

Can personal values contribute to explain wine choices?

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Abstract

Personal values play an important role in explaining and justifying consumer behaviours through their mediated relationship with attitudes. Nevertheless, to our knowledge, personal values have not been deeply investigated for wine buying behaviour. Current paper, through non-hypothetical experimental auctions, analyses the effect on willingness to pay (WTP) for three different wines of the ten value constructs as measured in the Portrait Value Questionnaire by Schwartz (1994). Outcomes reveal that seven (to eight) values exert a statistically significant effect on consumers' (N= 210) final WTPs for the three considered wines.

Keywords:

Experimental auctions, Wine, Personal values, Willingness-to-pay

Introduction

Personal values motivate action, giving it direction and emotional intensity (Schwartz 1994, p. 21). This suggests that personal values serve an important role in explaining and justifying economically-relevant behaviours through their mediated relationship with attitudes. Values are both self-centered and social centered in the sense that they are at the crossroads between the individual and the society. They are defined as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973). The meaningful content of values can be defined as cognitive representations of three types of universal human requirements: Biologically based needs of the organism, social interactional claims for interpersonal coordination, and social institutional demands for group welfare and survival (Kluckhohn, 1951; Maslow, 1959; Rokeach, 1973, Grunert and Juhl, 1995). Hence, values serve both individualistic and collectivist interests as well as a mixture of these (Hofstede and Bond, 1984; Triandis et al., 1990). Indeed, a number of scholars have demonstrated that several correlations exist between value domains and food-related attitudes (see, among others, Dreezens et al., 2005; Honkanen et al., 2006; Hoogland et al., 2007). Moore (2006) examined trusting relations between consumers and vendors in farmers' markets, underlining that consumers in the alternative agro-food network share

ethical and moral values that include supporting the local area. Bech-Larsen and Grunert (2003) stated that values pertaining to man's manipulation of nature are related to the acceptance of functional foods and in Grebitus et al. (2014) can be seen individuals with strong social orientation are more likely to choose sustainable products. Although the relationship between personal values and numerous behaviours and outcomes have been extensively studied in the food choice literature, there has heretofore been little study of the specific relationship between personal values and individuals' willingness to pay (WTP) for wines. Current paper examines the explanatory power of personal values on the individuals' behaviour in non-hypothetical auctions, and investigate the extent to which values can explain real WTP for wine. In particular, we test the 10 value constructs as measured in the Portrait Value Questionnaire (PVQ) by Schwartz (1994) on bids for three wines, identical in all attributes except a certification. Specifically, the three wines were: a conventional one (no eco-certification), a wine with a certification on the front label, a wine carrying a certification on the back label. We decided to concentrate on this specific attribute and particular modality to convey the information for two core reasons. 1) Pro-environmental consumption often involves a conflict between individual and long-term collective interests, since the problematic features of consumer goods often are invisible and unrecorded at the time of purchase (e.g. Kaiser, 2006; Thøgersen, 2014); 2) among the many wine's attributes, front and back label are the most effective source of information for consumers (e.g. Rocchi and Stefani, 2005). Nevertheless, our goal is not to explore if personal values affect differently across diverse wines; whereas we are interested in their general influence on wine's WTP.

Method

A sample of 210 wine consumers participated in Vickrey (Vickrey, 1961), 5th price, experimental auctions (21 sessions, 10 individuals each), organized in two computer labs at two Universities of Naples, between February and April 2015. Participants were asked to bid, for five rounds, for three wines differing exclusively for the eco-friendly certification, holding all other attributes constant (*ceteris paribus*). Several lifestyle and wine-related variables were collected (through pc-based questionnaires) before the auctions, while PVQ items were measured (i.e. Likert scale from disagree strongly=1; to agree strongly=7) just after the bids' submission. Following Lusk and Shogren (2007), no reference price was given; the full bidding procedure was applied; one binding round and wine were randomly selected at the end of the auctions; randomization of product ordering was performed; a monetary participation fee was provided at the end of the experiment for cost/opportunity compensation (€15 cash). Figure 1, briefly, explains the six main steps of the entire experimental flow.

Figure 1 – Experimental flow



Source: own elaboration

The experimental auction session is thus designed in a panel data set-up whereby the person submits multiple bids in relation to each wine across the five bidding rounds (5 rounds x 3 wines, for 15 bids per participant). Thus, random-effects Tobit regression models allow the incorporation of individual specific error in the error term of the regression model. The auction round is considered as the panel variable: the i th individual might submit a bid on the j th wine in the t th round. Following Lusk and Shogren (2007), this bid can be written as:

$$y_{it}^* = \alpha_i + \beta X_{ij} + \epsilon_{it} \quad [1]$$

where X is a matrix of independent variables expected to influence the willingness to pay, not including a constant term; β is a conformable vector of parameters (including Personal Values); α_i represent random individual-specific effects that are independently and identically distributed (i.i.d.) $N(0, \sigma^2)$; and ϵ_{it} are i.i.d. $(0, \sigma^2)$ independently of α .

