

CONSUMER PREFERENCES AND PURCHASE INTENTIONS FOR RATTAN FURNITURE

*M. Amoah**

Senior Lecturer
Department of Construction and Wood Technology Education
College of Technology Education
University of Education, Winneba
Kumasi, Ghana
E-mail: martamoah@yahoo.com

P. K. Dadzie†

Lecturer
Interior Architecture and Furniture Production Department
Kumasi Polytechnic
Kumasi, Ghana
E-mail: peter.kdadzie@kpoly.edu.gh

F. K. Bih

Lecturer
Department of Construction and Wood Technology Education
College of Technology Education
University of Education, Winneba
Kumasi, Ghana
E-mail: bihfrancis@yahoo.com

E. D. Wiafe

Lecturer
Department of Environmental and Natural Resources
Presbyterian University College
Akropong-Akuapem, Ghana
E-mail: Edward.wiafe@presbyuniversity.edu.gh

(Received November 2014)

Abstract. Although research on consumer preference and purchase intentions has received significant attention, little research has been performed with respect to furniture products, particularly in the area of empirical hypothesis testing. This study used regression models to test hypotheses relating to positional goods consumption and environmental and sustainable consumption theories to investigate consumers' preference for rattan cane furniture and their intentions to purchase the product. A questionnaire was administered to 750 staff and students from universities, polytechnics, and research institutions in Ghana. The results showed that social status, modernity, and environmental safety supported the preference and purchase intentions for rattan cane furniture, whereas mixed results emerged from sustainable consumption. The most important driver of preference for rattan cane furniture was modernity, followed by environmental safety, social status, and sustainable consumption. In the case of purchase intentions, social status emerged as the most important factor, followed by modernity, and then environmental consumption. Building a positive social, environmental, and sustainable image of rattan cane furniture will enhance the product's value, and this will culminate in increasing consumers' preference for the product and their intentions to purchase the product. The study concluded that through market segmentation, manufacturers, and marketers of rattan cane furniture can target consumers who are proenvironmentalists and those who want to use the product to enhance their social image, thereby attracting a price premium.

Keywords: Rattan cane furniture, positional goods, social-status-enhancing products, sustainable consumption, environmental quality, price premium.

* Corresponding author

† SWST member

INTRODUCTION

Several decades ago, timber was regarded as the only forest product of significant economic value. However, in recent times, nontimber forest products (NTFPs) have emerged as products that can potentially support the livelihoods of rural communities (ITTO 2004). Since the early 1990s, NTFP harvest has been the main focus of tropical biodiversity conservation projects, and it is estimated that NTFPs provide at most 25% of the cash income to nearly 1 billion people (Molnar et al 2004). Also, the extraction of NTFP is considered more environmentally friendly than that of timber. For example, a study carried out in Indonesia suggests that rattan harvesting does not conflict with forest conservation objectives because it has little effect on forest structure and diversity (Widayati and Carlisle 2012). Rattan cane occupies an enviable place among NTFPs and is one of the most important NTFP for millions of small-scale forest users in Asia, South America, and Africa (ITTO 2004). It has wide and diverse applications, including the production of furniture, handicrafts, and household items (Widayati and Carlisle 2012). In Ghana, the rattan cane industry is made up of a group of small-scale entrepreneurs and is a major source of livelihood for individuals living in both rural and urban communities (Falconer 1994; Tabi-Gyansah 2001).

Rattan cane furniture is becoming increasingly popular in the marketplace because of its important characteristics, including greater attractiveness, lighter weight, and lower cost compared with similar wood-based products. Additionally, rattan cane furniture has low embodied energy and therefore is considered more environmentally friendly than furniture produced from other materials such as wood, metals, and plastics (MDBRPP 2010). Despite its environmental advantage and economic potential as a source of livelihood for rural and urban populations in developing countries, the market potential of rattan cane furniture has not received adequate attention. This gap in the literature has been recognized by the international tropical timber organization (ITTO), which has advocated the

need to conduct a baseline study on the consumption patterns and market preferences of rattan cane products as one of the key priority areas if the sustainability of rattan cane development is to be guaranteed (ITTO 2004). A fundamental understanding of the concerns of consumers and what factors possibly motivate these concerns is imperative to the success of wood products and NTFP marketing (O'Brien 2001). Knowledge of consumer needs and desires is an integral part of marketing strategies if products are to be consumer oriented (Pakarinen 1999). Previous studies have focused primarily on the market potential of wooden furniture (Pakarinen 1999; Ratnasingam et al 2007). Pakarinen (1999) investigated consumer perceptions about the use of wooden furniture whereas Ratnasingam et al (2007) focused on evaluating consumer perceptions toward rubber wood as a furniture material. Because information on these matters with respect to rattan cane is scanty, this study was carried out to investigate the social, sustainability, environmental, and modernity dimensions of rattan cane furniture, which can be used to predict consumers' preference and purchase decisions for the product.

BACKGROUND AND HYPOTHESES DEVELOPMENT

The last three decades have witnessed a plethora of research on the concept of perceived customer value, and this trend is expected to continue in the years to come (Woodruff 1997; Sánchez-Fernández and Iniesta-Bonillo 2007). The attention given to perceived customer value stems from the belief that customer value serves as a pivot around which marketing activities revolve (Holbrook 2006). Indeed, it has been observed that customer value is the driving force behind a firm's success (Slater 1997). The customer is believed to be at the heart of every business, and what the customer perceives to be of value is what matters. It therefore stands to reason that if a firm wants to stay competitive at the marketplace, managers need to have a full grasp of perceived customer value. This will allow them to identify areas that require

prioritized attention for the purpose of achieving marketplace advantage (Woodruff 1997).

Holbrook (2006) defines customer value as “an interactive relativistic preference experience,” meaning that customer value involves an interaction between a product and a customer. To Holbrook, the relativistic nature of product–consumer interaction encompasses three axes: comparative, personal, and situational. Blackwell *et al.* (1999) explained value as personal preference in the perceived situation. The product–consumer interaction is comparative because the judgment on a product’s value is made with reference to the value of similar products. Indeed, value is a comparative axis not only exclusively among similar products but also between alternatives available to the consumer (Gallarza and Gil 2008). Customer value is personal because it varies from one person to another. Zeithaml (1988) recognized that although consumers agree on cues that signal quality, within a single product category, perceived value appears to be “highly personal and idiosyncratic.” Finally, customer value is situational because it depends on the situation in which the evaluation occurs. Several marketing researchers have recognized the time and space variable (situational) as an important factor that determines the value of products (Zeithaml 1988; Nilson 1992; Holbrook 1999). According to Nilson (1992), “perceived value of a product is not constant: it varies with each consumer and even with each relative change in time of the day and year.”

