

RESEARCH PAPERS



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# The Value of Green Labels – a Consumer Perspective

## ABSTRACT

*The statement "the consumer markets are becoming greener" means two things. The values and attitudes of consumers are becoming more pro-environmental, and companies are starting to focus on environmental issues and include an environmental dimension in their strategic planning processes. Consumers use previously stored knowledge and external information when making decisions. Companies inform customers about their environmental efforts and in that way take advantage of the greening attitudes. The value-attitude-behaviour model was tested in this study, and the effects of green labels on the consumer decision making processes were assessed. The results show that Finnish consumers have a positive attitude toward green labels and are willing to pay a higher price for products marked with a green label. Support for a complete value-attitude-behaviour model could not be found. Attitudes have a direct effect on consumer behaviour, but values correlate only with the variable willingness-to-pay.*

## INTRODUCTION

The objectives of this study were to assess the effects of green labels on consumers' decision making processes and to test the value-attitude-behaviour model (Gutman, 1982). Empirical data was collected from one area in Finland using a survey method. The theoretical framework used in this study is mainly built on attitude theories, value theories and theories about consumer behaviour.

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Pro-environmental behaviour is not a universal behaviour (McKenzie-Mohr, Nemiroff, Beers & Desmarais, 1995) and many researchers have had problems finding high correspondence between attitudes and pro-environmental behaviour (Uusitalo, 1986; Moisander, 1996). The weak support for the value-attitude-behaviour model is problematic on both a theoretical and pragmatic level. One central question is: why is it hard to find empirical support for the theoretically nice model? Different explanations can be found in the literature. To measure general attitudes and focus on a specific behaviour is doomed to fail (Ajzen, 1988). Consumer behaviour is often very complex and there are many factors influencing consumers, of which attitudes is only one (Ellen, 1994). Another central question researchers have been interested in is: which are these other factors (Pieters, 1988)? When we focus on the pro-environmental behaviour of consumers, convenience seems to be one of the dominating factors (Schwartz & Miller, 1991; Uusitalo, 1997). If the synopsis of all attitude research within the context of pro-environmental consumer behaviour is that consumers sometimes behave in accordance with their attitudes and sometimes not, we have a long way to go before we understand the relationships between attitudes and behaviour, and the relationships between values and attitudes (Ellen, 1994; McKenzie-Mohr, et al., 1995).

Grunert and Juhl (1995) studied Danish consumers buying organic foods and found strong support for the value-attitude-behaviour model. A prerequisite for finding a correlation between attitudes and behaviour is that attitudes are measured on the same level as the behaviour, i.e. attitudes towards a specific behaviour are measured. Therefore attitudes toward green labels and the consumers' perception of the influence of these labels on the consumer decision making processes were assessed in this study. According to the results presented by Heiskanen and Timonen (1996), Finnish consumers consider green labels the most important information source when evaluating the environmental friendliness of products. The consumer market is becoming greener, meaning that the values and attitudes of consumers are taking on a more pro-environmental outlook. Moisander (1996) stresses the fact that although values and attitudes are getting greener the behaviour does not change to the same magnitude or at the same speed.

### **VALUES, ATTITUDES AND BEHAVIOR IN A GREEN CONTEXT**

Values and attitudes influence the behaviour of consumers. Values are general goals helping the consumer to decide which "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, p. 5), and every consumer has his or her own personal value structure, which "reflect the choices an individual makes from the variety of social values or value systems to

*Table 1. Factors influencing consumer behaviour: a review of the most commonly used decision making models*

| Factors/<br>Authors                | Experience<br>Confidence | External<br>infor-<br>mation | Personality | Attitudes | Values<br>Culture | Needs<br>Wants<br>Motives | Social<br>factors |
|------------------------------------|--------------------------|------------------------------|-------------|-----------|-------------------|---------------------------|-------------------|
| ANDREASEN, 1965                    | X                        | X                            | X           | X         | X                 | X                         |                   |
| NICOSIA, 1966                      | X                        | X                            |             | X         |                   |                           | X                 |
| HOWARD & SHETH,<br>1969            | X                        | X                            |             | X         |                   | X                         | X                 |
| ROGERS &<br>SHOEMAKER, 1971        |                          | X                            | X           | X         |                   | X                         | X                 |
| ENGEL, KOLLAT &<br>BLACKWELL, 1973 | X                        | X                            | X           | X         | X                 |                           | X                 |
| HOWARD, 1974                       | X                        | X                            |             | X         |                   | X                         |                   |
| HOWARD, 1977                       | X                        | X                            |             | X         | X                 | X                         |                   |
| BETTMAN, 1979                      |                          | X                            |             |           |                   | X                         |                   |
| ENGEL. KOLLAT &<br>BLACKWELL, 1982 | X                        | X                            |             | X         | X                 | X                         | X                 |
| VAN RAAIJ, 1988                    | X                        | X                            |             | X         | X                 |                           | X                 |

