

**An Agenda to Construct an Improved Understanding of Australian Organic Consumers**

Author

Adamsen, Jannie, Lyons, Kristen, Winzar, Hume, Rundle-Thiele, Sharon

Published

2007

Conference Title

ANZMAC 2007 Conference: 3Rs reputation responsibility relevance

Rights statement

© The Author(s) 2007. The attached file is posted here with permission of the copyright owners for your personal use only. No further distribution permitted. For information about this conference please refer to the publisher's website or contact the authors.

Downloaded from

<http://hdl.handle.net/10072/18920>

Link to published version

<https://anzmac.wildapricot.org/>

Griffith Research Online

<https://research-repository.griffith.edu.au>

# **An Agenda to Construct an Improved Understanding of Australian Organic Consumers**

**Jannie Mia Adamsen, Kristen Lyons, Hume Winzar, Griffith University  
Sharon Rundle-Thiele, University of Southern Queensland**

## **Abstract**

Organic food is claimed to be one of the fastest growing food categories worldwide, with growth rates of 20-30%. There have been considerable research efforts globally seeking to understand the organic food consumer. To date, academic research has been unable to reach a consensus, and we remain incapable of adequately describing who buys and importantly why consumers choose to buy organic food products.

The objective of this paper is to examine the merits of using an alternate method to better understand organic food consumers. It is proposed that the Best Worst scaling method be used as a methodological framework to guide research about organic purchasing decisions. The Best Worst scaling method avoids issues related to Socially Desirable Responding; a known effect of using the ever-popular Likert scale.

## **Introduction**

Australia has the largest land area under organic food production in the world, in fact more than the rest of the world combined, yet the consumption of organic food in Australia is considerably lower than in other Western countries (IFOAM, 2007; Lockie *et al.*, 2006; Monk, 2004). With a view to supporting continued market growth in Australia, some researchers have sought to understand the people who buy and consume organic foods (examples include Lea & Worsley, 2005; Lockie *et al.*, 2002; Meldrum, 2006; Paull, 2006; Pearson, Henryks, & Moffitt, 2007).

Following research in green marketing, researchers have sought to understand key demographic and psychographic variables that influence intentions towards purchasing organic foods. To date, these endeavours have employed a limited repertoire of research methods, with many researchers relying on Likert scales. Findings from this research approach are limited to understanding organic food consumers intentions – generated from Likert scales (Lea & Worsley, 2005; Lockie *et al.*, 2002; Paladino, 2005; Pearson, 2002; Pearson, Henryks, & Moffitt, 2007).

This paper recommends a research agenda that will provide deeper understanding of the triggers that influence behaviours. This will move our understanding beyond the influences on purchase intentions towards behaviour. This paper examines the Best Worst (BW) scaling method (sometimes called maximum difference scaling), and evaluates its effectiveness to solve issues related to equivalence of concepts and measurement, issues that are negatively linked to ever-popular Likert scale (see for example Cohen & Markowitz, 2002; Cohen & Neira, 2003). The paper concludes by evaluating the extent to which the BW method may reduce some of the contradictory findings currently evident in the literature, and thus increase our understanding of organic food consumers.

## **Our Current Understanding of the Australian Organic Consumer**

In general the literature related to consumer behaviour in organic markets is limited and at times narrow, i.e. concentrating on a single area or even city. While this can generate in-depth insights into a specific case (e.g. product, distribution outlet or city), it is hardly useful for large-scale generalisation (Department of Agriculture Fisheries and Forestry, 2004; Lea & Worsley, 2005; Pearson, 2002). Despite attempts to generalise these findings, there are many contradictory results. For example, in regard to the socio-demographic attributes of organic consumers Grunert and Juhl (1995) argue young consumers are more likely to buy organic food, while Lockie *et al.* (2006) find organic food consumption does not differ across age categories. A similar contradiction is observable in regard to income. It has been widely accepted that income and consumption of organic food is positively correlated, yet recent research in Australia has shown this to be less dramatic (Lockie & Donaghy, 2004) and the National Food Choice Survey indicates consumers with moderate incomes do not find the price premium, often associated with organic food, presents a higher or lower barrier than for high income earners (Lockie *et al.*, 2006).