The observed data, y_{it}^* represent censored versions of the latent data y_{it} . In this case, left censoring is determined by the zero value such that:

$$y_{ijt} = 1 \text{ if } y_{ijt}^* > 0, 0 \text{ if } y_{ijt}^* \leq 0$$

Results

Table 1 presents sample characteristics. Additional information on socio-demographic data was not collected as participants were all recruited among undergraduates of the two Universities (see Depositaro et al., 2009).

Table 2 presents the values analyzed, their means, standard deviations and Cronbach's alpha coefficients. Reliability analyses gave satisfactory alpha coefficients, ranging from 0.71 to 0.82. Overall results prove that the ten underlying constructs are highly reliable. The most important values regarding the personal and social orientation indices are Benevolence ($M=6.26$, $SD=0.81$), Universalism ($M=6.25$, $SD=0.95$) and Self Direction ($M=6.12$, $SD=0.97$).

We now turn our attention on results of equation (1). As the focus of the current paper is to verify if personal values exert significant effects on individuals' bids, we limit analysis on only PVQ data not considering the other exogenous variables collected during the experiment.

Based on the econometric results (Table 3), it appears that most of the personal values included in the Schwartz's personal values have a statistically significant effect on final WTPs for the three considered wines. In particular, Self-direction, Stimulation, Achievement, Conformity and Tradition have a positive sign for all the explored wines; while Benevolence and Hedonism have a negative sign (together with Security for the no-certified and Power for the back eco-friendly labelled wine).

Table 1. Summary statistics for selected variables (N=210)

Median Age	22
Gender	
Male	55%
Female	45%
Household Size	
Up to 4	57%
Over 4	43%
Father Education	
Undergraduate	81%
Graduate	19%
Mother Education	
Undergraduate	82%
Graduate	18%
Wine monthly consumption	
Once to 3 times	56%
Over 3 times	44%

Source: own elaboration

Table 2 – Mean values (standard deviations) and internal reliability of Schwartz value types

Values	Mean (SD)	Cronbach's α
Universalism	6.25 (0.95)	0.73
Benevolence	6.26 (0.81)	0.71
Stimulation	5.71 (1.13)	0.76
Conformity	5.01 (1.53)	0.72
Tradition	5.46 (1.31)	0.80
Security	5.75 (1.30)	0.70
Power	4.30 (1.53)	0.74
Achievement	5.46 (1.26)	0.71
Hedonism	5.66 (1.23)	0.82
Self-direction	6.12 (0.97)	0.72

Source: own elaboration

Table 3 – Random effects Tobit models' coefficients (Number of observations=1050)

	No eco certification	Front eco certification	Back eco certification
Benevolence	-0.527**	-0.365**	-0.338**
Universalism	0.010	0.197	-0.059
Self-direction	0.322**	0.38 **	0.325*
Stimulation	0.544**	0.371**	0.393**
Hedonism	-0.526**	-0.573**	-0.625**
Achievement	0.355**	0.349**	0.448**
Power	-0.101	-0.039	-0.305**
Security	0.386**	0.142	0.152
Conformity	0.351**	0.575**	0.334**
Tradition	0.569**	0.428**	0.599**

Note: ** statistically significant at 1% level and * at the 5% level.