Product attributes that serve as reliable signals of product quality or value have been dichotomized into intrinsic and extrinsic cues (Olson and Jacoby 1972). The former involves physical composition of the product, whereas the latter is product related. In the case of furniture products, intrinsic cues include such attributes as attractiveness, good-looking, youthfulness, naturalness, durability, and environmental safety (Pakarinen 1999). The following typology of intrinsic and extrinsic value has been proposed by Holbrook (2006). The utility or economic dimension of customer value refers to the case in which a product or consumption experience serves as a

means to a customer’s own objective. The social dimension occurs when one’s own consumption behavior serves as means of shaping the responses of others, such as when one consumes in a way that makes a status-enhancing favorable impression. Consumers derive their pride in consuming quality products because of the perception that quality products carry “an image of social status” (Parvin and Kabir 2006). Hedonic value represents the pleasure one derives from consuming a product, whereas altruistic value entails a concern for how one’s consumption behavior affects others.

Despite the importance of the concept of perceived value as a strategic tool in sustaining a competitive advantage at the marketplace (Wang *et al.* 2004), its definition remains unsettled (Sánchez-Fernández and Iniesta-Bonillo 2007). Although studies have viewed perceived value as a unidimensional construct that can be measured simply by asking respondents to rate the value that they received in making their purchases (Zeithaml 1988), others have advanced arguments that the concept should be viewed as a multidimensional construct that encompasses a wide range of interconnected dimensions (Sheth *et al.* 1991a; Holbrook 1999; Sweeney and Soutar 2001). The unidimensional view of perceived value, although simple, does not view value as an aggregate concept formed from several dimensions. Of particular importance is the failure of this approach to account for the complexity of consumers’ perceptions of value, which may include intangible, intrinsic, and emotional factors (Sánchez-Fernández and Iniesta-Bonillo 2007).

This study uses the concept of perceived customer value for furniture products made from rattan cane both conceptually and empirically. Furniture marketing is better understood if perceived customer value or quality is analyzed using the multidimensionality of value as intrinsic and extrinsic as well as environmental and social factors that influence customer’s perceived value for furniture products (Toivonen 2011). In this study, the perceived value of rattan cane furniture is analyzed through the

lens of Holbrook's conceptual framework of perceived customer value (Holbrook 1999, 2006) for two reasons. First, Holbrook's framework fits the objectives of this study, and second, the framework provides a comprehensive view of this multidimensionality. In fact, Sánchez-Fernández and Iniesta-Bonillo (2007) assert that Holbrook's proposal presents an approach that has made enormous contributions to the study of the nature of perceived value.

Positional Goods Consumption as Social-Status-Enhancing Mechanism

There are many compelling reasons why people care about their relative position in society. A person who has a high standing in society can command respect, admiration, and power (Solnick and Hemenway 1998). Sociological discourse on consumption patterns advocates the notion that certain groups of consumption are used as tools for displaying status, power, and social position in society (Jackson 2005). The thrust of positional goods as a means of enhancing one's social status in society has been supported by theories. Veblen's theory of consumption, for example, suggests that consumption is the key vehicle for advertising wealth and social status in modern capitalist societies (Dwyer 2009). People in virtually every society care about other people's opinion of them (Postlewaite 1998). Most consumption is therefore not driven by utilitarian value, but is largely influenced by society (Galbraith 1958). According to Hirsch's concept of positional consumption, once our material needs are met, we are led to consume "positional goods"; goods that, by virtue of their value or characteristics, allow us to "position" ourselves socially with respect to our fellows (Hirsch 1995).

Not all goods have the potential of elevating consumers' social status. How then can positional goods be differentiated from nonpositional goods? The most important criterion for goods to qualify as positional goods is their social scarcity. Once goods are freely available and are consumed by the majority of the populace, their social-status-enhancing charac-

teristics diminish, and individuals who aspire to enhance their social status must take pains to look for new goods with social identity (Hirsch 1995; Jackson 2005). In the Ghanaian context, rattan cane furniture is especially used on porches, balconies, and roof terraces of homes to receive visitors. It can be considered a "positional good" in that it is used as complementary furniture in the home of families who strive to enhance their social image. We therefore hypothesized that

H1a: As the perception that the use of rattan cane furniture will enhance consumers' social standing in society increases, the preference for the product will significantly and positively increase.

H1b: As the perception that the use of rattan cane furniture will enhance consumers' social standing in society increases, intention to purchase the product will significantly and positively increase.

Sustainable Consumption

The past decades have experienced increased and renewed interest in sustainable consumption with respect to building materials (Gold and Rubik 2009; Abeysondra et al 2007; Morel et al 2001; Lehmann 2013) and household furniture items (Pakarinen 1999; Bennington 1985; Alderman et al 2007; Ratnasingam et al 2007). The renewed interest in sustainable consumption is driven partly by the notion that anthropogenic activities are critical elements in environmental degradation (World Commission on Environment and Development, WCED 1987; Tanner 1999), and through mindful consumption, consumers can care for self, community, and nature (Sheth et al 2011). It is estimated that the global atmospheric concentration of CO₂ increased from a preindustrial value of 280 to 379 ppm in 2005 (IPCC 2007). In 2011, the concentration of CO₂ was 391 ppm, which is about 40% higher than the preindustrial level (IPCC 2013).

Although recent years have witnessed a plethora of studies on environmental marketing, only a handful of green marketing research has addressed

the marketing of forest products (Kärnä 2003). Because environmental quality plays a significant and influential role in evaluating total quality of products, environmental issues are increasingly becoming relevant for the marketing of wood products and are shaping customers' perceptions on product quality (Toivonen 2011). Research shows a positive relationship between purchase decision and environmental attributes of an environmentally labeled wood product (O'Brien 2001). Customers' concern about sustainable forest management practices increases their willingness to use their purchasing power as leverage to protect the environment (Vlosky and Ozanne 1998; O'Brien 2001; Archer et al 2005).

Thus, consumers' growing environmentalism will positively influence their desire to prefer products determined to be environmentally friendly, and this will eventually drive their purchase decisions. On the basis of this argument, it was proposed that

H2a: Greater perception that the use of rattan cane furniture contributes to sustainable consumption will increase consumers' preference for the product.

H2b: Greater perception that the use of rattan cane furniture contributes to sustainable consumption will increase consumers' intention to purchase the product.

