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Consumer Attitudes Towards Genetic Modification, Functional Foods, and Microorganisms: A Choice Modeling Experiment for Beer

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A choice modeling approach was used to identify consumer preferences for various hypothetical forms of genetic modification in beer, using a sample from Western Australia. It was found that respondents were equally averse to first-generation modification in either plants or microorganisms but were willing to pay a premium for a product with positive health benefits.

Key words: genetic modification, food, health benefits, microorganisms.

Introduction

The first generation of genetically modified (GM) foods, with its focus on producer benefits, has met with considerable consumer resistance in a number of countries and, as a consequence, a significant policy response in terms of regulatory control and labeling. Some advocates of genetic modification see this is a temporary issue, driven in part by the lack of any direct consumer benefits from the new technology and in part by confused messages about potential economic and environmental impacts. They argue that once the next generation of products are available that show direct benefits to consumers (either in terms of improved qualities of foods or direct health benefits), the level of acceptance will be much higher (e.g., Gamble, Muggleston, Hedderley, Parminter, & Richardson-Harman, 2000; Schmidt, 2000).

The purpose of this research is to test this contention by using a choice modeling framework. Such a framework has been used extensively to investigate hypothetical changes in environmental and agricultural polices, and there have been some efforts to investigate attitudes towards GM foods. The preferred means of investigating preferences—through revealed preferences—is not available in circumstances where GM products cannot be freely traded (and, in large part, research is designed to investigate whether they should be). Direct experimental approaches, where real but trivial trades are made under experimental conditions, are unlikely to reveal the state of preferences which will be made in the context of total food purchases.

Choice modeling

Choice modeling has been taken up within the environmental valuation literature, where its ability to deal with extended attribute sets (including those related to product and process) give it considerable flexibility (e.g., Bennett & Blamey, 2001; Morrison, Blamey, Bennett, & Louviere, 1996; Adamowicz, Boxall, Williams, & Louviere, 1998). In the current context, a hypothetical product was devised and described to the respondent with alternative biotechnologies used at various points in the production process (see the Appendix for a copy of the survey). There have been a relatively small number of papers that have applied this technique to GM foodstuffs (e.g., Burton, Rigby, Young, & James, 2001; Donaghy, Rolfe, & Bennett, 2002; Owen, Louviere, & Clark, 2002; Baker & Burnham, 2001)

The product was beer, which would be familiar to all respondents. The first attribute specified was the form of barley. This was either conventional, or a GM barley that reduced production costs (i.e., a classic first-generation agricultural product). The second attribute specified was the yeast used in the brewing process. This was either conventional, or GM to reduce the costs of brewing, or GM to leave increased antioxidants in the beer, which would reduce cholesterol levels by 20% if consumed in moderation. The third attribute was the price of the beer, which varied across a range of A$2.00 to A$4.00.

This simple survey design gives three attributes. A modified greco-latin square was used to derive a main effects combination of attribute levels. Table 1 indicates

Table 1. The combinations of attribute levels used to generate 20 hypothetical beers.

		Yeast		
		Conventional	GM (Cost)	GM (Health)
Barley	Conventional	$3.00	$2.00, $2.50, $3.00	$2.00, $2.50, $3.00, $3.50, $4.00
	GM(Cost)	$2.00, $2.50, $3.00	$2.00, $2.50, $3.00	$2.00, $2.50, $3.00, $3.50, $4.00

Table 2. Example of a choice set.

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.50	$3.50
Barley	Conventional	Conventional	GM(Cost)
Yeast	Conventional	GM(Cost)	GM(Health)
If these three bottles of beer are the only ones available, which beer do you prefer?			

the combination of attribute levels that constitute the 20 alternative beer types used in the survey. Where only a GM cost-reducing attribute is included in the product, the price is restricted to fall or at worst stay constant. For the health-enhancing product, both reduced and increased price levels are included.

Table 2 gives an indicative choice set. Each respondent was asked to complete ten of these sets. Each set contained the conventional beer type and two other options from the set of attribute combinations.

