

Attitudes and Behaviours around Sustainable Food Purchasing - ANNEXES ONLY

Report (SERP 1011/10)

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The main report is in a separate document

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Thanks are due to Dan Holding for his valuable contribution to data processing and segmentation analysis of the animal welfare data.

Annex 1 – animal welfare segmentation analysis

This annex lists the steps taken to get from an initial four-part segmentation to the full one presented in the report Section 4.

In order to identify different patterns in the data for each population group, four separate analyses were carried for groups including seekers and non-seekers of each of free range eggs and free range chicken. The number of households in each of the four analysis were:

	Seekers	Non-Seekers
free range eggs	1910	1372
free range chicken	1505	2000

People who claim not to purchase eggs or chicken were excluded from the segmentation analyses. In fact if they claimed not to buy these items, they would not be routed to the barrier or driver questions in the survey and so we wouldn't have their attitudinal responses.

Respondents who selected 'I am doing this but not as much as I'd like' when asked if they actively seek free range eggs or chicken were given the opportunity to supply barrier and driver responses. They were included in the analyses for both seekers and non-seekers of free range. This differs from the approach in the main report where those answering 'I am doing this but not as much as I'd like' were not included in this analysis of the barriers.

The data used in the analyses is presented in Table 62. It comprises four behavioural questions, two demographic questions, five understanding questions, seven shopping approach questions, seven barrier or seven driver questions and the desire to seek more question (asked only to those wanting to do more). Not all the data was used in this analysis.

Table 64. Questions analysed in the segmentation

Behaviour data	
Behaviour	Over 50% of eggs purchased are free range
Behaviour	Over 10% of chicken purchased is free range
Behaviour	Average number of eggs purchased per week
Behaviour	Average amount of chicken purchased per week
Desire to do more (those who answered 'I am doing this but would like to do more')	
Desire to act	Actively seek more ('I am doing this but not as much as I'd like')
Driver options	
Driver	There isn't much difference in price
Driver	I think it's important that animals are treated as humanely as possible
Driver	The taste is better
Driver	It makes me feel good to think that I have helped an animal have a better life
Driver	My family like me to buy higher welfare products
Driver	I buy the same products out of habit
Driver	Government standard welfare levels do not go far enough
Barrier options	
Barrier	Too expensive for my budget
Barrier	How animals are reared is not important
Barrier	There is no benefit in the taste
Barrier	It is too much of an inconvenience to find

Barrier	Not an option where I shop
Barrier	I buy the same products out of habit
Barrier	The Government standard for animal welfare is enough
Shopping approach questions	
Approach	The particular food needs / wants of others in the household
Approach	Any special offers that week
Approach	Buying the best quality food
Approach	Trying to get the cheapest food I can
Approach	What I need to stock up on
Approach	Ingredients for specific meals
Approach	Whether I can use products by the use-by-date
Understanding questions	
Understanding	How important to you is it whether meat and eggs have been produced to high animal welfare standards?
Understanding	Free range products have higher welfare standards
Understanding	I don't know how to tell if a product meets high animal welfare standards
Understanding	Retailers should ensure they only sell products that have higher animal welfare
Understanding	I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards
Understanding	I have a good understanding of the issues surrounding animal welfare
Demographic data	
Demographic	Vegetarian in the household
Demographic	Income over £20,000 per annum

The segmentation analysis was undertaken using binary data. That is, respondents are categorised as answering yes or no to each of the above questions. Most of the questions were in the correct form but some had to be converted to binary. This was done as follows:

- Free range eggs – whether respondents purchased over 50% of free range eggs or not. This was determined as a sensible cut off point through looking at the purchase data, anyone scoring positively to this would have to purchase more free range eggs than the average in the survey.
- Free range chicken – whether respondents purchased over 10% of free range chicken or not. The cut off point is lower to reflect the fact that fewer free range chickens are purchased.
- Income – whether respondents had an annual income over £20,000 or not. Again, this was a sensible cut off point as it split the data into two large groups

Reducing these data items to binary results in a loss of information but considerably simplifies the analysis. The software used to process the work was Latent Analysis Model Interface (LAMI).

The remaining demographic data on characteristics such as age and household composition is analysed later on a group by group basis. It was excluded from the segmentation analysis because it led to segmentations defined largely by the demographics rather than the attitudes or behaviours. Each of the four segmentation analyses resulted in four segments, although the characteristics of the segments varied. The data analysis for this is shown below along with a detailed description of each segment.

Table 65. Primary animal welfare segmentation (chicken and eggs separately)

Seekers of free range eggs (61% of the population)		
A. Cautious followers	Buys free range eggs but is unsure about the ethics	153 (8%)
B. Budget watchers	Animal welfare is important, however, respondents buy few free range eggs, price could be a barrier to buying more free range eggs, but would like to do more	382 (20%)
C. Independent supporters	Cares about animal welfare and buys high proportion of free range eggs	668 (35%)
D. Full supporters	Buys the most free range eggs, highly driven by the humane treatment of animals, has a good understanding and thinks retailers should shoulder some responsibility	707 (37%)

Non-seekers of free range eggs (44% of the population)		
A. Indifferent shoppers	Indifferent about animal welfare, mostly buys non free range eggs out of habit	137 (10%)
B. Price over ethics	Buys very few free range eggs because of the price but is not overly concerned about animal welfare	494 (36%)
C. Budget watchers	Cares about animal welfare but price is a barrier to buying the free range eggs, would like to do more.	343 (25%)
D. Habit buyers	Price is not a barrier to buying free range eggs respondents are driven by habit	398 (29%)