Environmental Quality

Environmental quality is perceived to comprise a wide variety of issues ranging from sustainable management to health issues (Toivonen 2011). Proenvironmentalists desire to achieve two objectives: self-interest that places a premium on strategies that minimize one's own health risk and altruistic behavior that shows concern for other people, the next generation, other species, or the whole ecosystem (Bamberg and Möser 2007). Apart from the desire to safeguard the environment, health, and safety issues are important determinants of consumption patterns. Sought-after product characteristics include those that positively impact personal health, create

a good feeling of well-being, and communicate a certain lifestyle. Also, proenvironmentalists place a high premium on products perceived to possess low embodied energy and have great recycling potential (Toivonen 2011). On this basis, the following hypotheses were proposed:

H3a: As the perception that the use of rattan cane furniture will not pose any health problems to user's increases, preference for the product will significantly and positively increase.

H3b: As the perception that the use of rattan cane furniture will not pose any health problems to user's increases, intention to purchase the product will significantly and positively increase.

Other physical or tangible dimensions of product quality include aesthetic (visual) characteristics and youthfulness, and it is expected that products with high visual or aesthetic image quality will receive high patronage. The appearance attributes provide the consumer with the overall impression of the product. Modernity, simplicity, and playfulness emerged as the three attributes that provided insight into what consumers perceive when assessing product's appearance (Blijlevens et al 2009). We therefore hypothesized that

H4a: As the perception that rattan cane furniture is modern increases, preference for the product will significantly and positively increase.

H4b: As the perception that rattan cane furniture is modern increases, intention to purchase the product will significantly and positively increase.

METHODS

Participants and Data Collection

To test the hypotheses, we administered a survey instrument to 750 staff and students from universities, polytechnics, and research institutions in four major cities in Ghana. A questionnaire was developed and administered on site to participants

in the selected institutions. Six interviewers were recruited and trained in how to administer the survey. Face-to-face interviewing was adopted because it generates more reliable information (Zhou et al 2005). In addition, Carson et al (2001) recommended that when carrying out research on estimating economic values of ecological goods, having an in-person interview is preferable to a mail survey. We were, however, conscious about the interviewer effect and social desirability bias of face-to-face methodologies (Duffy et al 2005; Opdenakker 2006). To mitigate these effects, the participants were given time and space to respond to the questionnaire items (Robson 2011). The study met all the ethical guidelines of the research policy of University of Education, Winneba.

Because data were collected for the dependent (ie preference and purchase intentions) and independent (ie sustainable consumption, social status, modernity, and environmental safety) variables using the same participants, a common method of bias may occur (Zhou 2006). To

assess this potential problem, we conducted the Harman single-factor test (Podsakoff et al 2003) in which an exploratory factor analysis was carried out. The occurrence of common method bias is likely if one factor explains the majority of the variance in the data. In this study, the factor analysis carried out resulted in four factors that accounted for 69% of the total variance (Table 1). The first factor (sustainable consumption) explained about 36% of the variance, well below the threshold level of 50% that would indicate the presence of such bias (Husted et al 2014).

The participants were made up of 66% males and 34% females. The average age of the sample was 34 yr (median age = 31 yr). Majority (88.3%) aged between 21 and 40 yr, whereas 28.4% were between the ages of 41 and 60 yr. Approximately, 31% were holders of higher national diplomas, 48% holders of bachelor of science degrees, 18% holders of master's degrees, 2% holders of PhD degrees, and 1% held other qualifications. The income

Table 1. Measurement scales and assessment of internal consistencies.

Factors/variables	Factor loading	Eigen value	Cumulated explained variance (%)	Cronbach's alpha
Sustainable consumption		4.63	35.61	0.84
Increasing use of rattan cane furniture can decrease deforestation	0.69			
Production of rattan cane furniture is environmentally friendly	0.73			
By using rattan cane furniture, I contribute to the sustainability of tropical forests	0.87			
I will purchase rattan cane furniture because I want to contribute to the sustainability of tropical forests	0.71			
Social status		2.23	52.74	0.80
The use rattan cane furniture will enhance my social standing in society	0.76			
The use of rattan cane furniture will make me feel accepted in society	0.74			
The use of rattan cane furniture will make me have a good impression on other people	0.52			
Rattan cane furniture will make me feel attractive	0.56			
Environmental safety		0.78	62.93	0.72
Usage of rattan cane furniture will not pose any health problem to me	0.53			
Rattan cane furniture is recyclable	0.67			
Modernity		1.33	68.90	0.77
Rattan cane furniture is youthful	0.62			
Rattan cane furniture is the furniture of the future	0.76			
Rattan cane furniture is timeless	0.62			

distribution was as follows: at most GH¢150 (18%), GH¢151-700 (29.4%), GH¢701-1300 (41.4%), ≥GH¢1301 (19.4%).

Factor Analysis

To identify the factors that influence participants' preference for rattan cane furniture and that also drive their intention to purchase the product, a factor analysis with varimax rotation was performed on the data. Factor analysis is a statistical method used to analyze interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions called factors. The objective of factor analysis is to aggregate the information contained in a number of original variables into a smaller set of factors with minimum loss of information (Hair et al 2010). Factor analysis was therefore used to identify the key factors that could influence the participants' preference for rattan cane furniture and their decision to purchase the product. These key factors were then used as the basis for the multiple regression analyses. Factor analysis requires that the data matrix has sufficient correlation, and Bartlett's test of sphericity is used to test if there are correlations among variables. The Bartlett's test run on the data showed high correlations among the variables ($\chi^2 = 3478$, $df = 75$, $p < 0.001$) and therefore justified the application of factor analysis. Further analysis of the suitability of the data for factor analysis was carried out using the Kaiser–Meyer–Olkin Measure of Sampling Adequacy (KMO). The KMO value of 0.856 indicated that the data were satisfactory for factor analysis (Hinton et al 2004).

Four factors, namely, sustainable consumption, social status, environmental safety, and modernity, which explain about 69% of the total variance, were extracted as input for the regression models. The original variables *increasing the use of rattan cane furniture can decrease deforestation, production of rattan cane furniture is environmentally friendly, by using rattan cane furniture I contribute to the sustainability of tropical forests, and by using rattan cane furni-*

ture I contribute to mitigation of global warming were loaded on the first factor (sustainable consumption), which explained 35.61% of the variance. The second factor (social status), which explained 17.13% of the variance, consisted of four original variables, namely, *the use of rattan cane furniture will enhance my social standing in society, the use of rattan cane furniture will make me feel being accepted in society, the use of rattan cane furniture will make me have a good impression on other people, and the use of rattan cane furniture will make me feel attractive*. Two variables were loaded on the third factor (environmental safety) and they were *usage of rattan cane furniture will not pose any health problem to me, and rattan cane furniture is recyclable*. This factor explained 10.19% of the variance. The fourth factor (modernity), which was composed of three original variables, namely, *rattan cane furniture is youthful, rattan cane furniture is furniture of the future, and rattan cane furniture is timeless*, explained 5.97% of the variance.