This experimental design allowed us to test a series of hypotheses: (a) the presence of first-generation genetic modification in the production process reduces the value of the product to the consumer; (b) this valuation will differ depending on the vehicle for the first generation process—plant or microorganism—with an expectation that microorganisms may be of less concern; (c) values with respect to first-generation genetic modification are cumulative—i.e., the greater the extent of genetic modification used in the process, the greater the concern; and (d) aversion to GM processes will be moderated if the modification generates health benefits.

Statistical analysis of the choices used the random utility model. Assume that the utility derived by individual i from product j is given by $U_{ij}=\Sigma_k\beta_k X_{kj} + \varepsilon_j$, where X_k are the quantified attributes of the product. If the individual selected the product that gives the highest utility, and assuming independent and identically distributed error terms following a Weibull distribution (McFadden, 1973), the probability of choosing option j from N options can be expressed as:

$$\text{Prob}(Y=\text{j}) = \frac{\exp\left[\sum_{k=1}^{K} \beta_k X_{kj}\right]}{\sum_{n=1}^{N} \exp\left[\sum_{k} \beta_k X_{kn}\right]}$$

This is a conditional logit model, which can be estimated using a wide variety of standard statistical packages (Greene, 1997).

Parameter estimates from the conditional logit model identify the utility parameters (Louviere, Hensher, & Swait, 2000, p.39), and in the case of a linear utility function, marginal utilities. In particular, the parameter on the payment level identifies the negative of marginal utility of income. The ratio of the attribute parameters to the parameter on the payment level give partworths: the marginal $ value associated with a change in the attribute.

The survey was administered in 2001, using a drop-off/postal return with prepaid envelopes. Limited resources meant that a very limited coverage could be attained: 250 surveys were distributed in randomly-selected streets in five suburbs across Perth, Western Australia (WA). The suburbs were selected on the basis of expected income levels to get a cross section of the community. Sixty-four completed surveys were returned, for a response rate of 16%. This is not a high response rate, but was not surprising given the relative complexity of the survey and no possibility of conducting follow-up reminders. The gender balance was quite even (45% male); mean household income was $43,000, which is close to the average for couples with dependent households in WA. Median age for the sample was within 30-40 years; the median for the state was 34. The sample had a significantly higher level of educational attainment than the population average: 46% at tertiary level, compared to a national average of 27%. This may reflect a degree of self-selection when respondents were faced with a relatively complex survey instrument.

The 64 surveys provided 610 usable choices. However, 19 individuals within the set always selected the conventional beer—irrespective of the price discounts or health benefits being offered, they did not select a beer involving a GM modification. These individuals may have had a utility function consistent with the rest of the sample, but it is more likely that they had a committed opposition to GM that was not amenable to tradeoffs. This is analogous to the problem of large numbers of zero willingness-to-pay values from a conventional contingent valuation study; it may imply a subpopulation with preferences that are quite different from the rest of the population. This has been tested formally by conducting a Log Likelihood test for parameter stability, splitting the data into two sets: those respondents who showed some variation in their selection, and those who always selected the conventional beer. The results of this test suggested that the null hypothesis—that parameters were stable across the two groups—is rejected (a test statistic in excess of 400, compared to a critical value of 16.92); hence, there were two subpopulations within the sample. The remainder of the analysis focused on that group who were prepared to

make a tradeoff across the attributes. However, in interpreting the total consumer response to the GM issues presented here, it should be remembered that a significant proportion of the sample did not purchase GM products for the range of prices and attributes used in the experiment.

Focusing on the set of respondents who were prepared to consider GM beer, of the individual specific characteristics collected, only two were found to be significant modifiers of attitudes towards attribute levels: the age of the respondent and whether they considered cholesterol levels to be important. The results are reported in Table 3. First-generation modification to either the barley or the yeast to reduce costs was not valued by respondents, and they would require a price discount to be induced to purchase a beer with these characteristics. For both effects, the older the respondent, the less marked was their concern. For those who did not view cholesterol as important, genetic modification of yeast to generate health benefits was seen as neither positive nor negative: the coefficient is not significantly different from zero. However, those who did see cholesterol as an issue placed a positive weight on the health benefits, and would be prepared to pay more for this product. This was a product-specific effect—this group did not, in general, hold pro-GM views, as they did not hold a preference for first-generation GM changes.