which that individual is exposed" (Engel, et al., 1995, p. 444). Values can also be considered as standards used by consumers when making decisions (Rokeach, 1973). Attitudes can be defined as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object" (Fishbein & Ajzen, 1975, p. 6), or as "positive or negative feelings directed at some object, issue, or behavior" (Lutz, 1981, p. 233). Attitudes are hypothetical, learned and influence behaviour (Pieters, 1988). Support for the influence of values and attitudes on consumer decision making can be found in the consumer behaviour models presented during the last 30 years (Table 1).

What we can see in Table 1 is that most consumer behaviour models presented include both a value and an attitude component, and that the effects of these components on the behaviour of consumers are supported. The theoretical discussion has not been unambiguous and different results and models have been presented.

The values and attitudes of consumers are getting greener (Leeflang & van Raaij, 1995), but the behaviour is not changing at the same speed (Moisander, 1996). Uusitalo (1986) studied the value structure of Finnish consumers and her results show that one central value is environmental protection, and that Finnish consumers have a pro-environmental attitude. They are also to some extent willing to change their behaviour and pay a higher price for non-lead gasoline and organic foods. The correlation between attitudes and behaviour was, in general, low and she says that "one plausible explanation for attitude-behaviour inconsistency is that expressed favourable attitudes towards environmental protection are based on existing information on collective interests and social welfare, while in actual choice situations, the decisions are still based on individual utility considerations" (Uusitalo, 1990, p. 223). Consumers are only human and we agree with Uusitalo (1997) when she says that most consumers use two kinds of information when making decisions about whether to use or not to use collective goods: information about their own utility and information about social norms<sup>1</sup>.

Henry (1976), who studied the ownership of cars, and Vinson, Scott and Lamont (1977), who studied preferences for cars, found strong support for the influence of values on consumers' decision making. Homer and Kahle (1988, p. 645) studied food shoppers and their attitudes toward nutrition. The value-attitude-behaviour model was supported and they say that "values were shown to be associated more strongly with nutrition attitudes than with shopping behaviors, supporting the mediating role of attitudes". The relationship between pro-environmental attitudes and the buying of organic food was studied by Grunert and Juhl (1995) and a positive co-variation was found.

Studies carried out in Finland and in other countries show that women and consumers with higher education have a more environmentally friendly attitude (Uusitalo, 1986; Schwartz & Miller, 1991; Ellen, 1994). Moisander (1991), who studied consumers buying organic foods, says that it is possible that this type of consumer is influenced more by social values than other consumers. However, in spite of positive attitudes, the willingness to make personal sacrifices in favour of the protection of nature is not that convincing (Uusitalo, 1986; Moisander, 1996; Sairinen, 1996). It is interesting to note that Finnish consumers are more interested in paying a higher price for environmentally friendly products than paying higher taxes (Uusitalo, 1986; Moisander, 1996; Sairinen, 1996).

If we want to summarise the presented results, our general impression is that consumers, although stressing environmental matters, value convenience very much and only half-heartedly engage in pro-environmental behaviour. A weak attitude-behaviour relationship is found;

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<sup>1</sup> Free riding will be a fact if the consumer is committed to social goals but puts individual utility maximising in first place. Free riders usually do not feel the social norm or lack understanding about their contribution (Uusitalo, 1992).

sometimes consumers behave in accordance with attitudes and sometimes not. It is possible that consumers have a built-in hierarchy of excuses for not changing their behaviour (van Raaij, 1995)

## METHOD

We used a survey method in this study and developed a questionnaire consisting of five parts and 18 questions. The questionnaire developed was pre-tested, modified and finally sent to 120 respondents selected from the telephone-directory of Vasa. We used a strategic sampling procedure to obtain both Swedish and Finnish speaking respondents (Mendelhall, Reinmuth & Beaver, 1993). Pro-environmental attitudes of Finnish consumers have been in focus before and a quantitative approach has turned out well (Uusitalo, 1986; Moisander, 1991). The sample size can be criticised for being too small, but as an exploratory study embedded in a well developed research area, the sample size can be accepted.