Measurement of Variables

The questionnaire, which was the data collection instrument, consisted of items measured on a 5-point Likert scale anchored on strongly disagree (1) and strongly agree (5). The questionnaire was made up of scales for sustainable consumption, social status, environmental safety, and modernity (Table 1). Also, the participants were asked for demographic information. The questionnaire also contained a cover letter that informed them about the purpose of the study and explained that all information provided would be treated confidentially and used for research purposes. The participants had the option of declining participation by not accepting the questionnaire or leaving parts of the questionnaire incomplete.

Sustainable consumption. Items that were used as variables of sustainable consumption were developed after extensive review of extant research works such as Vlosky and Ozanne (1998), O'Brien (2001), Kärnä (2003), and Archer et al

(2005). Four items (eg, production of rattan cane furniture is environmentally friendly) were used to measure participants' sustainable consumption.

Social status. The measure of social status was adapted from Sweeney and Soutar (2001). In total, four items (eg, The use of rattan cane furniture will enhance my social standing in society) were used to measure the participants' perceived usage of rattan cane furniture as social enhancing status.

Modernity and environmental safety. The items were adapted from Pakarinen (1999), Ratnasingam et al (2007), Blijlevens et al (2009), and Gold and Rubik (2009). Three items (eg, rattan cane furniture is youthful) were used to measure the perceived modernity of rattan cane furniture. Environmental safety factors comprised healthiness and recyclability of rattan cane furniture.

Reliability and Validity of Constructs

The questionnaire was pretested on 10 furniture marketing professionals. The pretesting resulted

in rewording some questionnaire items. Reliabilities were calculated for the constructs, and Table 1 reports the reliability scores for each construct. The traditional measure of reliability is Cronbach's alpha with alpha values greater than 0.70 considered acceptable (Nunnally and Bernstein 1994). In this study, the reliability values ranged from 0.72 for environmental safety to 0.84 for sustainable consumption. Construct validity is most directly related to the question of what the instrument is in fact measuring (Churchill 1979). To ensure construct validity, measures should have convergent validity and discriminant validity. Convergent validity is demonstrated when two indicators of a construct are shown to be in agreement, whereas discriminant validity requires two or more indicators to be unrelated to each other (Cohen et al 2011). A correlation matrix of items shows moderate to high correlations among items of a construct and low correlations between them and other constructs' items (Table 2). Factor analysis performed on the constructs supports convergent validity and discriminant validity (Table 1).

Table 2. Intercorrelation of variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Purchase	1														
2 Preference	0.41 ^a	1													
3 Enhance	0.64 ^a	0.55 ^a	1												
4 Acceptance	0.49 ^a	0.32 ^a	0.41 ^a	1											
5 Impression	0.46 ^a	0.41 ^a	0.50 ^a	0.63 ^a	1										
6 Attractive	0.36 ^a	0.43 ^a	0.48 ^a	0.29 ^a	0.38 ^a	1									
7 Deforestation	0.08 ^b	0.04	0.11 ^a	0.13 ^a	0.09 ^a	0.08 ^b	1								
8 Environmentally friendly	0.17 ^a	0.03	0.15 ^a	0.27 ^a	0.19 ^a	0.03	0.54 ^a	1							
9 Sustainability	0.21 ^a	0.13 ^a	0.18 ^a	0.20 ^a	0.18 ^a	0.07 ^b	0.60 ^a	0.63 ^a	1						
10 Sustainability	0.26 ^a	0.20 ^a	0.24 ^a	0.22 ^a	0.23 ^a	0.13 ^a	0.48 ^a	0.55 ^a	0.65 ^a	1					
11 Healthy	0.41 ^a	0.46 ^a	0.46 ^a	0.27 ^a	0.33 ^a	0.42 ^a	0.13 ^a	0.16 ^a	0.16 ^a	0.23 ^a	1				
12 Recycle	0.36 ^a	0.37 ^a	0.36 ^a	0.22 ^a	0.26 ^a	0.31 ^a	0.14 ^a	0.17 ^a	0.19 ^a	0.29 ^a	0.56 ^a	1			
13 Youthful	0.33 ^a	0.46 ^a	0.37 ^a	0.22 ^a	0.26 ^a	0.36 ^a	0.16 ^a	0.14 ^a	0.18 ^a	0.20 ^a	0.40 ^a	0.34 ^a	1		
14 Future	0.35 ^a	0.53 ^a	0.44 ^a	0.27 ^a	0.30 ^a	0.40 ^a	0.08 ^b	0.06	0.13 ^a	0.20 ^a	0.48 ^a	0.37 ^a	0.53 ^a	1	
15 Timeless	0.36 ^a	0.42 ^a	0.39 ^a	0.27 ^a	0.34 ^a	0.38 ^a	0.13 ^a	0.16 ^a	0.22 ^a	0.27 ^a	0.47 ^a	0.40 ^a	0.48 ^a	0.55 ^a	1

^a $p < 0.01$; ^b $p < 0.05$.

Response scale: 1 = strongly disagree, 5 = strongly agree.

1 = I plan to purchase rattan cane furniture, 2 = I prefer rattan cane furniture, 3 = The use of rattan cane furniture will enhance my social standing in society, 4 = The use of rattan cane furniture will make me feel accepted in society, 5 = The use of rattan cane furniture will make me have a good impression on other people, 6 = Rattan cane furniture will make me attractive, 7 = Increasing the use of rattan cane furniture can decrease deforestation, 8 = Production of rattan cane furniture is environmentally friendly, 9 = By using rattan cane furniture, I contribute to the sustainability of tropical forests, 10 = I will purchase rattan cane furniture because I want to contribute to the sustainability of tropical forests, 11 = The use of rattan cane furniture will not pose any health problems to me, 12 = Rattan cane furniture is recyclable, 13 = Rattan cane furniture is youthful, 14 = Rattan cane furniture is the furniture for the future, 15 = Rattan cane furniture is timeless.

DATA ANALYSIS

Multiple regression analyses were performed to test the hypotheses. First, eight regression models with the original variables of the four factors were developed to test the hypotheses that perceived sustainable consumption, social status, modernity, and environmental safety of rattan cane furniture will increase participants' preference for the product and also lead to their decision to purchase the product (Table 3). The quality of these models was assessed by the adjusted R^2 values as well as the number of variables in the factors that were significant. In the second step, the multidimensionality of the preference and purchase intentions for rattan cane furniture was tested by developing regression models involving the interaction between the variables of social status and those of modernity and environmental safety. The sustainable consumption variables were not included in this step because of their low adjusted R^2 values (0.05 and 0.08; Table 3). The hypotheses were accepted if all the variables of a particular factor were significant at the 1, 5, and 10% levels of significance.