The assumption of independence of irrelevant alternatives was tested by dropping the "conventional" alternative from the model, and re-estimating the model over the restricted, two-option data set (Hausman & McFadden, 1984). The null hypothesis, of no systematic difference in the parameter values, could not be rejected at conventional levels of significance.

Table 4 reports the estimates with all insignificant variables removed.

What is notable about these results is the relative similarities in the size of the coefficients on the first-generation GM variables (Barley and Yeast(1)) and the effects of age. This suggests that there may be no difference in attitudes with respect to the vehicle of the modification (plant or microorganism). This can be tested formally by restricting the parameters on these variables to be equal, as in Table 5. This restriction is accepted on the basis of a LL test (test statistic of 4.54, compared to a critical value of 5.99), leading to a very parsimonious representation of preferences.

The implication of this specification is that the presence of both a cost-reducing GM barley and yeast had twice the impact on the consumers' valuation of the beer, as compared with either one on its own. However, it is possible that the respondents did not make a distinction between the degree of genetic modification; once they identified any level of first-generation genetic modification, it was sufficient to induce an adverse effect. Of the sample of 1,230 beers presented, 615 involved one first-generation GM process, while 82 had two (i.e., both cost-reducing barley and cost-reducing

Table 3. Parameter estimates from a conditional logit model.

LL value = -385.30			Choice sets = 410	
	Coeff	**Std. Err.**	**Z**	**p**
Price	-1.356	0.150	9.01	0.00
Barley	-0.913	0.355	2.57	0.01
Barley*Age	0.017	0.008	2.21	0.03
Yeast(1)	-1.810	0.562	3.22	0.00
Yeast(1)*Age	0.021	0.011	1.92	0.06
Yeast(1)*Chol	0.366	0.539	0.68	0.50
Yeast(2)	-0.152	0.447	0.73	0.73
Yeast(2)*Age	0.006	0.009	0.67	0.50
Yeast(2)*Chol	0.877	0.412	2.13	0.03

Notes: Barley = 1 if includes first-generation barley, 0 otherwise; Yeast(1) = 1 if includes first-generation yeast, 0 otherwise; Yeast(2) = 1 if includes cholesterol enhancement yeast, 0 otherwise; Price = price of beer; Age = age of respondent; Chol = 1 if respondent viewed cholesterol level to be important, 0 otherwise.

Table 4. Parameter estimates from a conditional logit model: significant variables only.

LL value = -385.84			Choice sets = 410	
	Coeff	**Std. Err.**	**Z**	**p**
Price	-1.351	0.150	8.99	0.00
Barley	-0.979	0.337	2.90	0.00
Barley*Age	0.019	0.007	2.55	0.01
Yeast(1)	-1.499	0.438	3.42	0.00
Yeast(1)*Age	0.021	0.009	2.22	0.03
Yeast(2)*Chol	0.966	0.155	6.19	0.00

Table 5. Parameter estimates from a conditional logit model: equality of 1st generation effects.

LL value = -388.11			Choice sets = 410	
	Coeff	**Std. Err.**	**Z**	**p**
Price	-1.286	0.150	8.83	0.00
Barley	-1.150	0.283	4.04	0.00
Barley*Age	0.019	0.006	3.16	0.00
Yeast(1)	-1.150	0.283	4.04	0.00
Yeast(1)*Age	0.019	0.006	3.16	0.00
Yeast(2)*Chol	1.09	0.144	7.56	0.00

yeast). To test whether there was any marginal reduction in utility associated with the second GM process, two new variables were created. The first (One) took a value of 1 if there was one first-generation GM process involved in the production of the beer, and 0 otherwise. The second variable (Two) took a value of 1 if two first-generation GM processes were involved in the production of the beer, and 0 otherwise. These variables were then used to replace the individual barley and yeast variables used before. Neither the variable Two nor Two*Age were significant, implying that the presence of a second first-generation GM process did not alter the respondents' valuation of the product. The final form of the estimated model is reported in Table 6.

