over-choice	choice	choice	Over-choice	Seekers	
Recreational	Recreational	Recreational	Recreational	Recreational	Recreational		Recreational
Shopping	Shopping	Shopping	Shopping	Shopping	Shopping		Shopping
Consciousness	Consciousness	Consciousness	Consciousness	Consciousness	Consciousness		
Impulsiveness	Impulsiveness	Impulsiveness	Impulsiveness	Impulsiveness	Impulsiveness		
Habitual, Brand	Habitual, Brand	Habitual, Brand	Habitual, Brand	Habitual, Brand	Habitual, Brand		
Loyalty	Loyalty	Loyalty	Loyalty	Loyalty	Loyalty		
		Time-Energy				Time-Energy	
		Conserving				Conserving	

(Continued)

Table 1 (Continued).

Walsh, Mitchell, and Henning-Thurau (2001)	Wesley, LeHew, and Woodside (2006)	Yang and Wu (2007)	Cowart and Goldsmith (2007)	Hanzaee and Aghasibeig (2008)	Zhou, Arnold, Pereira, and Yu (2010)
Germany Perfectionism	United States Perfectionism	Taiwan Perfectionism	United States Quality Consciousness	Iran Perfectionism	China Perfectionism
	Price-Value Consciousness				Price-Value Consciousness
Brand Consciousness	Brand Consciousness	Brand Consciousness	Brand Consciousness	Brand Consciousness	Brand Consciousness
Novelty-Fashion Consciousness	Novelty-Fashion Consciousness	Novelty-Fashion Consciousness	Fashion Consciousness	Fashion Consciousness	Novelty-Fashion Consciousness
Confused by Over-choice	Confused by Over-choice	Confused by Over-choice		Confused by Over-choice	Confused by Over-choice
Recreational/ Hedonism	Recreational Shopping Consciousness		Hedonistic shopping	Recreational Shopping Consciousness	Recreational Shopping Consciousness
Impulsiveness		Impulsiveness	Impulsiveness	Impulsiveness	Impulsiveness
Time-Energy Conserving	Habitual, Brand Loyalty	Brand Loyalty	Brand Loyalty Time-Energy Conserving	Habitual, Brand Loyalty	Habitual, Brand Loyalty
Variety Seeking				Low-Price Seekers Non-Perfectionist/ Brand Indifference	

Furthermore, the Internet has strongly contributed to the development of online consumer purchasing. Yang and Wu (2007) found six characteristics in CSI of Taiwanese online shoppers. They found that impulsive shopping still occurred in online shopping, which means that consumers still buy products online without an initial intention to purchase. In online consumer research, male and female shopping behaviours are different. The online male consumer has a strong brand consciousness. The search for novel fashion occurs with online female consumers (Yang & Wu, 2007).

Methodology

Questionnaire design

Following the methodology of related studies, a questionnaire was designed, comprising 54 questions and incorporating suggestions from the most recent study in the area of CDS (Mitchell & Bates, 1998). Three native English speakers were involved in the questionnaire development, and two academics moderated the process of developing items, following Brislin's (1970) back-translation approach (see the Appendix for the items used in the questionnaire). For the purposes of evaluating validity, six additional questions from the 'domain specific innovativeness' (DSI) scale were added (Gatignon & Robertson, 1985; Goldsmith & Hofacker, 1991; Price & Ridgeway, 1983). Following the theory, the characteristics of CDS are linked to the mental orientation of the consumer when they make their purchasing decision (G.B. Sproles & Kendall, 1986). The items were varied based on three different products (toothpaste, a vacuum cleaner, and a computer) to measure the consistency of responses, therefore adding up to 18 additional questions.¹ Items were anchored on a five-point Likert scale, where 1 = 'strongly agree', 2 = 'agree', 3 = 'neither agree nor disagree', 4 = 'disagree', and 5 = 'strongly disagree'.

Sampling and data collection

Most of the earlier CSI studies are limited in that they used student samples. Walsh et al. (2001) collected information from shoppers of both genders in Germany. In this paper, a quota sample representative of the general Austrian population based on age, gender, and level of education was applied. A total of 1200 questionnaires were distributed nationwide by means of the 'questionnaire-drop-in' technique. In this case, interviewers were involved in distributing the questionnaires to potential interview partners with matching characteristics. Specifically, a team of 50 interviewers was advised to distribute the questionnaires to interviewees with predefined demographics, following a quota-sample design (age, gender, and education characteristics). The sample was designed to mirror closely the Austrian population, and was therefore deemed to overcome the generalisability problems that were associated with earlier studies. The returned questionnaires were handled anonymously, so a follow up of non-respondents was not possible.