The biggest problem with available data about Australian organic consumers is that there has been no large-scale survey carried out since 2001. To put this in perspective, the value of the retail market for organic products has increased by a stunning A\$150-200 million (equivalent to between 160-200%) between 2003 and 2006 (Monk, 2004; Smith, 2006). This rapid growth reflects the on-going transformation in the organic food market, including the expansion in variety and availability of organic produce. For example, in the last five years leading supermarket chains Coles and Woolworths who control at least 75 percent of Australian food sales have significantly increased the number of home brand and private label organic product lines they stock (Coles, 2007; Heaton, 2005; Keighly, 2004; NARGA, 2002; Smith, 2006). Even ALDI supermarkets, known for being a discount price retailer, has introduced an organic home brand product line called *just organic* (ALDI, 2007). Given this rapid market growth and subsequent market changes, 2001 data may not adequately describe organic food consumers in 2007.

Australian studies describing organic food consumers are summarised in Table 1.

### **Bias Inherent in Ratings-Based Questions**

A review of Australian organic consumer studies suggests socio-demographic variables are not strong predictors of organic consumers (Lea & Worsley, 2005; Lockie *et al.*, 2004; Lockie *et al.*, 2002; Paull, 2006; Pearson, 2002; Pearson, Henryks, & Moffitt, 2007). Rather, personal values and beliefs might provide stronger explanations for organic consumption (Lea & Worsley, 2005). Researchers seeking to understand organic and green food purchasing behaviours have largely focussed on understanding attitudes towards green purchasing behaviour, and relations between these attitudes and purchasing intentions (examples include Harper & Makatouni, 2002; Padel & Foster, 2005; Paladino, 2005). However, collecting data about consumers' intentions does not necessarily give an accurate picture of people's actual organic buying patterns. As Lockie *et al.* (2004, p. 141) state in relation to their analysis of the National Food Choice Survey: "If estimates that organic food has captured about 1% of the Australian food market are accurate, then it would appear that a degree of over-stating has occurred". In order to gain a more complete understanding of organic food consumers, and to more accurately predict organic buying behaviour, alternative research methods may be required.

<b>Table 1</b>				
<b>Authors</b>	<b>Area</b>	<b>Empirical Method</b>	<b>Sample</b>	<b>Study Conclusion</b>
(Lea & Worsley, 2005)	Victoria	Survey, Mailed Likert Scale  (Personal Values adapted from Schwartz's 56-item personal values inventory)	223	Personal values were a stronger forecaster of organic food beliefs than socio-demographic variables, even though the predictive power of these values was fairly weak. This suggests that factors other than socio-demographic values play a larger role in predicting organic food beliefs. It is suggested that future understanding of organic food consumers include a fairly extensive set of potential influences, personal values being one of them. Attempts to modify organic food beliefs should mainly be directed at women, given that gender was found to be the socio-demographic variable with the strongest association with organic food beliefs, and communication based on psychographics may be a more effective way to alter these beliefs compared to demographic segmentation.
(Lockie & Donaghy, 2004)	Brisbane + Rockhampton	Survey, drop-off and collect  (Choice Modelling)	203 + 203	Consumers value the perceived improved environmental outcomes as the most important attribute of organic food products, yet most people are not willing to pay the premium attached to these products. Similarly consumers are concerned about keeping the standard of animal welfare, but do not want to pay a premium for any additional animal welfare benefits. To increase the uptake of organic foods focus should be on reducing the price differential between organic and conventional products as well as focus information dissemination about the environmental benefits of organics.
(Lockie et al., 2004) (Lockie et al., 2002)	Australia	National Survey, Telephone Interviews  Likert Scale + Path Analysis	1,200	Organic consumers are not significantly different from conventional in motivations, except somewhat more motivated by values. They are just as busy, price sensitive and risk adverse as other consumers. Very little link between participation in green consumption or political activities and ecological values and increasing rates of organic food consumption. Age, income and health-concerns do not seem to have any influence over the level of organic food consumption.
(Pearson, 2002; Pearson, Henryks, & Moffitt, 2007)	Armidale, NSW	Exploratory (Interviews) + Questionnaire  Likert	20 300	Organic food buyers cannot be generalised as 'greenies', and have no apparent defining characteristics. The most important attributes influencing an organic purchasing decision appear to be health, quality and to a lesser extent environment. Further research is needed to understand reasons for switching between conventional and organic food products. (Note: The proportion of highly educated people in Armidale is three times that of Australia as a whole.)
(Meldrum, 2005, 2006)	Australia	Likert scale questions	300	More than 90% of consumers believe organic food is better for their health. Modest evidence to support a typical organic consumer, although they are more like to be married and well educated. Price is a major barrier. The highest ranked incentive to encourage more organic buying is lower prices (70% of organic consumers). 41% of organic shoppers stated they would buy more organic products if supermarkets stocked a wider variety. About 60% of all organic consumers could mention an organic product brand, but no brand dominates.
(Paull, 2006)	Tasmania + mainland AUS	Factorial Design (assign value, \$5-\$10, to different types of labels). Online access.	120 + 101	Income and gender had no impact on food assessment. 'Certified organic' was valued at a premium of 15.6%, while 'organic' yielded 8.1%, stressing opportunities within the certified organics. Australian produced food has a premium value for Australian consumers. Respondents found the survey confusing, and would have preferred to respond to a specific product.