Seekers of free range chicken (48% of the population)		
A. Cautious followers	Buys free range chicken but is unsure about the ethics.	286 (19%)
B. Budget watchers	Animal welfare is important but respondents buy few free range chickens, price could be a barrier to buying more free range chickens, but would like to do more.	527 (35%)
C. Independent supporters	Cares about animal welfare and buys high proportion of free range chicken (compared to others in the survey)	406 (27%)
D. Full supporters	Buys the most free range chicken and has a good understanding, thinks retailers should shoulder some responsibility, highly driven by ethics.	286 (19%)

Non-seekers of free range chicken (64% of the population)		
A. Indifferent shoppers	Indifferent about animal welfare, mostly buys non free range chicken out of habit, price is only a small barrier.	360 (18%)
B. Price over ethics	Buys very few free range chicken because of the price but is not concerned about it.	500 (25%)
C. Habit buyers	Places high importance on the welfare of animals, price is not a big barrier, however shopping habits are and to some degree, availability.	640 (32%)
D. Budget watchers	Cares about animal welfare but can't afford to buy the free range chicken.	500 (25%)

For eggs, the largest part of the population are seekers (61%) and two segments stand out ‘full supporters’ and ‘independent supporters’. Their main driver is wanting to ensure animals are treated humanely .

For free range chicken the largest part of the population are non-seekers (64%) and among them ‘habit buyers’ are the largest segment, whose main barrier is buying the same items out of habit. Price is not the biggest barrier for this group, though it could be inferred that the decision to buy lower priced chicken was made some time ago and has now become habitual.

The four segmentations found similarities in the shopping habits of respondents in terms of chickens and eggs, namely that the same high level descriptors, e.g. ‘budget watchers’ were found to be appropriate for segments in both eggs and chicken analyses. This indicates that it is appropriate to combine the segmentations into one overarching set, which is done in the next section. However, there are significant differences underlying these name tags which are brought out in the fuller descriptions.

To note, a respondent is classed as buying free range eggs if they purchase, on average free range 50% of the time, whereas for chicken this level is 10%. If we had selected different levels then the segmentation analysis may have produced different results.

Combined segmentation

There are similarities between respondents behaviour towards free range eggs and free range chicken, and to gain an overall picture of attitudes and behaviours towards animal welfare as a whole, both the chicken and egg segments can be merged into one analysis. This is ideal since many of the groups have a large overlap in their population showing a similar attitude/behaviour segment for eggs and for chicken.

The high level name tags from the four segmentations suggest merging the eggs and the chicken segments at this level.

Table 66. Merged segments with duplication

Segment	Source	percent of households
Full supporters	Full supporters from both egg and chicken drivers	16%
Independent supporters	Independent supporters from both egg and chicken drivers	18%
Cautious followers	Cautious followers from both egg and chicken drivers	6%
Budget watchers	Budget watchers from all four analyses	25%
Habit buyers	Habit buyers from both egg and chicken barriers	8%
Indifferent shoppers	Indifferent shoppers and ‘price over ethics’ from both egg and chicken barriers	26%

The budget watchers is the only group to be made up of people from all four groups since it represents people who answered yes to 'I am doing this but not as much as I'd like' and so answered both the barrier and driver questions.

This is not a mutually exclusive segmentation yet because these six groupings have large overlaps, e.g. there are 80 cases of 'cautious follower' for chicken who are also 'independent supporters' for eggs. Using the probabilities that households have of being in particular segments of the primary four analyses (chicken actively seeking, chicken not actively seeking, eggs actively seeking, eggs not actively seeking) we can find the probabilities of them being in these wider groups. We then allocate a household to the wider group for which it has greatest probability of membership. Details of the probabilities of membership are shown in tables 66-69.

Notes on tables 66-69

Results for each of the four primary analyses use the following key to help draw out the main figures in the output:

Dark red:	Very low response compared to the average.
Light red:	Somewhat low response compared to the average.
Light green:	Somewhat high response compared to the average.
Dark Green:	Very high response compared to the average.

Also note that the average column denotes the average probability of answering positively to each question

Actively seeking free range eggs response correlations

In table 66:

- A. **Cautious followers:** buys free range eggs but is unsure about the ethics
- B. **Budget watchers:** Animal welfare is important but can't afford to buy free range eggs
- C. **Independent supporters:** Cares about animal welfare and buys high proportion of free range eggs
- D. **Full supporters:** Buys the most free range eggs and cares about the government and retailer standards

Table 67. Response correlations with segments for “claim to actively seek free range eggs” group