The first part of the questionnaire was used to assemble demographic data on the respondents. Beliefs and attitudes toward green labels were studied in the second part. Despite the drawback of using a single item measure to assess attitudes toward green labels, this procedure was selected in order to keep the questionnaire simple (Ajzen, 1988). Petty and Cacioppo (1981) also say that single item rating scale is often sufficient. We asked a straight question: do you have a positive attitude toward green labels? Beside this question, the second part of the questionnaire consisted of five other questions which were used to measure the respondents' beliefs about products marked with a green label. We asked the respondents about the importance of green labels, about the information green labels provide the respondent, if the respondents perceive products marked with a green label as more expensive than traditional ones, if they perceive products marked with a green label as more environmentally friendly than traditional products, and if they think products marked with a green label are of higher quality. A seven point Likert scale was used and the respondents were asked to indicate the level of agreement with each statement (McDaniel & Gates, 1996).

The influence of green labels on the decision making processes of the consumers was measured in the third part of the questionnaire. We asked the consumers if they look for green labels on products when shopping and if they buy products marked with a green label<sup>2</sup>. We also asked the respondents what kind of products marked with a green label they buy.

The concept willingness-to-pay was measured in the fourth part of the questionnaire. Two questions were asked. We used the first question to measure how much the respondents were

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<sup>2</sup> The consumer behaviour was measured using a five point scale (1 = every time, 2 = often, 3 = sometimes, 4 = seldom, 5 = never).

willing to pay for a detergent marked with a green label if a traditional detergent costs 20 FIM. Detergent represented a low involvement product. Products belonging to the high involvement category of products are more expensive and less frequently bought in comparison to low involvement products. A refrigerator was used in this study to represent products belonging to the high involvement product group, and we asked the respondents how much they would be willing to pay for a refrigerator marked with a green label if a traditional one costs 3500 FIM.

The value structures of the respondents were measured using a conjoint analysis design. The fifth part of the questionnaire consisted of eight cards describing the various value combinations. The task of the respondents was to rank these from most to least preferred. We did not use a full-concept approach, but a subset of all profiles (orthogonal array). To assess the effects of six values and two levels on each would be too laborious for the respondents ( $2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$  cards). We used the SPSS program to create the cards needed to assess the main effects. The eight cards were presented on the last page in two rows to make it easy for the respondents to compare the different cards. The values we used to assess the value structure of the respondents can be categorised into three groups. The two social values (a world at peace, equality), the two personal values (health, exciting life) and the two green values (green neighbourhood, environmental control), were partly selected from the value lists used by Uusitalo (1986), Moisander (1991) and Rokeach (1973).

## RESULTS

The response rate in this survey study was 45 percent. The small sample size is counterbalanced by the level of completeness of the questionnaires received. The respondents who decided to answer really seemed to get involved in our questionnaire, and no questionnaire had to be rejected due to incompleteness. The questionnaire developed for this study consisted of five parts and the presentation of the results will follow this structure.

### Demographics

The average age of the respondents is 49 with an standard deviation of 20 years. We can find respondents from all age categories in our sample. The distribution between women and men is somewhat unequal, while 57 percent of the respondents were women and 43 percent were men. Swedish speaking women was the group most eager to answer our questionnaire. Most people have an income per month less than 10.000 FIM (74.1%). Our results show, when we study the type of households the respondents are living in, that 25.9 percent are living alone, 48.1 percent with someone else and 26 percent in households consisting of more than two



people. We also asked if the respondents are members of any environmental organisation and 89 percent answered no. When we compare the sample statistics with the statistics of the population a correspondence is obvious, which will give strength to our results.

### Attitudes

The results presented in Figure 1 are very positive from an environmental perspective. The respondents have a positive attitude toward green labels (A2), find green labels important (A1), are of the opinion that green labels provide them with important information (A3), and believe that products marked with a green label are more environmentally friendly than non-marked products (A4).