The questionnaires were completed in the absence of the interviewer and collected after successful completion. While this procedure incurred increased time and costs, it helped to safeguard against self-selection bias and to deliver high-quality data with a pleasingly high response rate.

¹As indicated, DSI items referred to a different domain, were included for subsequent validation purposes only, and were therefore not included in the factor analysis.

In total, 225 usable questionnaires were returned, which equals a response rate of 19%. Due to the specifics of the sampling and data-collection procedure, non-response bias (Armstrong & Overton, 1977; Lambert & Harrington, 1990) was not an issue and thus was not tested for. Table 1 provides an overview of the sample characteristics.

Analysis

Descriptive analyses indicate that the sample reflects the Austrian population very well. To determine whether the factors identified by G.B. Sproles and Kendall (1986) are relevant to the Austrian data set, a factor analysis (principal components, varimax rotation) was conducted. Except for two items, which were subsequently deleted, all the items produced acceptable loadings. Next, Cronbach's alpha coefficients were computed to assess the scale reliabilities of the factors identified and to make comparisons with G.B. Sproles and Kendall's (1986) findings. In cross-cultural research, such an approach is commonly the first step in determining the generalisability of a model or scale to another cultural context (Irvine & Carroll, 1980).² For all but two factors, acceptable Cronbach's alpha coefficients between .63 and .78 were obtained (Nunnally, 1964). The factors 'Time-Energy Conserving' and 'Brand-Store Loyalty', however, displayed little internal consistency, with alphas of .40 and .34. Even when correcting for alpha's tendency to underestimate factor reliabilities and calculating unbiased coefficient thetas from the factor analysis, the reliability scores did not improve significantly. Therefore, the 'Time-Energy Conserving' and 'Brand-Store Loyalty' items cannot be perceived to be reliable measures of the dimensions in the Austrian context. While this is surprising at first sight, it does provide something of a pattern with the other studies. It was only in the UK, South Korean, and Chinese studies that 'Time-Energy Conserving' was identified, and only in the UK study that 'Brand-Store Loyalty' played a role. For the purposes of testing concurrent validity, a score for the positively anchored DSI items was calculated and correlated with the six CSI dimensions. In line with the hypothesised directions, 'Perfectionist', 'Novelty-Fashion Conscious', and 'Brand-Store Loyalty' factors showed significant positive correlations with the DSI scores, therefore confirming concurrent validity.

Table 2 gives a simplified overview of the Austrian findings and contrasts them with previous results using CSI in different country contexts. In addition to the findings obtained, demographic/economic indicators have been included to complement the interpretation.

The six factors derived from the Austrian samples correspond well to the factors already explored in previous studies. When looking at the CSI results across studies, there are some patterns that are particularly interesting. 'Perfectionist', 'Brand Conscious', 'Confused by Over-choice' occurred in most countries, including the Austrian case. This research confirms Mitchell and Bates's (1998) finding that 'Confused by Over-choice' occurs in most countries, as consumers become overloaded with information and face too many product choices (Klauegger, Sinkovics, & Zou, 2007). This research also found the 'Recreational Shoppers' characteristic, which appears in most countries studied, apart from China, and in the

²While we are aware that additional confirmatory approaches to data analysis will help to generalize our findings further, we did not aim at addressing more rigid equivalence tests (Steenkamp & Baumgartner, 1998) at this stage in our research. By applying the aforementioned exploratory analysis technique, we did, however, test for configural invariance (Douglas et al., 1994) and furthermore stay in line with earlier research in this area.

Table 2 Country comparison of CSI results.