The mismatch between intentions and actual behaviour could simply be an artefact of the data collection methodology i.e. it may be related to questionnaire design and analysis. Most respondents have a tendency to answer researchers' questions in ways that make themselves look good according to current cultural terms (Mick, 1996). This may cause the respondent to over-report or under-report, depending on the situation – a phenomenon referred to as Socially Desirable Responding (SDR) (Baumgartner & Steenkamp, 2005). SDR is likely to arise during research on sensitive topics, including child labour or the use of medication. In such cases, there may be strong public opinion, however research participants' actual behaviour may be incongruent with these opinions (i.e. we all think that taking advantage of cheap child labour in third world countries is hard to defend, but we still buy cheap clothing items produced in sweatshops that employ child labour). A further example, given by Zinkan & Carlson (1995), is the eagerness of consumers to describe themselves as recyclers, while in reality recycling is not as widespread as self-report data would lead us to believe.

The extent of SDR is, at least in part, related to the research methods employed. For example, in a 2006 comparative study between Danish and Australian consumers utilising Likert scale techniques Danish respondents displayed a significantly higher concern towards animal welfare than their Australian counterparts (questions in this study included “it is acceptable to keep livestock in cages/batteries”). Interestingly, when the same participants replied to BW scale items, no significant difference was found between Australian and Danish respondents (Adamsen, 2006). These results suggest that alternative methodological techniques may, indeed, be warranted.

### **Best-Worst Scaling**

Several researchers have argued there is considerable evidence the Likert-type format is susceptible to SDR (for example Bentler, Jackson, & Messick, 1971; McClendon, 1991; Welkenhuysen-gybls, Billiet, & Cambré, 2003). The relatively newly introduced BW scaling methodology shows some development to minimise the effect of SDR, and other scalar inequivalence issues (Chrzan & Skrapits, 1996; Cohen & Markowitz, 2002; Cohen & Neira, 2003; Swait, Louviere, & Anderson, 1995).

The central idea behind the BW method is that participants are presented with a limited set of a larger number of objects/products/concepts, and are required to make two choices: the best (or most attractive, most useful, etc.) and the worst (or least attractive, least useful, etc.) (Zikmund *et al.*, 2007). Respondents are not asked to report how much they prefer alternatives, they are merely asked to identify which of a number of options they prefer and which they do not (James & Burton, 2003). The implication is that no participants are permitted to like or dislike all attributes, as participants are forced to choose one most and one least preferred option in every scenario. A number of different object sets may be presented, using a balanced incomplete block design, to gather sufficient information about relative preferences from each respondent (Auger, Devinney, & Louviere, 2005; Cohen & Neira, 2003; Finn & Louviere, 1992). Formally, it is based within the framework of Random Utility Theory, and there have been extensive applications in marketing and environmental valuation (James & Burton, 2003). Likert or other rating scales, by comparison, permit respondents to declare that all options are equally desirable, which of course is rarely true. Using BW scaling, the relative frequency of selection of any one option compared with other options permits us to derive multinomial logit parameter estimates and a model for predicting future preferences.

The BW method presents an attractive way of approaching the issue of organic food versus conventional food, because choices are presented in context and explicitly highlight the trade-offs that often have to be made during actual decision-making. In this sense, results are likely to be more reliable than rating scales or contingent valuation willingness-to-pay (WTP)-type questions (James & Burton, 2003) as well as more predictive of actual marketplace choices (Goodman, Lockshin, & Cohen, 2006).