Question	Average	Probability of respondent answering positively to each question			
		A	B	C	D
		Proportion in class			
		0.08	0.20	0.35	0.37
Behaviour					
1. Over 50% Free range eggs	0.66	0.56	0.09	0.79	0.85
2. Above average number of eggs	0.39	0.27	0.55	0.35	0.37
Importance					
3. Is it important whether meat and eggs have been produced to high animal welfare standards	0.90	0.46	0.84	0.92	1.00
Desire to do more					
4. I am seeking free range eggs but not as much as I'd like	0.25	0.33	0.82	0.06	0.10
Driver options					
5. Egg driver: There isn't much difference in price	0.13	0.20	0.09	0.12	0.15
6. Egg driver: I think it's important that animals are treated as humanely as possible	0.76	0.27	0.63	0.70	0.99
7. Egg driver: The taste is better	0.49	0.60	0.40	0.49	0.51
8. Egg driver: It makes me feel good to think that I have helped an animal have a better life	0.47	0.20	0.42	0.34	0.69
9. Egg driver: My family like me to buy higher welfare products	0.10	0.00	0.05	0.04	0.20
10. Egg driver: I buy the same products out of habit	0.07	0.12	0.12	0.06	0.05
11. Egg driver: Government standard welfare levels do not go far enough	0.19	0.02	0.13	0.04	0.40
Shopping approach questions					
12. The particular food needs / wants of others in the household	0.62	0.50	0.69	0.54	0.67
13. Any special offers that week	0.82	0.78	0.92	0.73	0.85
14. Buying the best quality food	0.49	0.28	0.38	0.43	0.65
15. Trying to get the cheapest food I can	0.26	0.25	0.42	0.15	0.27
16. What I need to stock up on	0.84	0.74	0.89	0.77	0.89
17. Ingredients for specific meals	0.69	0.59	0.66	0.66	0.75
18. Whether I can use products by the use-by-date	0.51	0.39	0.54	0.44	0.59
Understanding questions					
19. Free range products have higher welfare standards	0.85	0.30	0.77	0.89	0.96
20. I don't know how to tell if a product meets high animal welfare standards	0.43	0.34	0.59	0.41	0.39
21. Retailers should ensure they only sell products that have higher animal welfare	0.74	0.08	0.72	0.70	0.93
22. I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards	0.25	0.00	0.22	0.25	0.32
23. I have a good understanding of the issues surrounding	0.49	0.10	0.34	0.43	0.70

animal welfare					
Demographic data					
24. Vegetarian	0.06	0.00	0.02	0.05	0.10
25. Income over £20,000 pa	0.61	0.67	0.53	0.67	0.58

Class A (Cautious followers):

- Buys moderate amount of free range eggs
- Very low attitude towards animal welfare compared to other free range seekers
- Largest driver is taste at 60%
- Most are not interest in buying the best quality food
- Very low understanding about animal welfare, only 10% think they understand the issues
- No vegetarians

Class B (Budget watchers):

- Buys very low amount of free range eggs
- Supports animal welfare but not as much as classes C and D
- Most are not seeking as much as they would like
- Most seek out special offers and cheap food
- Only a few vegetarians
- Buys the most eggs out of the group
- Fairly low understanding about animal welfare
- (This class is likely to be further represented in the barriers)

Class C (Independent supporters):

- Buys fairly large amount of free eggs
- Supports animal welfare
- Very few are not seeking as much as they would like
- Less likely to look for special offers and cheap food
- Less likely to be driven by feeling good than classes B and D
- Moderate understanding about animal welfare

Class D (Full supporters):

- Buys the largest amount of free range eggs
- Strong support of animal welfare
- Very highly driven by treating animals humanely
- Also driven strongly by feeling good, the government standards not being high enough and by their families needs
- Very high amount say retailers have a responsibility
- Most claim to have a good understanding
- Highest proportion of vegetarians

Not actively seeking free range eggs response correlations

In table 67 A, B, C and D refer to different groups than in table 66

- A. **Indifferent shoppers:** Indifferent about animal welfare, mostly buys non free range eggs out of habit
- B. **Price over ethics:** Buys very few free range eggs because of the price but is not concerned about it
- C. **Budget watchers:** Like class B in table 66, cares about animal welfare but can't afford to buy the free range eggs
- D. **Habit buyers:** Can afford to buy free range eggs but not in the habit of doing so

Table 68. Response correlations with segments for “claim to not actively seek free range eggs” group

Question	Average	Probability of respondent answering positively to each question			
		A	B	C	D
		Proportion in class			
		0.10	0.36	0.25	0.29
1. Over 50% Free range eggs	0.19	0.35	0.10	0.14	0.30
2. Above average number of eggs	0.40	0.30	0.40	0.43	0.39
3. Is it important whether meat and eggs have been produced to high animal welfare standards	0.61	0.29	0.28	0.86	0.91
4. I am seeking free range eggs but not as much as I'd like	0.34	0.07	0.10	0.59	0.52
5. Egg barrier: Too expensive for my budget	0.69	0.03	0.87	0.96	0.44
6. Egg barrier: How animals are reared is not important	0.02	0.00	0.03	0.00	0.02
7. Egg barrier: There is no benefit in the taste	0.17	0.24	0.20	0.04	0.23
8. Egg barrier: It is too much of an inconvenience to find	0.04	0.00	0.05	0.00	0.07
9. Egg barrier: Not an option where I shop	0.03	0.04	0.01	0.00	0.09
10. Egg barrier: I buy the same products out of habit	0.21	0.55	0.15	0.08	0.30
11. Egg barrier: The Government standard for animal welfare is enough	0.09	0.14	0.08	0.01	0.14
12. The particular food needs / wants of others in the household	0.61	0.48	0.56	0.72	0.62
13. Any special offers that week	0.85	0.63	0.88	0.94	0.82
14. Buying the best quality food	0.34	0.38	0.16	0.38	0.54
15. Trying to get the cheapest food I can	0.42	0.23	0.56	0.58	0.16
16. What I need to stock up on	0.84	0.78	0.80	0.87	0.88
17. Ingredients for specific meals	0.59	0.44	0.49	0.70	0.67
18. Whether I can use products by the use-by-date	0.49	0.37	0.42	0.60	0.51
19. Free range products have higher welfare standards	0.58	0.20	0.37	0.87	0.71
20. I don't know how to tell if a product meets high animal welfare standards	0.54	0.32	0.57	0.57	0.54
21. Retailers should ensure they only sell products that have higher animal welfare	0.51	0.16	0.26	0.76	0.71
22. I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards	0.19	0.04	0.08	0.26	0.31
23. I have a good understanding of the issues surrounding animal welfare	0.28	0.12	0.14	0.41	0.40
24. Vegetarian	0.03	0.06	0.03	0.05	0.00
25. Over £20000 PA	0.55	0.63	0.55	0.51	0.57