Country	Austria	UK	United States	United States	United States	S. Korea	India	Greece	New Zealand	China	China	Germany	Taiwan	Iran
Authors/Year		Mitchell and Bates (1998)	G.B. Sproles and Kendall (1986)	Wesley, LeHew, and Woodside (2006)	Cowart and Goldsmith (2007)	Hafstrom, Chae, and Chung (1992)	Lysonski, Durvasula, and Zotos (1996)	Lysonski, Durvasula, and Zotos (1996)	Durvasula, Lysonski, and Andrews (1993)	Fan and Zhou, Xiao (1998)	Siu, Wang, Chang, and Hui (2001)	Walsh, Mitchell, and Henning-Thurau (2001)	Yang and Wu (2007)	Hanzaee and AghasiBeig (2008)
Sample size ^a	225	401	482	527	357	310	73	96	210	271	744	455	472	692
Number of factors explored	6	8	8	7	6	8	7	7	7	5	4	7	6	10
Perfectionist	X	X	X	X		X	X	X	X		X	X	X	X
Brand Conscious	X		X	X	X	X	X	X	X	X	X	X	X	X
Confused by Over-choice	X	X	X	X		X	X	X	X			X	X	X
Time-Energy Conserving		X				X				X				X
Novelty-Fashion Conscious	X	X	X	X	X		X	X	X		X	X	X	X
Price-Value Conscious	X	X	X	X		X				X				
Recreational Shoppers	X	X	X	X	X	X	X	X	X		X	X		X
Brand-Store Loyalty		X			X								X	
Impulsiveness		X	X		X	X	X	X	X			X	X	X
Habitual Brand-Loyal			X	X		X	X	X	X					X
Quality Conscious					X					X				
Information Seekers										X				
Variety Seekers												X		
Low-Price Seekers														X
Non-perfectionist/Brand Indifference														X

^aValid sample size used in the study.

online Taiwanese study (Yang & Wu, 2007). As reported earlier, 'Time-Energy Conserving' and 'Brand-Store Loyalty' could not be identified in the Austrian context. While the latter only showed up in the UK study, the first dimension was also reported in two additional countries (South Korea and China). It has been found that neither 'Brand-Store Loyalty' nor 'Habitual Brand-Loyal' appear in either Austria or Germany. This shows that Austrian and German consumers' attitudes towards brand loyalty and brand-store loyalty are different from those of consumers in other countries. On top of that, there are similar CSI patterns between Austria and the United States, except that the 'Impulsiveness' and 'Habitual Brand-Loyal' dimensions did not show up in the Austrian study (as in the Chinese study). Although the latter finding is in line with the suggestion that Austrians are generally rather 'motionless' and 'traditional' people (Bernhard, 1974), we do not have a conceptually sound explanation for this finding. To some extent, the differing results may arise from the exploratory rather than confirmatory approach used by the studies outlined (except for Durvasula, Lysonski et al., 1993). However, these differences may also be attributed to more substantial cross-border differences. To provide additional insight into the country differences observed, demographic and economic key indicators were introduced. To date, the CSI has been tested in three different groups of countries: (1) economically well-developed countries such as Austria, Germany, the UK, and the United States; (2) emerging markets, such as China, Taiwan, South Korea, and India; and (3) countries in between, such as Greece and New Zealand, with modest or low annual GDP growth rates ranking in the upper middle with regards to living standards (New Zealand ranks at 27; Greece ranks at 35). A closer look from this perspective reveals some more detail: there is some evidence that the stage of economic development may impact the CSI's dimensionality.

Another objective of this research work was to test the CSI's explanatory power in a sample drawn from the general population. As Table 2 shows, the results from Austria are highly congruent with findings from previous studies using student samples. Therefore, the CSI may be deemed robust under a different sampling frame. While these results appear promising and support the cross-national applicability of the CDS construct to a considerable extent, they are to be considered – as was mentioned earlier – exploratory at this stage. Further analysis, following confirmatory model testing techniques is needed to establish fully credibility in terms of the generalisability of the results.

Conclusion, limitations, and future research

This paper attempts to test a well-established tool for measuring CDS in a different cultural context. This research thus contributes to cross-culture research by comparing the CSI of Austrian consumers with those from other countries. While previous studies have mainly drawn on samples from students, this paper draws its results from a more general sample of Austrians, which makes the findings inherently better suited to be generalised for the population as a whole. As the results indicate, the factors initially explored by G.B. Sproles and Kendall and refined during later studies seem to explain CDS to a large extent. This is an important contribution, which rests on the understanding that replications in marketing and consumer behaviour are not only useful but an important component of scientific inquiry (Evanschitzky et al., 2007; Hubbard & Armstrong, 1994). Our approach was also pursued with reference to previous work that dealt specifically with consumer behaviour research and its cross-national applicability in particular (Douglas & Nijssen, 2003; Durvasula, Andrews,

Lyonski, & Netemeyer, 1993). Hence, the findings strengthen an epistemological perspective, which suggests that replications are an important component of scientific progress (Collins, 1985).

Nonetheless, the results have to be interpreted with caution. The time span between the early studies (1986) and this particular research project (2002) is quite considerable and may thus distort the findings. Also there are demographic differences between this and the earlier studies, which were largely drawn from student samples. To the extent that our study draws on the general Austrian population, earlier generalisations may have returned higher levels of homogeneity. Finally, the question may be raised whether the similarities or differences observed are in fact real, with reference to measurement equivalence (Berry, 1969; Cavusgil & Das, 1997; Ewing, Salzberger, & Sinkovics, 2005; Salzberger, 2009; Sinkovics & Salzberger, 2006).