### **An Initial Research Agenda**

Research is required to evaluate the effectiveness of BW scaling to contribute towards an improved understanding of Australian organic food consumers. A BW questionnaire coupled with a number of socio-demographic variables is recommended. The BW part should incorporate a pictorial representation, for example pictures of bags of conventional carrots as well as organic carrots with different attributes (e.g. certified organic, price, environmental friendly packaging, and country of origin). This pictorial representation is of great importance, as previous studies utilising BW method or similar techniques, have been criticised by respondents as ‘confusing’ as they would have preferred to respond to specific products (Adamsen, 2006; Paull, 2006). It is anticipated the visual nature will minimise this confusion, as well as making the choice as realistic as possible. The time respondents hover over each decision will also be recorded, as the time it takes respondents to determine their decision could add valuable qualitative inputs towards areas that consumers find confusing as well giving an idea about similar importance attributes. It is acknowledged that these data should be used carefully, as respondents easily can be interrupted while working their way through the questionnaire.

According to prior research on Australian organic consumers, there are myriad variables that are likely to influence the decision to purchase organic foods. Researchers suggest the issues that warrant research attention include: 1) health concerns, 2) environmental concerns, 3) animal welfare concerns, 4) the requirement for foods to be free from synthetic chemicals, and 5) food safety (see for example Lea & Worsley, 2005; Lockie *et al.*, 2002; Meldrum, 2005; Pearson, Henryks, & Moffitt, 2007). Existing research can inform and develop this particular research agenda. Such endeavours would allow our current understanding to move beyond seeking to understand the possible drivers of organic food choice and move us towards building an understanding of which issues influence choice behaviour. The current literature can be used as a guide to inform studies using the BW methodology of the attributes that warrant research attention. The BW methodology will extend our understanding by identifying the issues that consumers consider more or less important in given choice scenarios and the degree to which consumers are prepared to trade off these issues.

### **Conclusion**

We need to ask different questions if we wish to increase our understanding in this field. As Einstein proclaimed: “The world will not evolve past its current state of crisis by using the same thinking that created the situation” (in McDonough & Braungart, 2002). Alternate methodologies are required to identify the attributes that consumers consider more or less important in given choice scenarios. This will extend our understanding and improve our ability to identify the drivers of organic food choice in Australia.

## References

- Adamsen, J. M. (2006). To Be Or Not To Be An Organic Consumer: A Cross-Cultural and Methodological Comparison. The Case of Australia and Denmark. Unpublished Thesis. Griffith University.
- ALDI. (2007). just organic. Retrieved June 27, 2007, from <http://aldi.com.au/>
- Auger, P., Devinney, T. M., & Louviere, J. J. (2005). To What Extent Do Consumer Ethical Beliefs Differ Across Countries? A Cross-Country Investigation Using Best-Worst Scaling Methodology.
- Baumgartner, H., & Steenkamp, J.-B. E. M. (2005). Response Biases In Marketing Research. In *The Handbook of Market Research: Do's and Don'ts* (pp. 204-237): Sage Publications.
- Bentler, P. M., Jackson, D. N., & Messick, S. (1971). Identification of context and style: two-dimensional interpretation of acquiescence. *Psychological Bulletin*, 76, 186-204.
- Chrzan, K., & Skrapits, M. (1996). *Best-Worst Conjoint Analysis: An Empirical Comparison with a Full Profile Choice-Based Conjoint Experiment*. Paper presented at the INFORMS Marketing Science Conference, Berkely.
- Cohen, S. H., & Markowitz, P. (2002). *Renewing market segmentation: Some new tools to correct old problems*. Paper presented at the ESOMAR 2002 Amsterdam, The Netherlands.
- Cohen, S. H., & Neira, L. (2003). *Measuring preferences for product benefits across countries: Overcoming scale usage bias with maximum difference scaling*. Paper presented at the Latin American Conference of ESOMAR, Punta del Este, Uruguay.
- Coles. (2007). Healthy living: Organic. *Healthy Living* Retrieved June 27, 2007, from <http://www.coles.com.au/healthyliving/>
- Department of Agriculture Fisheries and Forestry. (2004). *The Australian Organic Industry: A Profile*. Canberra: Australian Government: Department of Agriculture, Fisheries and Forestry.
- Finn, A., & Louviere, J. J. (1992). Determining the Appropriate Response to Evidence of Public Concern: The Case of Food Safety. *Journal of Public Policy and Marketing*, 11(1), 12-25.
- Goodman, S., Lockshin, L., & Cohen, E. (2006). *Using the Best-Worst method to examine market segments and identify different influences of consumer choice*. Paper presented at the 3rd International Wine Business and Marketing Research Conference.
- Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of Economic Psychology*, 16(1), 39-62.
- Harper, G. C., & Makatouni, A. (2002). Consumer perception of organic food production and farm animal welfare *British Food Journal* 104(3/4/5), 287-299.

