Replicating, validating, and reducing the length of the consumer perceived value scale

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ABSTRACT

This research reports an assessment of Sweeney and Soutar's (2001) consumer perceived value (PERVAL) scale. The PERVAL scale contains four dimensions: quality, emotional, price, and social values. The present study develops and evaluates two short forms of the original 19-item PERVAL scale based on Sweeney and Soutar's (2001) original data and three other studies in two different countries. In comparison with the full scale, the short 12-item and 8-item forms have equally good dimensional properties and equivalent predictive validity. The discussion includes implications, both for research and for retail managers.

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1. Introduction

Successful customer value delivery is one aspect of marketing management that receives substantial research attention (Anderson, Narus, & van Rossum, 2006; Tsai, 2005). Zeithaml (1988, p. 14) defines consumer perceived value as a "consumer's overall assessment of the utility of a product (or service) based on perceptions of what is given." A growing body of research focuses on establishing correlates of consumer perceived value (Chang & Tseng, 2013; Sirdeshmukh, Singh, & Sabol, 2002). Another stream centers on the measurement of consumer perceived value (Grewal, Monroe, & Krishnan, 1998; Kantamneni & Coulson, 1996) with Sánchez-Fernández and Iniesta-Bonillo (2007) concluding that customer perceived value is complex and multidimensional. Sweeney and Soutar (2001) (hereafter S&S) develop a consumer perceived value (PERVAL) scale using Australian data, subject this scale to extensive validation procedures, and test it in durable goods contexts such as furniture, car stereos and household appliances. The primary purpose of the present study is to propose and validate a cross-nationally applicable, short version of S&S's PERVAL scale.

The PERVAL scale frequently appears in marketing, adapted and used in services and goods contexts. These include mobile Internet in a cross-national study in Korea and Japan (Lee, Kim, Lee, & Kim, 2002), Canadian technology acceptance (Turel, Serenko, & Bontis,

2007), Chinese securities service (Wang, Lo, Chi, & Yang, 2004), Spanish financial services (Roig, Garcia, Tena, & Monzonis, 2006), Spanish (Sánchez, Callarisa, Rodríguez, & Moliner, 2006) and Australian (Williams & Soutar, 2009) tourism, Australian franchisees' risk perceptions (Grace & Weaven, 2011), U.S. wine region equity (Orth, McGarry Wolf, & Dodd, 2005), and licensed sport merchandise (Lee, Trail, Kwon, & Anderson, 2011), and German private-label brands context (Walsh & Mitchell, 2010). Although the PERVAL construct appears of growing interest to researchers, a systematic reexamination of the scale across cultures and consumption contexts and its measurement properties is absent from literature. Moreover, no study attempted to shorten the 19-item PERVAL scale.

This investigation of the PERVAL scale aims to contribute to literature in several ways. First, it assesses the robustness and generalizability of PERVAL in four studies using data collected from furniture shoppers and service customers (Table 1). In doing so, the authors attempt to heed the call for more replication studies in marketing (Evanschitzky, Baumgarth, Hubbard, & Armstrong, 2007; Hunter, 2001). Second, consumer perceived value may exist as a ubiquitous shopping-related influence that permeates many aspects of consumption for many individuals worldwide. Thus, it reports on an assessment of the PERVAL scale in two countries—the United Kingdom and the United States, in addition to the reassessment of the Australian S&S data. Third, increasing numbers of scholars advocate the use of shorter scales with nonredundant content that are as valid as those with more items (Lerman, Maldonado, & Luna, 2009; Manning, Bearden, & Tian, 2009; Richins, 2004; Walsh, Beatty, & Shiu, 2009). Therefore, it aims to develop and validate a shorter version (PERVAL-Short) of the 19-item PERVAL scale that exhibits good

Table 1
Samples used for PERVAL scale reassessment, validation, and scale shortening.

	S&S stage 2 study[a]	Study 1, U.K. (19-item PERVAL and PERVAL-Short)	Study 2, U.K. (19-item PERVAL and PERVAL-Short)	Study 3, U.S., validation study (PERVAL-Short 12 and Short 8)
Purpose	Reassessment of S&S scale. Development and assessment of measurement invariance of PERVAL-Short scales. Generalizability assessment.	Validation of S&S findings. Development and assessment of measurement invariance of PERVAL-Short scales. Generalizability assessment.	Validation of S&S findings. Development and assessment of measurement invariance of PERVAL-Short scales. Generalizability assessment.	Validation of PERVAL-Short scales. Assessment of measurement invariance of PERVAL-Short scales. Generalizability assessment.
Survey design	Telephone interviews in Australia (durable goods).	Self-completion questionnaire in furniture store in the U.K.	In-class survey of MBA students in U.K. university.	Shoppers collected by students at U.S. university via an online survey.
Sample	N = 303 adults (18+) 67% female 63% aged 18 to 44.	N = 345 furniture shoppers 66% female Mean age = 44.56 (SD = 15.69)	N = 149 students 63% female Mean age = 24.35 (SD = 2.37)	N = 205 furniture shoppers 63% female Mean age = 26.37 (SD = 10.25)

[a] These data were obtained from Professors Sweeney and Soutar.

psychometric properties. Using the original data by S&S, and data collected in three countries, it proposes a 12-item and an 8-item shorter scale.