Class A (Indifferent shoppers):

- Buy's the most eggs out of those who don't actively seek

- Most do not care about animal welfare and are not wanting to seek free range eggs any more
- Strongest barrier is habit followed by no difference in taste
- Price barrier is only 7% compared to the 69% average
- Most disagree that free range has higher welfare standards and that retailers should only sell them
- Only 12% say they have a good understanding of the issues
- Most disagree to not being able to tell which products have high standards
- Lower than average at hunting special offers and cheap food
- Slightly higher income than other groups

Class B (Price over ethics):

- Buy's the lowest amount of free range eggs
- Most do not care about animal welfare and are not wanting to seek free range eggs any more
- Strongest barrier is price followed by taste
- Like class A, most disagree that free range has higher welfare standards and retailers should only sell them but not as high a proportion as class A
- 14% say they have a good understanding
- Only 16% say they buy the best quality food whereas higher than average go for offers and cheap food

Class C (Budget watchers):

- Low amount buy free range eggs although more than class B
- 86% say animal welfare is important and 59% want to seek more
- Only significant barrier is price at 96%
- 87% say free range has higher standards and 76% say retailers should only sell free range, the highest in the 4 classes
- 94% say they hunt for special offers and larger than average amount look for the cheapest food
- Has a strong overlap with class B in the seekers

Class D (Habit buyers):

- Moderate amount buy free range compared to the average of the group, 30%
- Highest amount say they care about free range and over half say they want to seek more
- Price barrier is lower than average but still at 44%
- Taste, habit, not an available where they shop and the government standards being enough, are all small but higher than the average
- Very similar answer to animal welfare questions to class C
- 54% buy the best quality food whereas only 16% buy the cheapest
- No vegetarians

Actively seeking free range chicken response correlations

In table 68

- A. **Cautious followers:** Like class A in table 66 but buys lower proportion of free range
- B. **Budget watchers:** Like class B in table 66, incorporates more people
- C. **Independent supporters:** Like class C in table 66
- D. **Full supporters:** Like class D in table 66 but incorporates less people

Table 69. Response correlations with segments for “claim to actively seek free range chicken” group

Question	Average	Probability of respondent answering positively to each question			
		A	B	C	D
		Proportion in class			
		0.19	0.35	0.27	0.19
Over 10% Free range chicken	0.24	0.12	0.14	0.33	0.41
Above average amount of chicken	0.37	0.35	0.40	0.35	0.36
Is it important whether meat and eggs have been produced to high animal welfare standards	0.92	0.67	0.96	0.99	1.00
I am seeking free range chicken but not as much as I'd like	0.47	0.59	0.72	0.22	0.23
Chicken driver: There isn't much difference in price	0.08	0.09	0.06	0.04	0.15
Chicken driver: I think it's important that animals are treated as humanely as possible	0.74	0.29	0.83	0.77	0.99
Chicken driver: The taste is better	0.59	0.62	0.42	0.63	0.82
Chicken driver: It makes me feel good to think that I have helped an animal have a better life	0.48	0.19	0.53	0.37	0.81
Chicken driver: My family like me to buy higher welfare products	0.12	0.00	0.08	0.05	0.39
Chicken driver: I buy the same products out of habit	0.07	0.18	0.05	0.02	0.08
Chicken driver: Government standard welfare levels do not go far enough	0.20	0.02	0.19	0.10	0.57
The particular food needs / wants of others in the household	0.62	0.53	0.68	0.51	0.72
Any special offers that week	0.82	0.77	0.91	0.68	0.87
Buying the best quality food	0.54	0.41	0.46	0.57	0.75
Trying to get the cheapest food I can	0.25	0.23	0.37	0.12	0.21
What I need to stock up on	0.83	0.78	0.95	0.67	0.91
Ingredients for specific meals	0.70	0.60	0.75	0.66	0.76
Whether I can use products by the use-by-date	0.53	0.39	0.65	0.38	0.64
Free range products have higher welfare standards	0.85	0.53	0.85	0.96	0.99
I don't know how to tell if a product meets high animal welfare standards	0.41	0.42	0.56	0.25	0.35
Retailers should ensure they only sell products that have higher animal welfare	0.76	0.37	0.84	0.80	0.94
I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards	0.27	0.15	0.22	0.36	0.36
I have a good understanding of the issues surrounding animal welfare	0.53	0.21	0.42	0.70	0.79
Vegetarian	0.04	0.02	0.03	0.06	0.03
Over £20000 PA	0.61	0.63	0.58	0.70	0.54

Class A (Cautious followers):

- Only 12% buy over 10% free range chicken, the least in the group

- Cares less about animal welfare than other free range chicken seekers
- 59% want to seek free range more
- The drivers: treating animals humanly, feeling good and the government standards not being high enough, are very low
- Habit is very high compared to the average at 18%
- Many disagree that welfare standards are higher for free range products and retailers should sell food with higher standards
- Very low understanding at 21%
- Similar to class A in the free range egg seeking group except they buy much less free range

Class B (Budget watchers):

- Buys just slightly more chicken than class A
- Nearly every agrees that animal welfare is important
- 72% want to seek free range more, the highest in the group
- 91% look out for special offers when shopping
- Understanding is lower than average but higher than in class A
- Strong relation to class B in the first group

Class C (Independent supporters):