- Heaton, S. (2005). Supermarkets: friends or foes? *Australian Organic Journal*, Spring 2005, 18.
- IFOAM. (2007). *The World of Organic Agriculture. Statistics and Emerging Trends 2007*. Frick, Switzerland: International Federation of Organic Agriculture Movements
- James, S., & Burton, M. (2003). Consumer preferences for GM food and other attributes of the food system (Vol. 47, pp. 501-518).
- Keighly, J. (2004). Healthy Living: Organic. Retrieved April 2, 2006, from [http://www.coles.com.au/healthyliving/nutrition\\_notes/natural\\_selection.asp](http://www.coles.com.au/healthyliving/nutrition_notes/natural_selection.asp)
- Lea, E., & Worsley, T. (2005). Australians' organic food beliefs, demographics and values. *British Food Journal*, 107(11), 855-869.
- Lockie, S., & Donaghy, P. (2004). Who consumes organic food in Australia? Chapter 5. In D. Halpin (Ed.), *The Australian Organic Industry: A Profile* (pp. 158). Canberra: Australian Government: Department of Agriculture, Fisheries and Forestry.
- Lockie, S., Lyons, K., Lawrence, G., & Grice, J. (2004). Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43(2), 135-146.
- Lockie, S., Lyons, K., Lawrence, G., & Halpin, D. (2006). *Going Organic: Mobilizing networks for environmentally responsible food production*. Wallingford: CABI.
- Lockie, S., Lyons, K., Lawrence, G., & Mummery, K. (2002). Eating "Green": Motivations Behind Organic Food Consumption in Australia. *Sociologia Ruralis*, 42(1), 23-40.
- McClendon, M. J. (1991). Acquiescence and Recency Response-Order Effects in Interview Surveys. *Sociological Methods & Research*, 20(1), 60-103.
- McDonough, W., & Braungart, M. (2002). *Cradle to cradle: remaking the way we make things*. New York: North Point Press.
- Meldrum, J. (2005). A survey of Australian organic consumers. *Australian Organic Journal*, Summer 2005, 22-23.
- Meldrum, J. (2006). A survey of Australian organic consumers. *Australian Organic Journal*, Autumn 2006, 28-29.
- Mick, D. G. (1996). Are Studies of Dark Side Variables Confounded by Socially Desirable Responding? The Case of Materialism. *Journal of Consumer Research*, 23(2), 106.
- Monk, A. (2004). The Future of Australian Organics in a Changing Marketplace. Biological Farmers of Australia.
- NARGA. (2002). NARGA Issues Pack. Retrieved June 20, 2007, from [www.narga.com.au/docs/NARGA\\_ISSUES\\_2002.doc](http://www.narga.com.au/docs/NARGA_ISSUES_2002.doc)



- Padel, S., & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food *British Food Journal* 107(8), 606-625.
- Paladino, A. (2005). Understanding the Green Consumer: An Empirical Analysis. *Journal of Customer Behaviour*, 4, 69-102.
- Paull, J. (2006). *Provenance, Purity & Price Premiums: Consumer Valuations of Organic & Place-of-Origin Food Labelling*. University of Tasmania.
- Pearson, D. (2002). Marketing organic food: Who buys it and what do they purchase? *Food Australia*, 54(1), 31-34.
- Pearson, D., Henryks, J., & Moffitt, L. (2007). What Do Buyers Really Want When They Purchase Organic Foods? An investigation using product attributes. *Journal of Organic Systems*, 2(1), 9.
- Smith, M. (2006). Organic produce in Australia's major supermarkets. *Australian Organic Journal*, Spring 2006, 20-21.
- Swait, J., Louviere, J. J., & Anderson, D. (1995). Best Worst Conjoint: A New Preference Elicitation Method to Simultaneously Identify Overall Attribute Importance and Attribute Level Partworths. Unpublished Working Paper. Department of Marketing, University of Florida
- Welkenhuysen-gybels, J., Billiet, J., & Cambré, B. (2003). Adjustment for Acquiescence in the Assessment of the Construct Equivalence of Likert-Type Score Items *Journal Of Cross-cultural Psychology*, 34(6), 702-722.
- Zikmund, W., Ward, S., Lowe, B., & Winzar, H. (2007). *Marketing Research Asia Pacific Edition* (1 ed.). Melbourne: Thomson Learning.
- Zinkhan, G. M., & Carlson, L. (1995). Green advertising and the reluctant consumer. *Journal of Advertising*, 24(2), 1.