Although these results indicate only the signs and significance of effects, they can be given monetary values by identifying the partworths associated with changes in attribute levels. These are defined by the negative ratio of attribute to price coefficient. Table 7 reports partworths for first-generation GM and functional GM for those concerned about cholesterol levels.

Thus, the presence of first-generation GM of either form would require a discount of A$0.72 for the 20-year-old respondent to be left indifferent as compared to the conventional beer; this declines to A$0.40 for 40-year-old respondents. However, those who viewed cholesterol as a significant issue for themselves would be prepared to pay a premium of A$0.83 to purchase a bottle of beer that had the described medical implications. Those who did not see cholesterol as an issue were indifferent to the presence of this modification; it neither increased nor reduced their perception of the beer.

Conclusions

Although the sample size was small, the repeated nature of the experiments means that the preferences of this set of respondents can be identified with high precision. The results reveal a diversified set of preferences towards genetic modification in foods. There was a set of respondents (30% in this sample) who were not prepared to select a beer having any GM component in its production for any of the price or health advantages offered in this experiment. There was a set of respondents who required some price discount to be induced to purchase a beer that had some first-generation GM involved in its production. However, this effect appeared not to be cumulative—the presence of a single first-generation GM process was sufficient to generate a reduction in utility, but subsequent additional GM processes did not further extend this.

Table 6. Parameter estimates from a conditional logit model: final specification.

LL value = -385.92	Choice sets = 410			
	Coeff	Std. Err.	Z	p
Price	-1.386	0.155	8.92	0.00
One	-1.440	0.330	4.36	0.00
One*Age	0.022	0.007	3.12	0.00
Yeast(2)*Chol	1.15	0.148	7.78	0.00

Note: One = 1 if one first-generation process is involved (either barley or yeast), 0 otherwise.

Table 7. Partworths associated with genetic modification and beer.

	Partworth ($)	p
1st generation GM (age = 20)	-0.72	0.00
1st generation GM (age = 40)	-0.40	0.00
Functional GM	0.83	0.00

There was a third set who were prepared to pay a premium to access a product having medicinal benefits. It was particularly reassuring that this subset corresponded to those who revealed a concern about cholesterol in other areas of the survey; this gave some support to the validity of the survey instrument. However, the expected differentiation between GM plants and GM microorganisms was not present in this sample; a similar level of concern was found for both.

An unresolved question is whether concerns about first-generation GM products would be moderated by market exposure. If this were the case, there would be significant benefits for those striving for market acceptance to develop products with direct nutritional or health benefits to consumers, as opposed to some unspecified price advantage. A second issue is the inevitably conditional nature of the preferences that the choice modeling framework reveals. The assumption made here is that the discount reflects some disutility associated with the process. However, as noted by a reviewer, it may be that respondents were expressing a view that any cost savings associated with the use of first-generation GM (which was how the technology was motivated in the survey) should be passed on to consumers. Hence, even if they were indifferent to the product, they were expressing a preference for market consequences of its use based on some notion of equity. The current survey was not designed to tease out these possibilities, but it does show the potential complexity of consumer responses to the introduction of these technologies.

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Appendix A: The Survey Instrument

This Appendix reports the information that was given to the respondents, but the formatting has been changed.

Consumer Survey: Genetic Modification in the Brewing of Beer

This survey will consist of four sections over four pages.

Section 1: This part of the survey will help identify your preferences in the use of genetic modification in food and drink production. In the questions below we use beer as a typical product, consumed by many people. During this survey you will be asked to comment on different hypothetical situations relating to the brewing processing of beer. The characteristics we are interested in are:

1. The price of the beer.
2. The type of yeast used to ferment the beer.
3. The type of barley used in the beer.

Background: What is Genetic Modification?