- Relatively high amount of free range chicken bought
- 99% thinks animal welfare is important
- Most say they're satisfied in how much they are buying
- Drivers with treating animals humanly and feeling good are above average but 'the government standards not being high enough' is low at 10%
- Less likely to look for special offers, cheapest food and what they need to stock up on
- Most agree that free range has higher welfare standards and most say they have a good understanding
- Highest income in the group with 70% earning over £20000 per year
- Links strongest to class C in the free range egg seekers

Class D (Full supporters):

- Similar to class C but buys a high proportion of free range
- Much stronger drivers with treating animals humanly, feeling good and the government standards not being high enough than class C
- More likely to be driven by their family to buying free range
- 75% go after the best quality food
- Very strong agreement in the animal welfare questions and very high understanding
- Links strongest to class D in the free range egg seekers

Not actively seeking free range chicken response correlations

- A. **Indifferent shoppers:** Similar to class A in table 67 but a larger group

- B. **Price over ethics:** Like class B in table 67, again a larger group
- C. **Habit buyers:** Like class D in table 67 but buys less free range
- D. **Budget watchers:** Like class C in table 67 but actually buys high proportion free range

Table 70. Response correlations with segments for “claim not to actively seek free range chicken” group

Question	Average	Probability of respondent answering positively to each question			
		A	B	C	D
		Proportion in class			
		0.18	0.25	0.32	0.25
Over 10% Free range chicken	0.12	0.05	0.06	0.12	0.22
Above average amount of chicken	0.38	0.35	0.37	0.34	0.45
Is it important whether meat and eggs have been produced to high animal welfare standards	0.69	0.25	0.46	0.92	0.94
I am seeking free range chicken but not as much as I'd like	0.35	0.06	0.13	0.41	0.72
Chicken barrier: Too expensive for my budget	0.69	0.41	1.00	0.38	0.96
Chicken barrier: How animals are reared is not important	0.02	0.09	0.00	0.01	0.00
Chicken barrier: There is no benefit in the taste	0.12	0.26	0.10	0.13	0.02
Chicken barrier: It is too much of an inconvenience to find	0.06	0.06	0.03	0.11	0.02
Chicken barrier: Not an option where I shop	0.05	0.03	0.00	0.12	0.02
Chicken barrier: I buy the same products out of habit	0.20	0.36	0.08	0.35	0.03
Chicken barrier: The Government standard for animal welfare is enough	0.07	0.18	0.02	0.11	0.01
The particular food needs / wants of others in the household	0.62	0.59	0.55	0.63	0.69
Any special offers that week	0.85	0.79	0.92	0.79	0.91
Buying the best quality food	0.36	0.27	0.11	0.53	0.45
Trying to get the cheapest food I can	0.37	0.40	0.57	0.21	0.36
What I need to stock up on	0.85	0.84	0.82	0.87	0.87
Ingredients for specific meals	0.63	0.49	0.55	0.65	0.78
Whether I can use products by the use-by-date	0.51	0.42	0.47	0.52	0.61
Free range products have higher welfare standards	0.66	0.26	0.55	0.79	0.91
I don't know how to tell if a product meets high animal welfare standards	0.52	0.41	0.62	0.59	0.41
Retailers should ensure they only sell products that have higher animal welfare	0.57	0.16	0.39	0.79	0.78
I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards	0.20	0.05	0.12	0.28	0.27
I have a good understanding of the issues surrounding animal welfare	0.33	0.13	0.16	0.43	0.50
Vegetarian	0.02	0.01	0.03	0.02	0.02
Over £20000 PA	0.58	0.66	0.47	0.57	0.64

Class A (Indifferent shoppers):

- Very low amount of free range chicken bought
- Cares the least about animal welfare with only 25% agreeing to it being important
- Only 6% want to seek free range chicken more
- Price barrier is low compared to the average at 41%
- The habit and 'government standards being high enough' barriers are above average
- Most disagree that free range has higher welfare standards and that retailers should have higher standards
- Very poor understanding with only 13% saying they have a good understanding
- Higher income with 66% over £20000 per year
- Similar to class A in the not seeking free range egg group

Class B (Price over ethics):

- very low amount of free range chicken
- More agreement to animal welfare being important than class A but still only 46%
- 100% put price as their barrier, all other barriers are minimal
- 92% look for special offers and 57% go for the cheapest food they can get
- More than in class A agree that free range has higher standards and that retailers should only sell food with high standards, but still below average
- Again very poor understanding
- Low income with 47% over £20000 per year
- Similar to class B in the not seeking free range egg group

Class C (Habit buyers):

- Average amount of free range chicken bought for the group
- Most think animal welfare is important at 92% but only 41% want to seek free range more
- Price barrier is comparatively low at 38%
- Habit and not an option where I shop are higher than average
- 53% go for the best quality food and only 21% go for the cheapest
- Strong agreement to retailers only selling food with higher standards
- Most similar to class D in the not seeking free range egg group

Class D (Budget watchers):

- Buys the most free range with 22% above 10%
- Strongly agrees to animal welfare being important and free range has higher standards
- 72% say they are seeking but want to seek more
- Price barrier is very high at 96%. Other barriers are very low
- Claim to have the best understanding in the group with 50% saying they have a good understanding
- Most similar to class C in the not seeking free range egg group

- Those that say they want to seek more are most likely in class B in the seeking free range chicken group

Combining primary segmentations into one

One limitation of this method is that the four primary animal welfare segmentation analyses do not always match up perfectly. For example, class B of the actively seeking eggs group was joined with class C of the not actively seeking eggs group to form part of the Budget watchers segment however people are not always in both classes.