RESULTS AND DISCUSSION

One of the major challenges facing the world today is how to use natural resources without compromising the quality and sustenance of the environment. The need to promote low carbon, resource-efficient, and "green" products has generated a plethora of discussions in the literature (UNEP 2011). One area in which gains can be made with respect to sustainable consumption is the use of household items that have low embodied energy. Research indicates that environmental attributes of wood products are relevant for consumers purchase decisions (O'Brien 2001; Archer et al 2005). Indeed, studies have demonstrated that the perceived social benefits associated with a product increase consumers' preference for the product (Sweeney and Soutar 2001). Thus far, little is known about how the perceived social value of furniture products influences consumers' preference for the products.

This study investigated the social, sustainability, environmental, and modernity dimensions of rattan cane furniture, which can be used to predict consumers' preference and purchase decisions for the product.

First, purchase intentions and preference for rattan cane furniture variables were correlated with the variables of sustainable consumption, social status, modernity, and environmental safety to provide evidence of the multidimensionality of perceived customers' preference and purchase intentions (Table 2). Purchase intentions correlated positively with all variables, with the perception that rattan cane furniture usage will decrease deforestation and the perception that the use of rattan cane furniture will enhance one's social status in society providing the weakest and strongest associations, respectively. Similarly, with the exception of "deforestation" and "environmental friendliness," the rest of the variables were relevant to the perceived preference for rattan cane furniture. Overall, all the variables correlated positively. This suggests that not a single dimension can explain customers' perceived preference and purchase intentions for rattan cane furniture and that social, environmental, and sustainable dimensions all matter (Toivonen 2011). As a practical implication of this finding, producers and marketers of rattan cane furniture can take advantage of the multidimensional nature of perceived preference and purchase intention constructs to develop information-rich advertising and promotional packaging that meets the expectations of diverse consumers.

Next, hypotheses were used to investigate if greater environmental quality of rattan cane furniture, use of rattan cane furniture as perceived social status enhancement, and increased perceived modernity and environmental safety of rattan cane furniture would result in increased preference and purchase intentions of the product (Table 3). First, H1a and H1b were addressed. It was hypothesized that as the perception that the use of rattan cane furniture will enhance consumers' social standing in society increases, consumers' preference for the product and their

Table 3. Predicting consumers' preference for rattan cane furniture and purchasing intentions of the product.

Factors/variables	Preference β	Purchase intentions β
Sustainable consumption		
Increasing the use of rattan cane furniture can decrease deforestation	-0.07	-0.13 ^a
Production of rattan cane furniture is environmentally friendly	-0.12 ^b	0.04
By using rattan cane furniture, I contribute to the sustainability of tropical forests	0.09	0.12 ^a
By using rattan cane furniture, I contribute to global warming mitigation	0.24 ^a	0.23 ^a
Adjusted R^2	0.05	0.08
Social status		
Social-standing enhancement in society	0.04	0.27 ^a
Feel being accepted in society	0.26 ^a	0.19 ^a
Having good impression on other people	0.28 ^a	0.15 ^a
Rattan cane furniture will make me feel attractive	-0.01	0.08 ^b
Adjusted R^2	0.22	0.30
Modernity		
Rattan cane furniture is youthful	0.22 ^a	0.14 ^a
Rattan cane furniture is the furniture of the future	0.34 ^a	0.17 ^a
Rattan cane furniture is timeless	0.13 ^a	0.20 ^a
Adjusted R^2	0.33	0.17
Environmental safety		
The use of Rattan cane furniture will not pose any health problem to me	0.37 ^a	0.31 ^a
Rattan cane furniture is easily recyclable	0.17 ^a	0.19 ^a
Adjusted R^2	0.23	0.19
Two-way interaction paths		
Social-standing enhancement \times youthful	0.01	0.33 ^a
Acceptance in society \times youthful	0.25 ^a	0.16 ^b
Good impression on people \times youthful	0.20 ^a	0.08 ^c
Attractive \times youthful	0.15 ^b	0.06
Adjusted R^2	0.32	0.23
Social-standing enhancement \times furniture of the future	0.05	0.38 ^a
Acceptance in society \times furniture of the future	0.27 ^a	0.10 ^c
Good impression on people \times furniture of the future	0.18 ^a	0.08 ^c
Attractive \times furniture of the future	0.16 ^a	0.06
Adjusted R^2	0.37	0.24
Social-standing enhancement \times timeless	0.03	0.35 ^a
Acceptance in society \times timeless	0.19 ^a	0.05
Good impression on people \times timeless	0.27 ^a	0.10 ^b
Attractive \times timeless	0.18 ^a	0.01
Adjusted R^2	0.29	0.24
Social-standing enhancement \times healthiness	0.02	0.41 ^a
Acceptance in society \times healthiness	0.24 ^a	0.15 ^b
Good impression on people \times healthiness	0.22 ^a	0.04
Attractive \times healthiness	0.16 ^b	0.04
Adjusted R^2	0.31	0.30
Social-standing enhancement \times recyclable	0.10 ^c	0.33 ^a
Acceptance in society \times recyclable	0.26 ^a	0.16 ^b
Good impression on people \times recyclable	0.26 ^a	0.08 ^c
Attractive \times recyclable	0.15 ^b	0.03
Adjusted R^2	0.28	0.26

β = standardized regression coefficient, R^2 = variance explained by the model.

^a $p < 0.01$, ^b $p < 0.05$, ^c $p < 0.10$ (one-tailed).

intentions to purchase the product will significantly and positively increase. Four variables of social status (enhancement of social standing in society, acceptance in society, good impression on other people, and feeling attractive) were used to test the hypotheses. “Acceptance in society” and “good impression on other people” were significant contributors of consumer preference, with modest explanatory power ($R^2 = 0.22$). As the perception that the use of rattan cane furniture will make consumers feel accepted in society ($\beta = 0.26, p < 0.01$) and make them have good impressions on other people ($\beta = 0.28, p < 0.01$) increased, consumers’ preference for rattan cane furniture also increased. The results, however, show that there were nonsignificant associations between the use of rattan cane furniture as a social-standing-enhancing tool in society ($\beta = 0.04, p > 0.10$) and as a tool for making oneself attractive ($\beta = 0.01, p > 0.10$) and preference for rattan cane furniture. Thus, H1a was not supported. To address hypothesis H1b, the four variables of social status were used to predict consumers’ purchase intentions, and the model explained 30% of the variation in the purchase intentions (Table 3). All the four variables were significant contributors of purchase intentions for rattan cane furniture. As the perception that the use of rattan cane furniture will enhance consumers’ social standing in society ($\beta = 0.27, p < 0.01$), make them feel accepted in society ($\beta = 0.19, p < 0.01$), make them have a good impression on other people ($\beta = 0.15, p < 0.01$), and make them feel attractive ($\beta = 0.08, p < 0.05$) increased, consumers’ intentions to purchase the product also increased. Thus, H1b was supported.