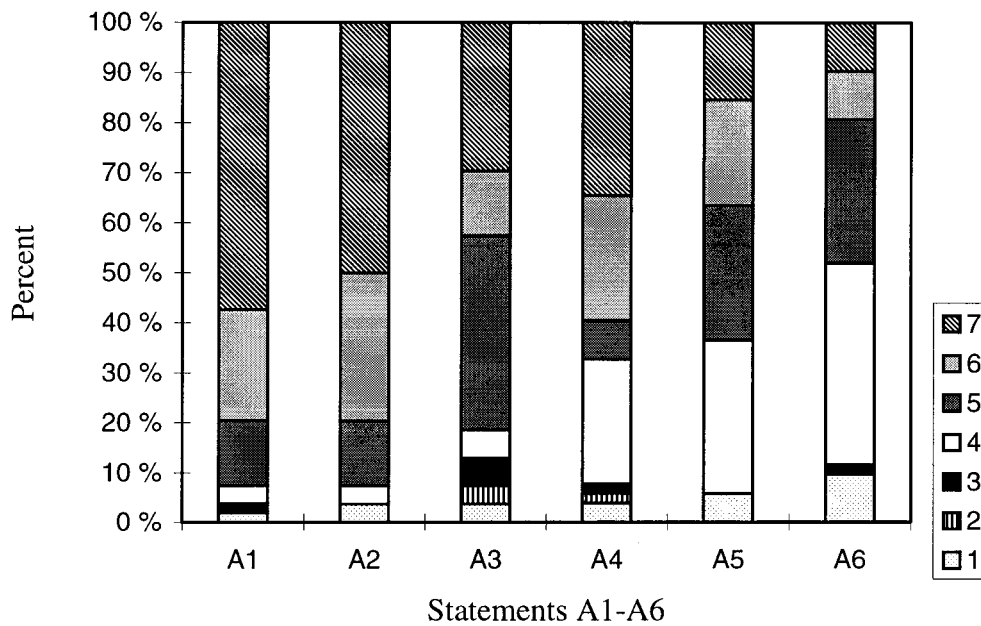


FIGURE 1. Beliefs and attitudes toward green labels

To what extent do you agree with the following statements;

7 = I totally agree and 1 = I do not agree at all.

A1 = I find it important that environmentally friendly products are marked with a green label  
(Average value = 6.22)

A2 = I have a positive attitude toward green labels (Average value = 6.11)

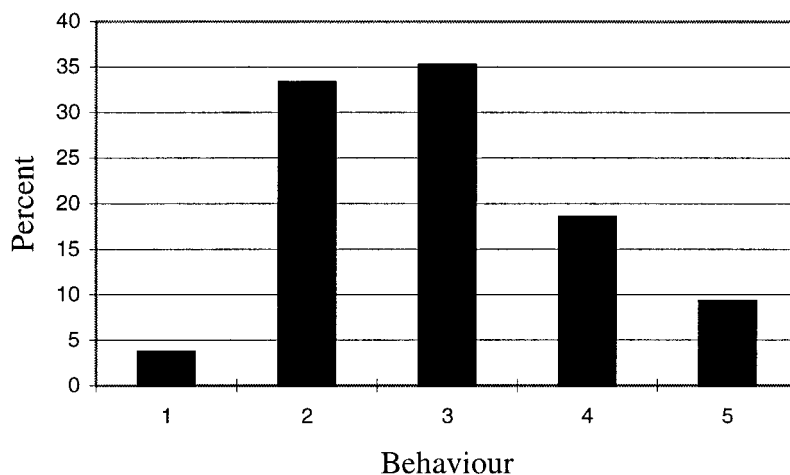
- A3 = A green label provides me with important information  
(Average value = 5.29)
- A4 = Products marked with a green label are more environmentally friendly than non-marked products  
(Average value = 5.44)
- A5 = Products marked with green labels are more expensive than non-marked products  
(Average value = 4.98)
- A6 = Products marked with green labels are of higher quality than non-marked products  
(Average value = 4.46)

It is also interesting to notice that a large group of respondents think that products marked with a green label are more expensive than traditional products (A5). Only 10 percent of the respondents totally agree with the statement that products marked with a green label are of higher quality than non-marked products (A6).

### The consumers' decision making processes

The general question "do green labels influence consumers' decision making processes", was investigated in the third part of the questionnaire. We asked: "when you buy products, how often do you look at products to see if they are marked with a green label?". As can be seen in Figure 2, a large group of respondents do look for green labels.

We were also interested in whether green labels directly influence the decision making processes of the consumers, and as can be found in Figure 3, about one fourth (26%) of the respondents claim that they are always or often influenced by green labels.



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**FIGURE 2. Consumers' interest in green labels**

1 = Every time, 2 = Often, 3 = Sometimes, 4 = Seldom, 5 = Never  
(100%) (75%) (50%) (25%) (0%)