Source: own elaboration

Discussion

Personal values have been studied in many disciplines, including anthropology, sociology, psychology, philosophy, organizational behavior, and marketing (Keng and Yang, 1993 and Vinson et al., 1977). Personal values are vital to an individual's self-concept (Dickson, 2000), are often a part of our personality system (De Pelsmacker et al., 2005b), are closely linked to needs, are important predictors of consumers' attitudes, and influence intentions of behaving in a certain way (Kamakura and Novak, 1992 and Rokeach, 1973). Prior studies report that personal values influence innovative behavior (Daghfous et al., 1999), attitudes toward e-shopping (Jayawardhena, 2004), store choice (Bozinoff and Cohen, 1982), preferences for products and brands (Pitts and Woodside, 1983), consumption of nutritional food (Homer and Kahle, 1988), food-related lifestyles (Brunsø et al., 2004), and charity contributions (Manzer and Miller, 1978). Current results reveal that these values are significant determinants of WTP for wine. In particular, findings show that across different types of wines values hold constantly an important role in explaining consumer purchasing patterns. Moreover, we corroborate several previous findings. Self Transcendence human value of Universalism has been related to environmentally friendly food products, and along with Benevolence, has been negatively related to GMOs. Current outcomes are in line with Thøgersen and Olander (2003) which reveal that Universalism is given high priority if a person possesses strong personal norms for environmental-friendly behaviour. Similarly, Krystallis and colleagues (2008), demonstrate that a clear relation between consumers' 'societal' (universalism and benevolence) value and higher frequency of organic purchasing exist. Furthermore, our results suggest that consumer whose values are strongly associated with Power, a Self-Enhancement meta- value, relate negatively to environmentally friendly products (Vermeir and Verbeke, 2008; Dreezens et al., 2005; Grunert, 2002). Our results also confirm that interest in trying new food products is positively related to Stimulation and Self-Direction, as revealed also by Fotopoulos and Krystallis, 2002. Additionally, consumers expressing conservation-oriented human values of Security, Conformity and Tradition relate positively to foods considered safe and natural (Cicia et al., 2009; Botonaki and Mattas, 2010). While in Chrysohoidis and Krystallis, 2005, internal values, such as "self-respect" and "enjoyment of life" (personal and a-personal respectively), are found to be the main motivators behind the purchase of organic products in Greece, corresponding to the motives of healthiness and better taste of the organic products. Finally, our research did not include hedonic evaluations of wines whilst previous studies proved that consumers who express human values of Hedonism relate positively to food taste. Indeed Magnusson et al., 2001 report taste to be the most important choice/purchase criteria and in Kihlberg and Risvik, 2007, the majority of organic consumers thought that organic food tastes better than conventional, confirming other similar results (Arvola et al., 2000; Schifferstein and Oude Ophuis, 1998).

Conclusions

Nowadays most research on wine-consumer behaviour carefully investigates subjects' attitude toward health, society, environment and several aspects of food production in

general (e.g. safety issues, technophobia, etc.). While a limited number of studies have dedicated attention to the role played by personal values in wine buying decisions. Our results suggest that personal values indeed have an effect on valuations in non-hypothetical experimental auctions. Specifically, seven and eight personal values exerted a significant influence on final bids for the three wines examined. The implication of this result is that personal values should be taken into account when trying to explain different consumer-behaviour in real market situations. Also because personal values are relatively stable constructs in people's lives, and thus a useful criterion for segmenting consumer groups.

References

- Arvola, A., Biel, A., Grankvist, G., Koivisto Hursti, U.-K., Larsson, M., Magnusson, M. et al. (2000). *Ekologiska livsmedel – konsumenternas attityder, vanor och värderingar* Swedish University of Agricultural Sciences, Uppsala, Sweden.
- Bech-Larsen, T., & Grunert, K. G. (2003). The perceived healthiness of functional foods: A conjoint study of Danish, Finnish and American consumers' perception of functional foods. *Appetite*, 40(1), 9-14.
- Botonaki, A., & Mattas, K. (2010). Revealing the values behind convenience food consumption. *Appetite*, 55(3), 629-638.
- Bozinoff, L., & Cohen, R. (1982). The effects of Personal values on attitude and store choice behavior. *An Assessment of Marketing Thought and Practice, American Marketing Association*, 25-9.
- Brunso, K., Scholderer, J., & Grunert, K. G. (2004). Testing relationships between values and food-related lifestyle: results from two European countries. *Appetite*, 43(2), 195-205.
- Chryssohoidis, G. M., & Krystallis, A. (2005). Organic consumers' personal values research: testing and validating the list of values (LOV) scale and implementing a value-based segmentation task. *Food Quality and Preference*, 16(7), 585-599.
- Cicia, G., Del Giudice, T., & Ramunno, I. (2009). Environmental and health components in consumer perception of organic products: Estimation of willingness to pay. *Journal of food products marketing*, 15(3), 324-336.
- Daghfous, N., Petrof, J. V., & Pons, F. (1999). Values and adoption of innovations: a cross-cultural study. *Journal of Consumer Marketing*, 16(4), 314-331.
- De Pelsmacker, P., Janssens, W., Sterckx, E., & Mielants, C. (2005). Consumer preferences for the marketing of ethically labelled coffee. *International Marketing Review*, 22(5), 512-530.
- Depositario, D., Nayga Jr., R., Wu, X., & Laude, T. (2009). Should students be used as subjects in experimental auctions? *Economics Letters*, 102, 122-124.
- Dickson, M. A. (2000). Personal values, beliefs, knowledge, and attitudes relating to intentions to purchase apparel from socially responsible businesses. *Clothing and Textiles Research Journal*, 18(1), 19-30.