Next, hypothesis H2a was addressed, and it was predicted that greater perceived environmental quality of rattan cane furniture will increase consumers’ preference for the product. Two of the four items contributed significantly to consumers’ preference with weak explanatory power ($R^2 = 0.05$) (Table 3). As consumers’ perception that the use of rattan cane furniture will contribute to the sustainability of tropical forests increased ($\beta = 0.24, p < 0.01$), their preference for the product also increased. In contrast to

expectation, the environmental friendliness of rattan cane furniture associated negatively and significantly ($\beta = -0.12, p < 0.05$) with preference for the product. Hypothesis H2a thus had to be rejected. To address hypothesis H2b, the four variables of environmental quality were used to predict purchase intentions and explained only 8% of the variation in the variable (Table 3). The increase in perception that the use of rattan cane furniture contributes to sustainability of tropical forests ($\beta = 0.12, p < 0.01$) and decreases global warming ($\beta = 0.23, p < 0.01$) increased consumers’ purchase intentions of the product. In contrast to expectation, decrease in deforestation with usage of rattan cane furniture ($\beta = -0.13, p < 0.01$) associated negatively with purchase intentions, whereas a nonsignificant association was found between environmental friendliness of rattan cane furniture ($\beta = 0.04, p > 0.10$) and purchase intentions. Thus, hypothesis H2b was not supported.

Three variables of modernity of rattan cane furniture were used to test the hypotheses that as the perception that rattan cane furniture is modern increases, the preference for the product (H3a) and purchase intentions (H3b) of the product increase. Modernity explained 33% and 17% of the variation in preference for rattan cane furniture and purchase intentions of the product, respectively (Table 3). All the three variables of modernity of rattan cane furniture were significant and positive for preference (youthful, $\beta = 0.22, p < 0.01$; future furniture, $\beta = 0.34, p < 0.01$; timeless, $\beta = 0.13, p < 0.01$) and purchase intentions (youthful, $\beta = 0.14, p < 0.01$; future furniture, $\beta = 0.17, p < 0.01$; timeless, $\beta = 0.20, p < 0.01$). Thus, the results provide support for hypotheses H3a and H3b.

Finally, hypotheses H4a and H4b were addressed, and it was predicted that greater perceived environmental safety of rattan cane furniture will increase consumers’ preference for the product and consequently increase the purchase intentions of the product. All the three variables were significant predictors of both preference and purchase intentions of rattan cane furniture. As the perception that rattan cane furniture does

not pose any health problems ($\beta = 0.37, p < 0.01$) and is recyclable ($\beta = 0.17, p < 0.01$) increased, the preference for the product increased. Similarly, there were positive and significant associations with the healthy nature of rattan cane furniture ($\beta = 0.31, p < 0.01$) and recyclability of the product ($\beta = 0.19, p < 0.01$) and purchase intentions of the product (Table 3). Thus, both H4a and H4b were supported.

From the results, it is evident that not all dimensions explained the perceived preference and purchase intentions in the same way. Social status, modernity, and environmental safety largely supported preference and purchase intentions, whereas mixed results emerged from sustainable consumption. Earlier study has asserted that although environmental quality of wood products has dominated public discourse in recent times, consumers do not generally consider this attribute as an important factor in their purchasing decision process. One reason driving this trend might be that producers have not taken full advantage of the environmental qualities associated with wood products (Toivonen 2011). Conversely, consumers may not be aware of the benefits associated with using products with good environmental qualities. One strategy that can be used to increase patronage of rattan cane furniture is developing an advertising package that highlights the full range of environmental qualities associated with the product.

The most important driver of perceived preference for rattan cane furniture was modernity, followed by environmental safety, social status, and sustainable consumption. In the case of purchase intentions, social status emerged as the most important driver, followed by environmental safety. Sustainable consumption was the least important driver. Drawing from "consumption value" theory to explain consumer choice, Sheth et al (1991b) advanced an argument that to buy or not to buy, to choose one type of product or service over another, and to choose one brand over another entails a wide range of value forms. One such value form is social value, which Sheth et al (1991b) referred to as "an image that is

congruent with the norms of a consumer's friends or associates and/or with the social image the consumer wishes to project." The findings of other studies (Williams and Soutar 2000; Sweeney and Soutar 2001; Wang et al 2004; Pura 2005) also suggest that the social dimension of a product plays a significant role in consumer purchase intentions. As a contribution to the literature, this study has demonstrated that indeed social value does have a significant effect on consumers' purchase decisions, more specifically with respect to rattan cane furniture. Producers and marketers can increase the level of patronage of rattan cane furniture by highlighting the social status enhancement potential of the product.

Regression models involving the variables of social status, modernity, and environmental safety were developed, and the purpose was to investigate if the effects of social status enhancement on preference and purchase intentions for rattan cane furniture were reinforced when the perceived environmental safety and modernity of the product was higher. All the five models that predicted preference for rattan cane furniture had greater explanatory powers than the initial model that involved only social status variables (Table 3). Additionally, 9 of the 12 interaction coefficients were significant. It was therefore concluded that the interactive effects of the perceived social status, environmental safety, and modernity of rattan cane furniture had a positive effect on preference for the product. Conversely, all the models that predicted the purchase intentions of rattan cane furniture had low explanatory powers compared with that achieved with the variables of social status only. It was therefore concluded that the effect of social status on the purchase decision of rattan cane furniture was not reinforced when the perceived modernity and environmental safety of the product were higher. The contribution to marketing literature made by this study indicates that value constructs can be independent and dependent. The interconstruct variables that yielded positive and significant interactions suggest that the constructs are related, whereas those that yielded nonsignificant interactions indicate

independence of the constructs. Previous studies (Sheth *et al* 1991a, 1991b) suggested that value constructs are independent and that they relate additionally and contribute incrementally to choice. Conversely, Sweeney and Soutar (2001) suggested that value constructs may be dependent.