The importance of this study is considered from both conceptual and practical perspectives. Conceptually, demonstrating the applicability of the PERVAL scale to different countries and shopping contexts might prompt further research into the perceived value construct and its correlates. Practically, a valid PERVAL measure that is short enough to be used in surveys could be more useful to practitioners and enable marketing researchers to use public opinion polls as a data source for empirical investigations of customer perceived value.

2. Background

2.1. The PERVAL scale

S&S propose four dimensions of PERVAL. Quality value ("functional value") refers to the practical or technical benefits that consumers can obtain by using a product. Emotional value refers to mental or psychological needs of consumers and the utility they derive from the feelings or affective states that a product generates. Price value refers to how satisfactory a product is compared with the cost, time, or effort spent in obtaining the product. Social value refers to the social utility (e.g., status, prestige) that consumption of the product conveys.

S&S's exploratory factor analysis results in a four-factor solution, with composite reliabilities ranging from .80 to .94, eigenvalues from 9.53 to 1.00, and indicators factor loadings above .60. The results of their confirmatory factor analysis (CFA) on a four-factor structure show that the model adequately represents the data. All model fit indices exceed the recommended threshold levels, with construct convergent and discriminant validity achieved. Correlations across the four PERVAL dimensions range from .26 to .74. S&S assess criterion-related validity by examining the relationships of the PERVAL dimensions with other conceptually related variables. In three regression analyses, they regress each of three dependent variables (willingness to buy the product, willingness to recommend the product, and not expecting problems with the product) on the four PERVAL summated subscales. These yield high coefficients of determination (R^2 = .68, .62, and .48) with beta values between .19 and .62. Furthermore, S&S evaluate the robustness of the 19-item PERVAL scale in the post-purchase stage in two product contexts—furniture and car stereos. Overall S&S provide a robust defense of their PERVAL scale.

However, Grace and Weaven (2011) fail to find discriminant validity between the social value dimensions and the other three PERVAL dimensions and drop social value from subsequent analyses. The lack of validity pertaining to the social value dimension may be attributable to the sample of Australian businesspeople, who likely differ from consumers—the targets for the original scale. Williams and Soutar (2009) expand PERVAL to include a new dimension,

epistemic value, and make the scale more applicable to the holiday consumption context in their study. Similar adaptations appear in other studies. Turel et al. (2007) use a 17-item scale to investigate the influence of perceived value on intention to use short messaging services. Roig et al. (2006) expand the original scale to 22 items to measure perceived value with respect to financial services. Orth et al. (2005) employ a 22-item 6-dimension scale to capture two additional value dimensions (environmental and humane) in the context of wine region equity. Altogether, these studies show growing uses of PERVAL, thus a replication study is warranted.

2.2. Benefits of a shorter PERVAL scale

Stanton, Sinar, Balzer, and Smith (2002), Richins (2004), and Nenkov, Morrin, Ward, Schwartz, and Hulland (2008) offer several arguments for shortening multi-item scales such as the PERVAL scale. A shorter PERVAL scale takes up less space in a questionnaire, allowing the inclusion of other measures and constructs. Similarly, if PERVAL is not the main construct under investigation, and the 19-item form of the PERVAL measure is the only one available, researcher may have to forgo measurement of PERVAL to keep the survey reasonable in length. A shorter measure also reduces hypothesis guessing in surveys and response bias caused by boredom and fatigue. The PERVAL scale draws particular attention because of the relatively large number of items dealing with similar (PERVAL-related) issues. Questionnaire design is challenging when so many items are embedded among others on different topics. Thus, shortening the PERVAL scale is desirable.

2.3. Approaches to shortening scales

Richins (2004) argues that despite a large psychometric literature on scale development processes, few publications describe how to shorten a scale. Drawing from Stanton et al. (2002) and Richins (2004), Nenkov et al. (2008) describe three sets of criteria to use when shortening a scale: internal, external, and judgmental. Internal criteria relate to internal consistency and dimensionality of a construct, external criteria refer to criterion-related validity, and judgmental criteria involve assessments of content validity and ease of use. These criteria provide guidelines for our efforts to shorten the PERVAL scale.

3. Methodology

This research involved three studies, with data from S&S's original stage 2 study. Studies 1 and 2 took place in the United Kingdom, and Study 3 in the United States. In Study 1, 345 U.K. furniture shoppers completed a questionnaire in a furniture store. In Study 2, 149 postgraduate U.K. students completed an online survey during class about their perceptions of their postgraduate program. In study 3, students from a large, southern, U.S. university distributed the link to an online survey to elicit online responses from furniture shoppers