- Dreezens, E., Martijn, C., Tenbült, P., Kok, G., & De Vries, N. K. (2005). Food and values: an examination of values underlying attitudes toward genetically modified-and organically grown food products. *Appetite*, 44(1), 115-122.
- Fotopoulos, C., & Krystallis, A. (2002). Purchasing motives and profile of the Greek organic consumer: a countrywide survey. *British Food Journal*, 104(9), 730-765.
- Grebitus, C., Steiner, B., & Veeman, M. (2015). The roles of human values and generalized trust on stated preferences when food is labeled with environmental footprints: Insights from Germany. *Food Policy*, 52, 84-91.
- Grunert, K. G. (2002). Current issues in the understanding of consumer food choice. *Trends in Food Science & Technology*, 13(8), 275-285.
- Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of economic psychology*, 16(1), 39-62.
- Hofstede, G., & Bond, M. H. (1984). Hofstede's culture dimensions an independent validation using rokeach's value survey. *Journal of cross-cultural psychology*, 15(4), 417-433.
- Homer, P. M., & Kahle, L. R. (1988). A structural equation test of the value-attitude-behavior hierarchy. *Journal of personality and social psychology*, 54(4), 638.
- Jayawardhena, C. (2004). Personal values' influence on e-shopping attitude and behaviour. *Internet research*, 14(2), 127-138.
- Kaiser, F. G. (2006). A moral extension of the theory of planned behavior: norms and anticipated feelings of regret in conservationism. *Personality and Individual Differences*, 41, 71-81.
- Kamakura, W. A., & Novak, T. P. (1992). Value-system segmentation: Exploring the meaning of LOV. *Journal of consumer research*, 119-132.
- Keng, K. A., & Yang, C. (1993). Value choice, demographics, and life satisfaction. *Psychology & Marketing*, 10(5), 413-432.
- Kluckhohn, C. (1951). *Values and value-orientations in the theory of action: An exploration in definition and classification*. Harper and Row.
- Krystallis, A., Vassallo, M., Chryssohoidis, G., & Perrea, T. (2008). Societal and individualistic drivers as predictors of organic purchasing revealed through a portrait value questionnaire (PVQ)-based inventory. *Journal of Consumer Behaviour*, 7(2), 164-187.
- Lusk, J.L., & Shogren, J.F. (2007). *Experimental auctions: Methods and applications in economic and marketing research*. Cambridge University Press.
- Magnusson, M.K., Arvola, A., Koivisto Hursti, U.-K., Åberg, L., & Sjöden, P.-O. (2001). Attitudes towards organic foods among Swedish consumers. *British Food Journal*, 103(3), 209-226.
- Manzer, L., & Miller, S. J. (1978). An examination of the value-attitude structure in the study of donor behavior. In *Proceedings of the american institute of decision sciences* (Vol. 12, pp. 532-538).
- Maslow, A.H. (1959). *New Knowledge in human values*. Harper and Row
- Moore, O. (2006). Understanding post-organic fresh fruit and vegetable consumers at participatory farmers' markets in Ireland: reflexivity, trust and social movements. *International Journal of Consumer Studies* 30(5), 416-426.

- Pitts, R. E., & Woodside, A. G. (1983). Personal value influences on consumer product class and brand preferences. *The Journal of Social Psychology, 119*(1), 37-53.
- Rocchi, B., & Stefani, G. (2005). Consumers' perception of wine packaging: A case study. *International Journal of Wine Marketing, 18*(1), 33-44.
- Rockeach, M.J. (1973). *The Nature of Human Values*. New York Free Press.
- Schifferstein, H.N.J. & Oude Ophuis, P.A.M. (1998). Health-related determinants of organic food consumption in the Netherland. *Food Quality and Preference, 9*(3), 119-133.
- Schwartz, S.H. (1994). Are there universal aspects in the content and structure of values? *Journal of Social Issues, 50*, 19-45.
- Thøgersen, J., & Ölander, F. (2003). Spillover of environment-friendly consumer behaviour. *Journal of environmental psychology, 23*(3), 225-236.
- Thøgersen, J. (2014). Unsustainable consumption: basic causes and implications for policy. *European Psychologist, 19*(2), 84-95.
- Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of personality and social psychology, 59*(5), 1006.
- Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological Economics, 64*(3), 542-553.
- Vickrey, W. (1961). Counterspeculation, auctions, and competitive sealed tenders. *Journal of Finance, 16*, 8-37.
- Vinson, D. E., Scott, J. E., & Lamont, L. M. (1977). The role of personal values in marketing and consumer behavior. *The Journal of Marketing, 44*-50.