CONCLUSIONS

Much of the buying behavior of consumers of rattan cane furniture can be explained usefully by positional goods consumption and environmental and sustainable consumption theories. Most of the previous research on furniture has neglected the importance of social values on consumers purchase intentions. The result of this study has shown that building a positive social, environmental, and sustainable image of rattan cane furniture will enhance the product's value and this will culminate in increasing consumers' preference for the product and their intention to purchase the product. Social status, modernity, and environmental safety influence purchase intentions, but social status plays the most important role in driving consumers' intention to purchase rattan cane furniture. However, because of the multidimensional nature of perceived customers' preference and purchase intentions, marketers should strive to use an integrative approach in their marketing strategies.

This study also provides valuable information to manufacturers and marketers of rattan cane furniture products as well as policy makers and environmentalists. Traditionally, rattan cane furniture has not received market promotion at the same rate as furniture made from wood. With growing interest in NTFPs, it is imperative that manufacturers and marketers of rattan cane furniture understand the factors that influence consumers to show preference for rattan cane furniture over other types of furniture. Additionally, the findings of this study will help rattan cane furniture manufacturers identify the most important factors that influence consumers' choice for the product. These factors should be incorporated into the design of rattan cane products. The findings will also allow marketers

of rattan cane furniture to devise strategies for how to present the product to the consuming public. For example, the social and environmental benefits associated with rattan cane furniture can be used as leverage to increase its market share. Through market segmentation, marketers of the product can target consumers who are proenvironmentalists and those who want to use the product to enhance their social image, thus attracting a price premium on the product.

This study also extends the use of social, environmental, and sustainability values to explain why consumers prefer to purchase rattan cane furniture. However, there are some limitations worth mentioning. First, the convenient sample used in this survey might have only come from a certain group of consumers. This group of potential consumers might behave differently from general consumers and therefore might not be representative of the entire consuming population. Therefore, caution should be used when generalizing the findings of this study. Additionally, the use of students and staff of polytechnics, universities, and research institutions limit the findings to these subgroups. Future research should consider sampling consumers with diverse demographic backgrounds. Secondly, this study did not consider effect of cultural differences on the preference and purchase intentions of rattan cane furniture. Studies have shown that consumer perceptions of product value are determined not only by intrinsic dispositions but also by internalized cultural values (Jung and Kau 2004; Overby *et al* 2005). Because rattan cane furniture has some cultural connotations, future research should include cultural and religious variables to assess their effects on preference and purchase intentions of the product.

ACKNOWLEDGMENTS

This research project would not have been possible without the financial support provided by the Government of Ghana (Research and Book Allowance for Tertiary Institutions) and cooperation from the staff and students of the University of Ghana, the Kwame Nkrumah University of

Science and Technology, Kumasi Polytechnic, and Takoradi Polytechnic and staff of the Forestry Research Institute of Ghana (FORIG), and Timber Industry Development Division (TIDD).

REFERENCES

- Abeysondra Y, Babel S, Gheewala S, Sharp A (2007) Environmental, economic and social analysis of materials for doors and windows in Sri Lanka. *Build Environ* 42:2141-2149.
- Alderman D, Smith R, Bowe S (2007) Eastern white pine secondary manufacturers: Consumption, markets, and marketing. *Forest Prod J* 57(10):28-35.
- Archer H, Kozak D, Balsillie D (2005) The impact of forest certification labeling and advertising: An exploratory assessment of consumer purchase intent in Canada. *For Chron* 81(2):229-243.
- Bamberg S, Möser G (2007) Twenty years after Hines Hungerford and Tomera: A new meta-analysis of psychosocial determinants of pro-environmental behaviour. *J Environ Psychol* 27:14-25.
- Bennington RR (1985) Furniture marketing: From product development to distribution. Fairchild Publications, Inc., New York, NY. 310 pp.
- Blackwell SA, Szeinbach SL, Barnes JH, Garner DW, Bush V (1999) The antecedents of customer loyalty. An empirical investigation of the role of personal and situational aspects on repurchase decision. *J Serv Res* 1(4):362-375.
- Blijlevens J, Creusen MEH, Schoormans JPL (2009) How consumers perceive product appearance: The identification of three product appearance attributes. *Int J Des* 3(3):27-35.
- Carson D, Gilmore A, Perry C, Gronhaug K (2001) Qualitative marketing research. Sage Publications, Thousand Oaks, CA. 216 pp.
- Churchill GA Jr. (1979) A paradigm for developing better measures of marketing constructs. *J Marketing Res* 16(1):64-73.
- Cohen L, Manion L, Morrison K (2011) Research methods in education (7th ed). Routledge, New York.
- Duffy B, Smith K, Terhanian G, Bremer J (2005) Comparing data from online and face-to-face surveys. *Int J Mark Res* 47(7):615-639.
- Dwyer RE (2009) Making a habit of it: Positional consumption, conventional action and the standard of living. *J Consum Cult* 9(3):328-347.
- Falconer J (1994) Non timber forest products in southern Ghana: Main report. Natural Resources Institute, Kent, UK. 240 pp.
- Galbraith JK (1958) The affluent society. Houghton Mifflin, Boston, MA. 368 pp.
- Gallarza MG, Gil I (2008) The concept of value and its dimensions: A tool for analyzing tourism experiences. *Tourism Rev* 63(3):4-20.
- Gold S, Rubik F (2009) Consumer attitudes towards timber as a construction material and towards timber frame houses-selected findings of a representative survey among the German population. *J Clean Prod* 17:303-309.
- Hair JF, Black WC, Babin BJ, Anderson RE (2010) Multivariate data analysis: Global perspective. Pearson Prentice Hall, New York, NY.
- Hinton PR, Brownlow C, McMurray I, Cozen B (2004) SPSS explained. Routledge, London.
- Hirsch F (1995) Social limit to growth. Routledge, London. 208 pp.
- Holbrook MB (1999) Consumer value: A framework for analysis and research. Routledge, London. 224 pp.
- Holbrook MB (2006) Consumption experience, customer value, and subjective personal introspection: An illustrative photographic essay. *J Bus Res* 59:714-725.
- Husted BW, Russo MV, Mezza CEB, Tilleman SC (2014) An exploratory study of environmental attitudes and willingness to pay for environmental certification in Mexico. *J Bus Res* 67:891-899.
- IPCC (2007) Summary for policymakers. In S Solomon, D Qin, M Manning, Z Chen, M Marquis, K-B Averyt, M Tignor, HL Miller, eds. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom. 18 pp.
- IPCC (2013) Summary for Policymakers. In TF Stocker, D Qin, GK Plattner, M Tignor, SK Allen, J Boschung, A Nauels, Y Xia, V Bex, PM Midgley, eds. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK.
- ITTO (2004) Rattan Reborn? The Regional Conference on Sustainable Development of Rattan in Asia, Tropical Forest Update 14/4. International Timber Trade Organization, 21-23 January 2004, Manila, the Philippines. 13 pp.
- Jackson T (2005) Live better by consuming less? Is there a double dividend in sustainable consumption? *J Ind Ecol* 9(1/2):19-36.
- Jung K, Kau AK (2004) Culture's influence on consumer behaviors: Differences among ethnic groups in a multi-racial Asian country. *Adv Consum Res* 31:366-372.
- Kärnä J (2003) Environmental marketing strategy and its implementation in forest industries. Academic Dissertation. Publication of University of Helsinki. Dept. of Forest Economics N o. 39 pp. 16 articles.
- Lehmann S (2013) Low carbon construction systems using prefabricated engineered solid wood panel for urban infill to significantly reduce greenhouse emissions. *Sustainable Cities and Society* 6:57-67.
- MDBRPP (2010) Review of developed western market for bamboo and rattan commodities of Nepal. Market Development of Bamboo and Rattan Products Project, Department of Forest Research and Survey, Kathmandu, Nepal.
- Molnar A, Scherr SJ, Kheer A (2004) Who conserves the world's forests? A new assessment of conservation and investment. *Forest Trends*. http://www.forest-trends.org/documents/files/doc_163.pdf (10 March 2013).