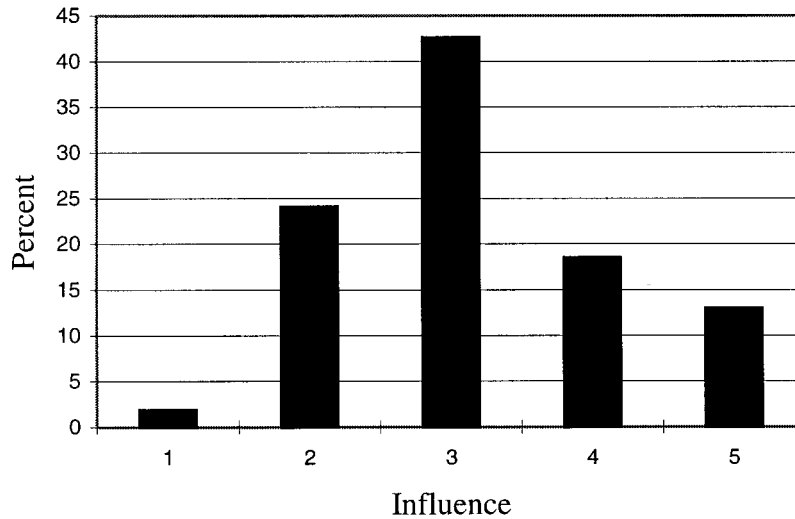


FIGURE 3. The effect of green labels on consumers' decision making processes

1 = Always, 2 = Often, 3 = Sometimes, 4 = Seldom, 5 = Never

42.6 percent of the respondents say that they sometimes buy products marked with a green label instead of a traditional product when they have an opportunity to choose. We can also see that some respondents state that they are not at all influenced by green labels (13%). These results are in line with the results presented by Heiskanen and Timonen (1996) and Schwartz and Miller (1991), when they say that there are different kinds of consumers. A small segment is very committed to pro-environmental behaviour, while other groups need not be interested at all in green labels and environmentally friendly products.

We used an open question to ask what kind of products marked with a green label consumers buy. All the answers were very similar: paper products and detergents were the products most often mentioned. Cosmetics, food and washing detergent for cars were only mentioned by a few respondents.

**Willingness-to-pay**

How much are you willing to pay for a detergent (refrigerator) marked with a green label if a traditional detergent costs 20 FIM (3500 FIM)? This was the type of question asked to measure the respondents' willingness-to-pay. The respondents were on average willing to pay a 6.5 percent higher price for a detergent marked with a green label and 20 percent more for a more environmentally friendly refrigerator. But there is also a large group of consumers who are not willing to pay a higher price (Figure 4 and 5).

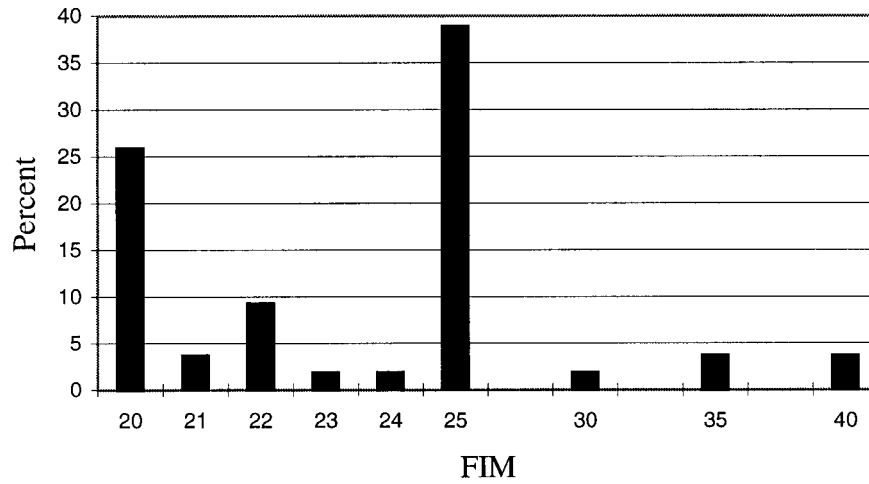


FIGURE 4. Willingness-to-pay (detergent)

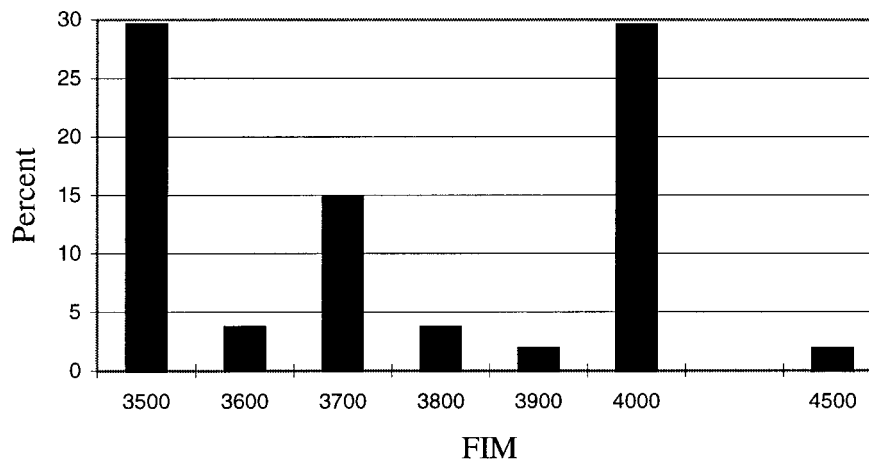


FIGURE 5. Willingness-to-pay (refrigerator)

If the Finnish consumer has to choose to pay either higher prices or higher taxes for the protection of the environment, he would choose to pay higher prices (Sairinen, 1996; Moisander, 1996).