The table below shows the number of households who in each combination of the actively seeking and not actively seeking egg groups. It shows that for those who are actively seeking eggs and in class B, 184 are also in class C of the not actively seeking group. These people create an overlap between the new classes since they are in the 'Budget watchers' and 'habit buyers'. This overlap arises since those selecting 'I am doing this but not as much as I'd like' were able to give answers to both the barrier and driver questions.

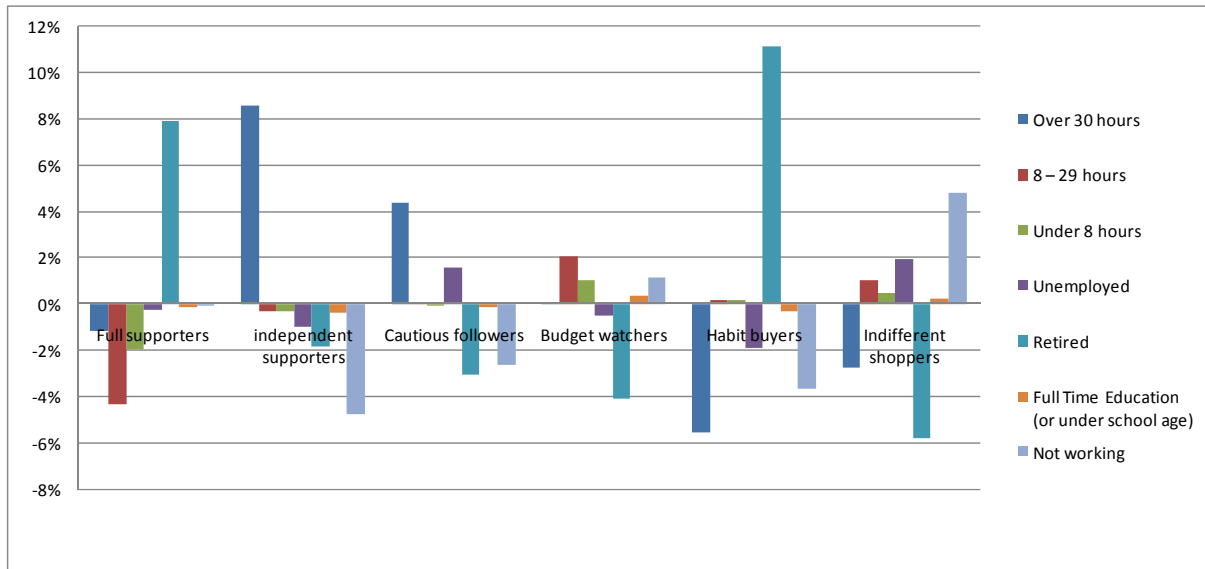
Class overlaps (number of households)		Not actively seeking eggs			
		A	B	C	D
Actively seeking eggs	A	6	15	5	17
	B	0	24	184	125
	C	0	0	8	25
	D	0	0	26	36

To remove the overlap the estimated posterior probabilities from the four primary segmentation models were used. Each household has a probability they will be assigned to each of the classes. These probabilities are combined. For example, the new probability for 'Full Supporters' is made by finding the probability of either being in 'actively seeking eggs class D' or 'actively seeking chicken class D'. Then the highest of the combined probabilities was chosen to allocate each household to one and only one of the six new classes.

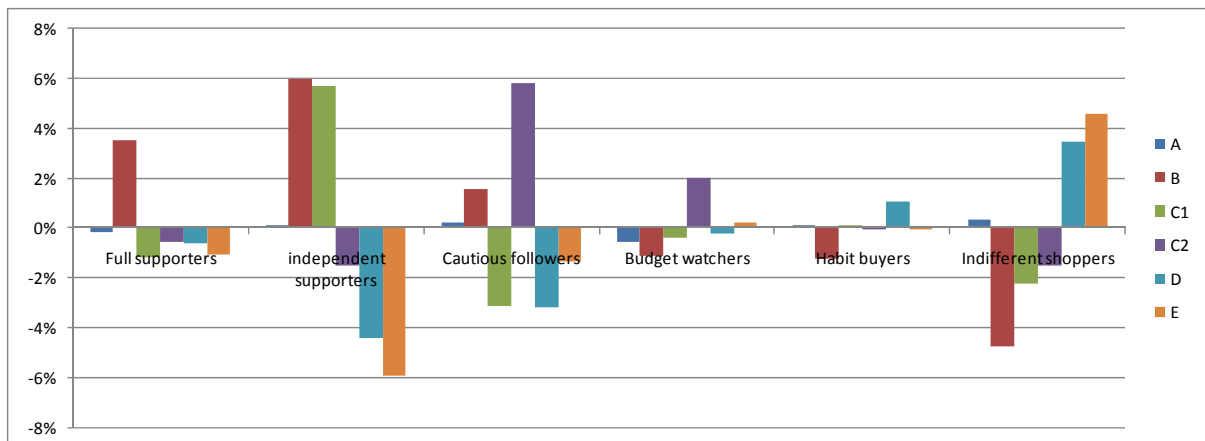
Class	With overlaps	Without overlaps	Percentage of population
Full supporters	1005	468	16%
independent supporters	1073	517	17%
Cautious followers	411	158	5%
Budget watchers	1823	637	21%
Habit buyers	993	444	15%
Indifferent shoppers	1481	790	26%