Therefore, we see three different avenues for future research. First, based on the experience of the studies already available, the CSI could be re-evaluated and adapted. In our view, it makes sense to review the items used so far critically, replace some, and add new items. Also, the scale should be designed in a way that is applicable to new sales channels such as the Internet. A redesigned scale could then be developed in different languages simultaneously and tested within a short period concurrently to increase comparability. Second, to be considered a useful tool, the samples used should mirror the overall population's demographics in each country. We therefore strongly advocate testing the scale on the entire population. Third, and most crucial in our view, is to address measurement equivalence, which has been criticised in cross-cultural research for quite some time (Albaum & Peterson, 1984; Aulakh & Kotabe, 1993; Davis, Douglas, & Silk, 1981; Salzberger, Sinkovics, & Schlegelmilch, 1999). The following diagnostic techniques for evaluating measurement equivalence in cross-national research may be used: first, alternating least squares optimal scaling (optimal scaling), which allows the estimation and comparison, item by item, of the underlying metrics of the ordinal measures across countries; and second, the analysis of multiple group structural equation measurement models (Mullen, 1995). The emerging perspective of Rasch modelling may offer further promising avenues for establishing equivalence in research results (Ewing et al., 2005; Salzberger & Sinkovics, 2006).

Given the critical importance of identifying CDS, and the extensive data available already, we strongly advocate the continuation of research using CSI. The suggestions for future research may contribute, in our view, to considerable improvements and the cross-national usability of the scale. Eventually, the CSI will become a powerful tool for marketing practitioners to improve their segmenting and targeting across borders.

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Appendix

Questionnaire – Instructions

Please indicate to what extent the following statements apply to you. Tick a number to indicate your likely cause of action. Circle '1' if you strongly agree with this statement or '5' if you strongly disagree with this statement. [1 = 'strongly agree', 2 = 'agree', 3 = 'neither agree nor disagree', 4 = 'disagree', 5 = 'strongly disagree'.]

Questionnaire items for consumer decision styles

I spend little time deciding on the products and brands I buy. / Shopping in different stores is a waste of time. / Shopping is very enjoyable to me. / I enjoy shopping, just for fun. / Shopping is not a pleasant activity to me. / I only shop stores that are close and convenient to me. / I spend little time deciding on the products I buy. / I usually compare at least three brands before choosing. / Getting good quality is very important to me. / I have very high standards and expectations for products I buy. / I really don't give my purchases much thought or care. / In general, I usually try to buy the best overall quality. / I make a special effort to choose the very best quality products. / I normally shop quickly, buying the first product I find that seems good enough. / I shop quickly, buying the first product or brand I find that seems good enough. / When it comes to purchasing products, I try to get the very best, or perfect choice. / A brand recommended in a consumer magazine is an excellent choice for me. / I usually compare advertisements to buy fashionable products. / To get variety, I shop in different stores and buy different brands. / It's fun to buy something new and exciting. / I keep my wardrobe up to date with the changing fashions. / There are so many brands to choose from that I often feel confused. / I usually have at least one outfit of the newest style. / Fashionable, attractive styling is very important to me. / I usually buy the very newest style. / I get confused by all the information on different products. / The more I learn about products, the harder it seems to choose the best. / Sometimes it's hard to decide in which stores to shop. / All brands are the same in overall quality. / I consider price first. / I cannot choose products by myself. / I prefer buying the best-selling brands. / I have favourite brands that I buy every time. / Once I find a product I like, I buy it regularly. / The higher the price of the product, the better its quality. / I usually buy well-known brands. / A product doesn't have

to be exactly what I want, or the best on the market, to satisfy me. / I regularly change the brands I buy. / I go to the same store each time I shop. / I usually buy the more expensive brands. / Good quality department and speciality stores offer the best products / The most advertised brands are usually good choices. / Expensive brands are usually the best. / Once I find a product or brand I like, I buy it over and over. / The well-known national brands are best for me. / I buy as much as possible at sale price. / I usually buy the lower-price products. / I look very carefully to find the best value for the money. / I look carefully to find the best value for money. / I carefully watch how much I spend. / I should spend more time deciding on the products I buy. / I often make purchases I later wish I had not. / I frequently purchase on impulse. / I take the time to shop carefully for best buys.

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