### The value-structures of the consumers

The value structures of the respondents were studied using a conjoint analysis method. Six different values were analysed and the value providing the respondents with most utility (most

important) is "a world at peace", closely followed by "equality". The value "health" is in third place, and then we have "a green neighbourhood", and "environmental control". The least important value is "to live an exciting life". It is interesting to note that a green neighbourhood is considered more important than a green world (environmental control). We categorised the respondents into three groups according to their dominant values in their value structure. 53.7 percent of the respondents were categorised as "socially" directed, 22.2 percent as "personally" directed, and 24.1 percent as "green".

**The value-attitude-behaviour model**

Correlation and regression analysis were used to test the relevance of the value-attitude-behaviour model in this study. A correlation matrix shows that no direct correlation between green values and green attitudes were found, but a significant correlation between green values and the variables measuring willingness-to-pay could be found (sign. level = 1%) (Figure 6).

Green attitudes do not correlate with the variable willingness-to-pay, but have a high correlation with the variables "look for green labels on products" and "buy green labelled products". If you have a positive attitude toward green labels you also tend to look for green labels and buy products marked with green labels. Respondents looking for green labels are also

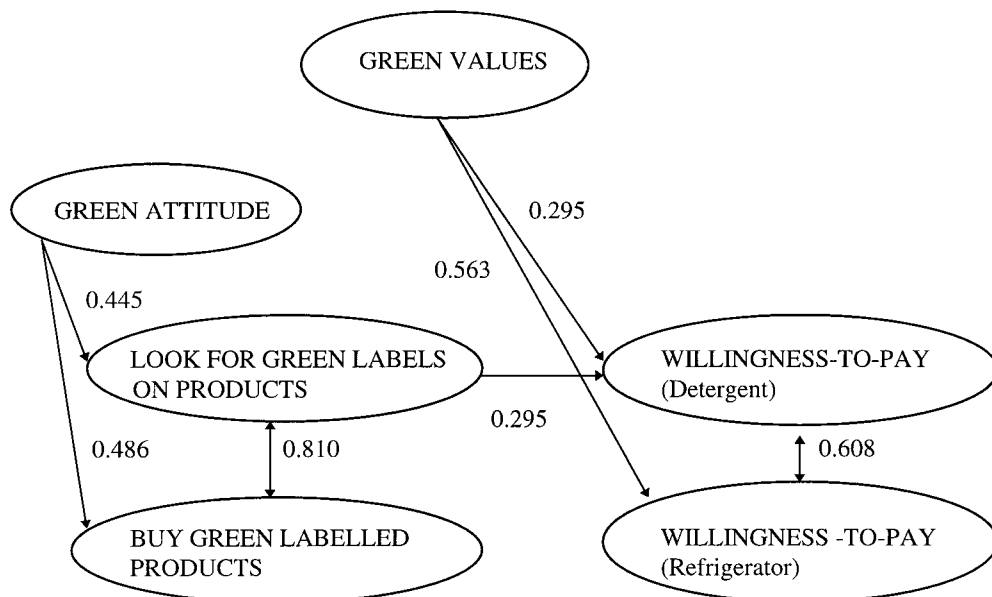


FIGURE 6. Correlation between green values, attitudes and behaviour

willing to pay a higher price for detergents marked with a green label. The simple and multiple regression analysis supports the structure presented in Figure 6. Based on the results presented, we are ready to say that attitudes toward green labels influence the behaviour of consumers. Strong support for the value-attitude-behaviour model was not found in this research, but the fact that values influence willingness-to-pay confirm their existence in the consumer behaviour models.

### **Differences in attitudes**

We used t-tests to see if there are any differences between men and women regarding green attitudes and environmentally friendly behaviour. We also tested if respondents under fifty years of age have different attitudes towards green labels and different consumer behaviour than older respondents. The reason for using fifty years as a dividing point was to get an equal distribution between younger and older respondents (42% of the respondents belong to the "younger" segment and 58% to the "senior" segment). We did not find any significant differences between the different groups, but when we follow the path the average values indicate, younger, female, Swedish speaking respondents have a somewhat more positive attitude toward green labels and also behave in accordance with these.

The pattern found in our data support the results presented by Uusitalo (1986), who studied Finnish consumers, and Schwartz and Miller (1991), who studied American consumers. Women tend to have a more favourable attitude toward green issues, which Sairinen (1996) explains by women's stronger belief in the possibility of the single consumer to influence (the development in the world). Younger consumers seem to have a more positive attitude toward environmental issues, which can be explained by their higher level of education and/or higher disposable income (Ellen, 1994). It is interesting to note that Swedish speaking respondents have a more favourable attitude toward green labels and have a more environmentally friendly behaviour than Finnish speaking consumers.