Annex 2 Demographics of the animal welfare segmentation

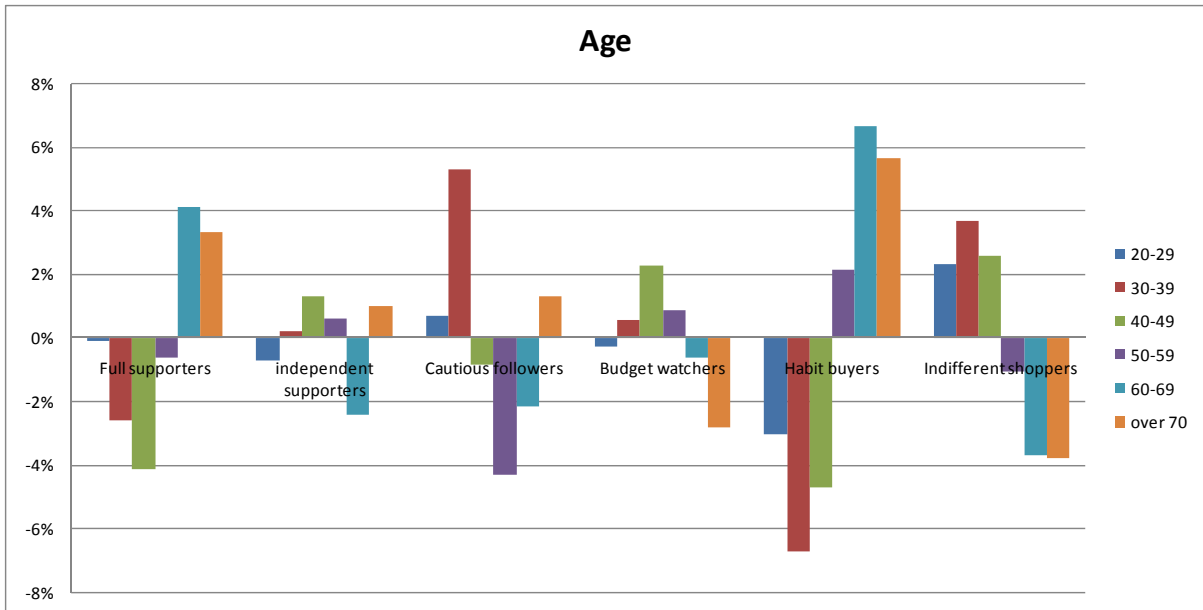
The demographic patterns of each segment are shown in charts which show the deviation from the total population percentages. That is, the baseline denotes the average response and the bars either side show how different from the average each demographic of each segment is.



- Full supporters tend to be retired
- Independent supporters tend to be in full time work
- Habit buyers tend to be retired and not in full time work

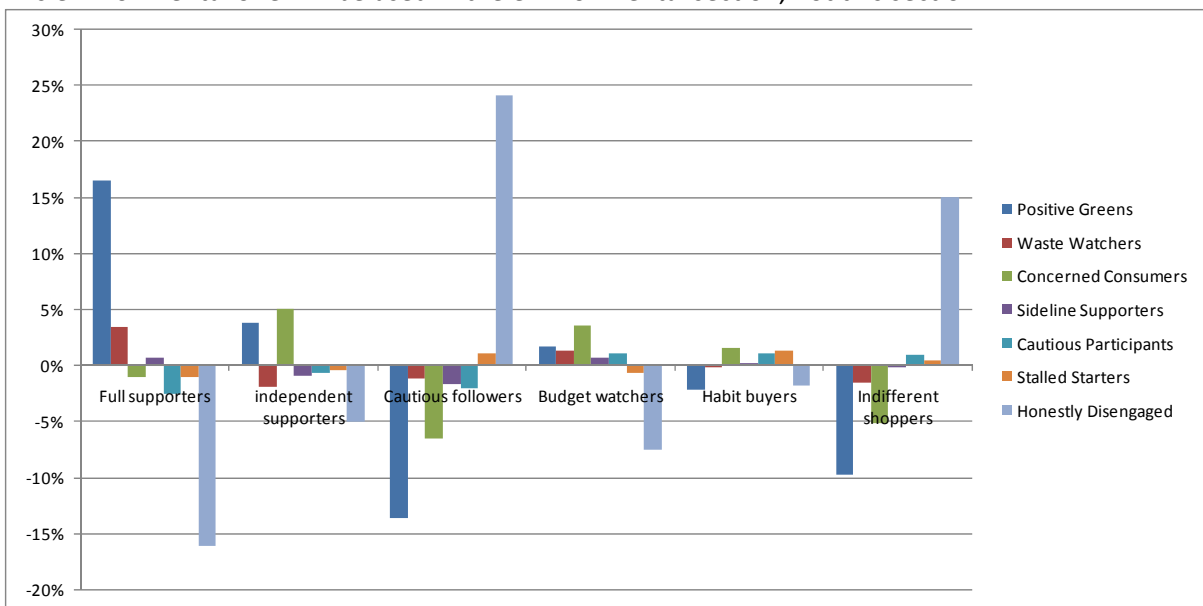


- Independent supporters tend to be classified as social class Bs and Cs
- Indifferent shoppers tend to be classified as social class Ds and Es
- Cautious Followers tend to be social class C2
- Full supporters tend to be Bs