Genetic modification (GM) is the process of transferring genes from one species of organism into a different species of organism. This can be done using genes from plants, animals, or microorganisms. This is done to transfer characteristics of one organism into another. Some examples of this is the transfer of a fish gene into a tomato to make it more frost tolerant or the transfer of a gene from a pea into rice to add a new protein that gives it a health benefit. Genetic modification can be used to increase the productivity of plants and animals or to improve the health of consumers who eat them.

Key issues: Where do the genes come from?

The key issue of this survey involves attitudes towards the genetic modification of plants and microorganisms involved in the brewing of beer.

Traditional beer is made through the fermentation of barley by yeast that produces alcohol and carbon dioxide. Yeast is a living microorganism that at the time of consumption is not present in the beer. The two types of genetically modified yeast we are suggesting are either:

1. Designed to reduce the time of brewing and therefore the price of the beer, or
2. Designed to increase the level of antioxidants in the beer, which will lower cholesterol levels when consumed in moderation.

This is a significant health advantage because high cholesterol levels can be linked to many heart-related diseases.

The genetically modified barley we are suggesting is designed to reduce costs for the farmer, and therefore the price of beer may fall.

The Design of this Survey

Hypothetical Situations. In this survey we will present you with hypothetical situations where you have the choice between three different middies (285 ml) of beer. One will always be made using conventional methods while the other two will have a different price and a different type of yeast and barley.

The price of the beer varies between $2.00 and $4.00 depending on the type of yeast and barley used. The conventional beer has a price that is set at $3.00.

There are three different types of yeast being suggested: (i) conventional, (ii) genetically modified to reduce the brewing time and maybe the cost (GM - cost), or (iii) genetically modified to brew beer that is high in antioxidants designed to lower cholesterol by 20% if drunk in moderation (GM - health). These genes come from canola plants. Reducing cholesterol levels by this amount would lead to significant health improvements: The heart foundation says heart disease accounts for 40% of Australian deaths and a high cholesterol level is one of the major risk factors for developing heart disease.

The genetically modified barley is designed to improve the yields for the farmer which may in turn lead to a fall in the price of beer. However the cost savings for the farmer may not be passed on to the consumer so the price of beer may remain the same.

The Choices. Using the information that you have read, we would like you to make choices between three types of beer. Look at the characteristics of the beer and tick one of the boxes. You may prefer an alternative that is not one of those presented but for the purpose of this study we are asking for you to simply choose between the three options that are presented in each questions.

Example Question. Suppose that you were offered a beer with the following characteristics:

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.50	$3.50
Barley	Conventional	GM	Conventional
Yeast	Conventional	GM (Cost)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

If you preferred the conventional option to option 1 or 2 then you would tick the first box. If the decrease in price of 50 cents made option 1 more favorable with genetically modified barley and yeast then you would tick the second box. However if you decided that the reduced cholesterol from the GM beer was worth paying the extra 50 cents to buy then you would tick the third box.

The Survey

Please answer the following questions and return this booklet in the Reply Paid envelope.

Section 1:

1. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.00	$3.50
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Cost)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

2. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$3.00	$3.00
Barley	Conventional	Conventional	Conventional
Yeast	Conventional	GM (Cost)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

3. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.50	$4.00
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Cost)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

4. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.00	$2.50
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Cost)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

5. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.00	$3.00
Barley	Conventional	GM	GM
Yeast	Conventional	Conventional	GM (Cost)
Which beer do you prefer? (tick one box)	☐	☐	☐

6. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$3.00	$2.00
Barley	Conventional	GM	GM
Yeast	Conventional	Conventional	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

7. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$3.50	$2.50
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Health)	Conventional
Which beer do you prefer? (tick one box)	☐	☐	☐

8. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$4.00	$2.00
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Health)	GM (Cost)
Which beer do you prefer? (tick one box)	☐	☐	☐

9. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$2.50	$2.50
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Health)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

10. If the following three middies of beers are the only ones available, which do you prefer?

Attribute	Conventional	Option 1	Option 2
Price	$3.00	$3.00	$3.00
Barley	Conventional	Conventional	GM
Yeast	Conventional	GM (Health)	GM (Health)
Which beer do you prefer? (tick one box)	☐	☐	☐

Section 2:

This section is designed to let us know how well informed consumers are about genetic modification. Please answer true/false to each of the following statements:

1. Genetic Modification involves recombinant DNA technology.
   True ☐ False ☐ don't know ☐

2. There are no environmental issues involved with Genetic Modification.
   True ☐ False ☐ don't know ☐

3. Genetic Modification can only occur between related species.
   True ☐ False ☐ don't know ☐

4. Genetically Modified barley crops have already been commercially released in Australia.
   True ☐ False ☐ don't know ☐

5. Biotechnology is assisting laboratories in making insulin for diabetics.
   True ☐ False ☐ don't know ☐

Section 3: Attitudes Survey.

Please circle the number that indicates your degree of approval or opposition to the following five questions (1=Strongly Opposed; 2=Opposed; 3=No opinion; 4=Approve; 5=Strongly Approve; 6=Don't Know).

1. How do you feel about genetic modification of plants in food production?
   1 2 3 4 5 6

2. How do you feel about genetic modification of animals in food production?
   1 2 3 4 5 6

3. How do you feel about genetic modification of microorganisms in food production?
   1 2 3 4 5 6

4. How do you feel about the use of genetic modification to make medicines?
   1 2 3 4 5 6

5. How do you feel about the use of genetic modification to produce medically beneficial foods?
   1 2 3 4 5 6

6. If you object to genetic modification on what do you base this opinion? (There may be more than one reason.)
   Moral ☐ Environmental ☐ Religious ☐
   Economical ☐ Food Safety ☐ Other ☐
   Please List:

7. Do you drink beer?
   Yes ☐ No ☐

8. If yes: How many standard drinks of beer would you consume in a week?
   1-5 ☐ 6-15 ☐ 16-30 ☐ 31 + ☐

9. Do you look for organically grown foods when you are shopping?
   Yes ☐ No ☐

10. Do you read the ingredients labels of all of the foods that you buy?
    Yes ☐ No ☐

11. Have you ever had your cholesterol tested?
    Yes ☐ No ☐
    If yes, was the level...
    Of high concern? ☐ Of low concern? ☐
    Of moderate concern? ☐ Of no concern? ☐

12. In general, do you consider your cholesterol level to be important?
    Yes ☐ No ☐

13. Who do you trust the most about giving you information about genetic modification?
    Multinational companies ☐
    Government agencies ☐
    Print/Television Media ☐
    No one ☐
    Other ☐ Please List:

14. What factor plays the greatest role in your food purchase decisions?
    Price ☐ Health ☐ Australian Made or not ☐
    Other ☐ Please List:

Section 4:

This final set of questions will allow us to ensure that the people we survey represent a cross section of the community. All information that you give us is confidential and it will not be revealed to anyone else.

1. What is your age? (please circle)
   18 to 25 26 to 35 36 to 45
   46 to 55 56 to 65 Over 65

2. What is your Sex? (please circle)
   Female Male

3. What is the Post Code for your home address?

4. What is your current employment status? (please circle)
   self-employed unemployed retired pension employed full time employed part time student home duties

5. What is your estimated annual household pre-tax income? (please circle)
   $0-10,000 $10,001-$30,000
   $30,001-$50,000 $50,001-$70,000
   $70,001-$90,000 $90,001+

6. What is the highest level of education you have completed? (please circle)
   Year ten or below Year 12 Certificate/diploma tertiary degree Other (please specify)

Thank you for taking the time to answer this survey. Your responses are much appreciated. Please mail this booklet in the reply paid envelope.