## **SUMMARY**

The models found in consumer behaviour literature describing factors influencing consumer behaviour are supported by the results presented in this study. Values and attitudes influence consumer behaviour, but the influence pattern found does not support the value-attitude-behaviour model (Jolly et al., 1988). The green values analysed did influence the variable willingness-to-pay, but did not correlate with green attitudes or purchase behaviour. Green attitudes influence consumer behaviour, but not directly the willingness to pay higher prices for products marked with green labels.

The results presented in this study are based on a very small sample, but when we compare our results with those presented by Uusitalo (1986), Moisander (1991, 1996), Sairinen (1996), and Heiskanen and Timonen (1996), a pattern describing Finnish consumers' relationship to environmental issues and green labels starts to emerge. Based on the results presented in this study, Finnish consumers have a positive attitude toward green labels and find them important when making decisions. When we calculate an average price consumers are willing to pay for products marked with a green label, it is somewhat higher than the price they are willing to pay for a traditional product. Measuring willingness-to-pay is very difficult and we must keep in mind that in our study we also have a large group of consumers who are not willing to pay a higher price. An obvious attendant question is: who are the consumers who are willing to spend extra on products marked with green labels? We compared women with men, younger with older respondents and Finnish with Swedish speaking respondents, but no significant differences could be found.

Results based on small empirical studies must be interpreted with some caution, but we are quite confident with our results. The completeness of the questionnaires returned denotes a deep involvement of the respondents in our study. The results presented in this study are in line with previously presented results based on much larger sample sizes (Uusitalo, 1986; Moisander, 1991, 1996; Sairinen, 1996; Heiskanen & Timonen, 1996). To study the value-structure of the consumers seems to be very difficult. We used a conjoint analysis method in this study and the method seems promising. The respondents could be categorised into three groups: each emphasising either some social, personal or green values. A slight precaution must be issued, as we are not completely convinced that this analysis method is the best one for the size of the design if more values are included. A suitable area for further research would therefore be to study how the conjoint analysis approach could be developed to measure the value structures of the consumers.

Attitude research is always challenging and based on our experiences and the results presented two areas for further studies can be outlined. We think it could be fruitful to develop studies using multi-item questionnaires for measuring "green" attitudes. We did not find support for the complete value-attitude-model in this study and therefore think it is necessary test the model further.

Green labels are not free of charge. Companies must reckon with development costs as well as registration and control fees. The question is, "is it worth it?" To know how consumers are responding to marketing strategies and tactics, follow up studies must be undertaken at intervals, especially when the attitudes and values of the consumers are changing continuously. ■