- Morel JC, Mesbah A, Oggero M, Walker P (2001) Building houses with local material: Means to drastically reduce the environmental impact of construction. *Build Environ* 36:1119-1126.
- Nilson TH (1992) Value-added marketing: Marketing management for superior results. McGraw-Hill, Maidenhead, UK. 208 pp.
- Nunnally JC, Bernstein IH (1994) Psychometric theory (3rd ed). McGraw-Hill, New York. xxiv + 752 pp.
- O'Brien KA (2001) Factors affecting consumer valuation of environmentally labeled forest products. MS thesis, The University of Maine, Orono, ME. 541 pp.
- Olson JC, Jacoby J (1972) Cue utilization in the quality perception process. Pages 167-179 in M Venkatesan, ed. *SV - Proc Third Annual Conference of the Association for Consumer Research*, Association for Consumer Research, Chicago, IL.
- Opdenakker R (2006) Advantages and disadvantages of four interview techniques in qualitative research. *Forum: Qual Social Res* 7(4). <http://nbn-resolving.de/um.nbn.de.0114-fqs0604118> (16 August 2013).
- Overby JW, Woodruff RB, Cardinal SF (2005) The influence of culture upon consumers' desired value perceptions: A research agenda. *Mark Theory* 5(2):139-163.
- Pakarinen T (1999) Success factors of wood as a furniture material. *Forest Prod J* 49(9):79-85.
- Parvin N, Kabir MH (2006) Consumer evaluations of beautification products: Effects of extrinsic cues. *Asian Acad Manage J* 11(2):89-104.
- Podsakoff P, MacKenzie S, Lee J, Podsakoff N (2003) Common method bias in behavioral research: A critical review of the literature and recommended remedies. *J Appl Psychol* 8(5):879-903.
- Postlewaite A (1998) Social status, norms and economic performance: The social basis of interdependent preferences. *Eur Econ Rev* 42:779-800.
- Pura M (2005) Linking perceived value and loyalty in location-based mobile services. *Manag Serv Qual* 15(6): 509-538.
- Ratnasingam J, Ioras F, Macpherson TH (2007) Influence of wood species on the perceived value of wooden furniture: The case of rubber wood. *Holz Roh Werkst* 65:487-489.
- Robson C (2011) Real world research: A resource for users of social research methods in applied settings (3rd ed). Wiley Cornwall, UK. 573 pp.
- Sánchez-Fernández R, Iniesta-Bonillo MA (2007) The concept of perceived value: Systematic review of the research. *Mark Theory* 7(4):427-451.
- Sheth JN, Newman IB, Gross LB (1991a) Consumption values and market choice. South-Western Publishing, Mason, OH. 218 pp.
- Sheth JN, Newman IB, Gross LB (1991b) We buy what we buy: A theory of consumption values. *J Bus Res* 22(2): 159-170.
- Sheth JN, Sethia NK, Srinivas S (2011) Mindful consumption: A customer centric approach to sustainability. *J Acad Marketing Sci* 39:21-39.
- Slater SF (1997) Developing a customer value-based theory of the firm. *J Acad Marketing Sci* 25(2):162-167.
- Solnick SJ, Hemenway D (1998) Is more always better? A survey on positional concerns. *J Econ Behav Organ* 37:373-383.
- Sweeney J, Soutar G (2001) Consumer perceived value: The development of a multiple item scale. *J Retailing* 77(2):203-207.
- Tabi-Gyansah E (2001) Analysis of the spatial distribution of NTFPs in the tropical forest of Ghana. *ETERN News* 32:21-22.
- Tanner C (1999) Constraints on environmental behaviour. *J Environ Psychol* 19:145-157.
- Toivonen R (2011) Dimensionality of quality from a customer perspective in the wood industry. PhD diss, Dept. of Forest Science, Faculty of Agriculture and Forestry, University of Helsinki, Finland. 71 pp.
- UNEP (2011) Towards a green economy: Pathways to sustainable development and poverty eradication. 631 pp. <http://www.unep.org/greeneconomy> www.unep.org/greeneconomy (14 June 2013).
- Vlosky RP, Ozanne LK (1998) Environmental certification of wood products: The US manufacturers' perspective. *Forest Prod J* 48(9):21-26.
- Wang Y, Lo HP, Chi R, Yang Y (2004) An integrated framework for customer value and customer-relationship-management performance: A customer-based perspective from China. *Manag Serv Qual* 14(3):413-438.
- WCED-World Commission on Environment and Development (1987) Our common future. Oxford University Press, New York. 416 pp.
- Widayati A, Carlisle B (2012) Impacts of rattan cane harvesting on vegetation structure and tree diversity of Conservation Forest in Button, Indonesia. *For Ecol Mgmt* 266:206-213.
- Williams P, Soutar GN (2000) Dimensions of customer value and the tourism experience: An exploratory study. ANZMAC Conference 2000, 28 November–1 December 2000, Queensland, Australia.
- Woodruff BR (1997) Customer value: The next source for competitive advantage. *J Acad Marketing Sci* 25(2): 139-153.
- Zeithaml AV (1988) Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *J Mark* 52:2-18.
- Zhou KZ (2006) Innovation, imitation, and new product performance: The case of China. *Ind Marketing Mgmt* 35:394-402.
- Zhou KZ, Yim CK, Tse DK (2005) The effects of strategic orientations on technology- and market-based breakthrough innovations. *J Mark* 69(2):42-60.