## REFERENCES

- AJZEN, I. (1988), Attitudes, Personality and Behavior. The Dorsey Press. Chicago.
- ANDREASEN, A. (1965), Attitudes and Customer Behavior: A Decision Model. In: Preston, L. (ed.), *New Research in Marketing*. Institute of Business and Economic Research. Berkley.
- BETTMAN, J. (1979), An information processing theory of consumer choice. Addison & Wesley Publishing. Reading, Mass.
- ELLEN, P. (1994), Do We Know What We Need to Know? Objective and Subjective Knowledge Effects on Pro-Ecological Behaviors. *Journal of Business Research*. Vol. 30, p. 43–52.
- ENGEL, J., KOLLAT, D. & BLACKWELL, R. (1973), Consumer Behavior. Holt, Rinehart and Winston, Inc. New York.
- ENGEL, J., KOLLAT, D. & BLACKWELL, R. (1982), Consumer Behavior. Holt, Rinehart and Winston, Inc. New York.
- ENGEL, J., BLACKWELL, R. & MINIARD, P. (1995), Consumer Behavior. The Dryden Press. Forth Worth.
- FISHBEIN, M. & AJZEN, I. (1975), Belief, attitude, intention, and behavior: An introduction to theory and research. Addison-Wesley. Reading.
- GRUNERT, S. & JUHL, H. (1995), Values, environmental attitudes, and buying of organic foods. *Journal of Economic Psychology*, p. 39–62.
- GUTMAN, J. (1982): A Means-End Chain Model Based on Consumer Categorization Processes. *Journal of Marketing*. Vol. 46, p. 60–72.
- HEISKANEN, E. & TIMONEN, P. (1996), Ympäristötieto ja kulutusvalinnat. Kuluttajatutkimuskeskus. Julkaisuja 9. Helsinki.
- HENRY, W. (1976), Cultural Values Do Correlate With Consumer Behavior. *Journal of Marketing*. Vol. 8, p. 121–127.
- HOMER, P. & KAHLE, L. (1988), A Structural Equation Test of the Value-Attitude-Behavior Hierachy. *Journal of Personality and Social Psychology*. Vol. 54, p. 638–646.
- HOWARD, J. (1974), The Structure of Buyer Behavior. In: Farley, J., Heward, J. & Ring, W. (eds.), *Consumer Behavior. Theory and Application*. Allyn & Bacon, Inc. Boston, p. 9–32.
- HOWARD, J. (1977), Consumer Behavior: Application of Theory. McGraw-Hill Book Company. New York.
- HOWARD, J. & SHETH, J. (1969), The Theory of Buyer Behavior. Wiley & Sons. New York.
- JOLLY, J., REYNOLDS, T. & SLOCUM, J. (1988): Application of the Means-End Theories for Understanding the Cognitive Bases of Performance Appraisal. *Organizational Behavior and Human Decision Processes*. Vol. 41, p. 153–179.
- LEEFLANG, P. & VAN RAAIJ, F. (1995), The changing consumer in the European Union: A "meta-analysis". *International Journal of research in Marketing*. Vol. 12, p. 373–387.
- LUTZ, R. (1981), The Role of Attitude Theory in Marketing. In: Kassarian, H. & Robertson, T. (eds.). *Perspective in Consumer Behavior*. Foresman. Glenview, p. 233–249.
- MCDANIEL, C. & GATES, R. (1996): Contemporary Marketing Research. West publishing company. St. Paul, MN.
- MCKENZIE-MOHR, D., NEMIROFF, L., BEERS, L. & DESMARAIS, S. (1995), Determinants of Responsible Environmental Behavior. *Journal of Social Issues*, p. 139–156.
- MENDELHALL, W., REINMUTH, J. & BEAVER, R. (1993), Statistics for Management and Economics. Duxbury Press. Boston.
- MOISANDER, J. (1991), Sosiaaliset arvot luomutuotteiden kulutuksessa. Helsingin kaupunkorakentamiskeskus, D-144.
- MOISANDER, J. (1996), Attitudes and Ecologically Responsible Consumption. Statistics Finland. Research report 218.
- NICOSIA, F. (1966), Consumer Decision Processes. Prentice-Hall. Englewood Cliffs.
- PETTY, R. & CACIOPPO, J. (1981), Attitudes and Persuasion: Classic Contemporary Approaches. William C. Brown. Dubuque. Iowa.
- PIETERS, R. (1988), Attitude-behavior Relationship. In: Van Raaij, F. (ed.). *Handbook of Cognitive Psychology*, p. 147–204.



- ROGERS, E. & SHOEMAKER, F.** (1971), *Communication Innovations*. Macmillan Publishing Co.
- ROKEACH, M.** (1973), *The Nature of Human Values*. The Free Press. New York.
- SCHWARTZ, J. & MILLER, T.** (1991), The Earth's Best Friends. *American Demographics*. February, p. 26–35.
- SAIRINEN, R.** (1996), *Suomalaiset ja Ympäristöpolitiikka*. Statistics Finland, Research report 217.
- UUSITALO, L.** (1986), *Suomalaiset ja ympäristö – tutkimus taloudellisen käyttäytymisen rationaalisuudesta*. Helsingin kauppakorkeakoulu, A:49.
- UUSITALO, L.** (1990), Are Environmental Attitudes and Behavioural Inconsistent? Findings from a Finnish Study. *Scandinavian Political Studies*, p. 211–226
- UUSITALO, L.** (1992), Environment as a Social Problem. In: Eisendle, R. & Miklultz, E. (eds.), *Produktkulturen – Dynamik und Bedeutungswandel des Konsums*. Frankfurt am Main/New York: Campus, p. 309–328.
- UUSITALO, L.** (1997), Kuluttajan ympäristöä koskevat valinnat. *The Finnish Journal of Business Economics*, p. 15–31.
- VAN RAAIJ, F.** (1988), Information Processing and Decision making, Cognitive Aspects of Economic Behaviour. In: van Raaij, F., van Veldhoven, M. & Wärneryd, K-É. (eds.), *Handbook of Economics Psychology*. Kluwer Academic Publisher. Dordrecht, p. 74–106.
- VAN RAAIJ, F.** (1995), A hierarchy of excuses for not behaving in a pro-environmental way. In: Jolibert, A., Peterson, R. & Strazzier, A. (eds.), *Marketing Communication and Consumer Behaviour*. 22nd International Research Seminar in Marketing, p. 533–552.
- VINSON, D., SCOTT, J. & LAMONT, L.** (1977), The Role of Personal Values in Marketing and Consumer behavior. *Journal of Marketing*. April, p. 44–50.