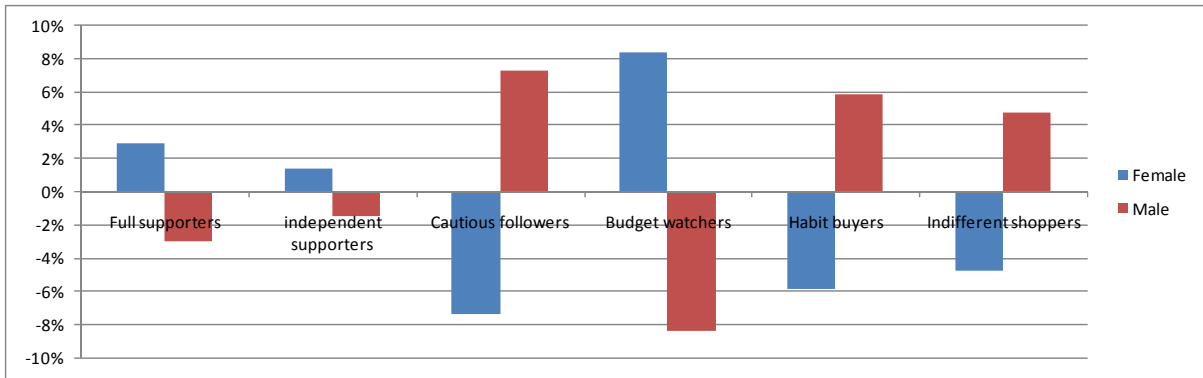
- Habit buyers are likely to be over 60 years old
- Full supporters have a tendency to be over 60 years old
- Cautious followers tend to be in their thirties
- Indifferent shoppers are more likely to be younger than fifty

This environmental one will be used in the environmental section, not this section.



There are a few strong correlations between the animal welfare segmentation and the Defra pro-environmental segmentation.

- Full supporters are often positive greens and not honestly disengaged
- Cautious followers and indifferent shoppers tend to be honestly disengaged
- There is a positive link between independent supporters and concerned consumers
- Budget watchers and habit buyers come from a cross section of the pro-environment groups.



There are some small but clear gender differences

- Full supporters, independent supporters and budget watchers are more likely to be female
- Cautious followers, indifferent shoppers and habit buyers are more likely to be male

Annex 3 The attitude questionnaire

Question	
Whether meat and eggs have been produced to high animal welfare standards	<p>Very important</p> <p>Quite important</p> <p>Neither important nor unimportant</p> <p>Not very important</p> <p>Not at all important</p>
Whether the food item is British and in season	
Whether the food has been produced ethically	
Whether it forms part of a healthy balanced diet	
Whether the fish comes from a sustainable source	
Whether the item has been produced with respect to the environment	
The particular food needs / wants of others in the household	
Any special offers that week	
Buying the best quality food	
Trying to get the cheapest food I can	
What I need to stock up on	
Ingredients for specific meals	
Whether I can use products by the use-by-date	
None of the above	

Animal welfare

Free range products have higher welfare standards	<p>Strong agree</p> <p>Tend agree</p> <p>Neither</p> <p>Tend disagree</p> <p>Disagree</p>
I don't know how to tell if a product meets high animal welfare standards	
Retailers should ensure they only sell products that have higher animal welfare	
I think that higher value ranges in supermarkets, such as 'taste the difference' or 'finest' have higher animal welfare standards	
I have a good understanding of the issues surrounding animal welfare	
a. When shopping for eggs I actively seek free range varieties	seven options - see below
b. When shopping for chicken I actively seek free range or freedom food varieties	
Too expensive for my budget	tick all that apply
How animals are reared is not important	
There is no benefit in the taste	
It is too much of an inconvenience to find	
Not an option where I shop	
I buy the same products out of habit	
The Government standard for animal welfare is enough	
Other / None of the above	
There isn't much difference in price	
I think it's important that animals are treated as humanely as possible	
The taste is better	
It makes me feel good to think that I have helped an animal have a better life	
My family like me to buy higher welfare products	
I buy the same products out of habit	
Government standard welfare levels do not go far enough	
Other / None of the above	

Too expensive for my budget	
How animals are reared is not important	
There is no benefit in the taste	
It is too much of an inconvenience to find	
Not an option where I shop	
I buy the same products out of habit	
The Government standard for animal welfare is enough	
Other / None of the above	
There isn't much difference in price	
I think it's important that animals are treated as humanely as possible	
The taste is better	
It makes me feel good to think that I have helped an animal have a better life	
My family like me to buy higher welfare products	
I buy the same products out of habit	
Government standard welfare levels do not go far enough	
Other / None of the above	

British Seasonal Food

	Strong agree	Tend agree	Neither	Tend disagree	Disagree
Where possible I try to support British producers					
I trust retailers to make sure that they sell as much British produce as possible					
It's better for the environment to eat local fruit and vegetables grown in season					
I have a good understanding of the issues surrounding buying local / seasonal produce					
C.2 When buying fresh fruit and vegetables I actively seek seasonal British produce	seven options - see below				
It is too expensive for my budget					
It is inconvenient to check the origin / seasonality of products					
I don't know what fruit and vegetables are in season					
I want a wide choice of fruit and vegetables					
I don't like the taste					
I don't care where it was produced so long as it's affordable					
I buy the same fruit and vegetables out of habit	tick all that apply				
My shop does not supply country of origin information					
Other / None of the above					
It is cheap					
It's easy to check origin / seasonality of fruit and vegetables when shopping					
I know which local fruit and vegetables are in season					
I am happy to eat fruit and vegetables according to the seasons (e.g. salads in the summer and root vegetables in the winter)					
It tastes better					
I am happy to pay more to support local/British producers					
Other / None of the above					

Fairtrade

Fair trade products help producers in the developing world receive a fair price for their produce	Strong agree Tend agree Neither Tend disagree Disagree
I think it is the responsibility of retailers to provide a wide variety of fairtrade products	
I'm not concerned about the ethical issues surrounding food so long as it is affordable	
I have a good understanding of the issues around fair trade products	
D.3 "When shopping for tea I actively seek to buy fair-trade" or "When shopping for coffee I actively seek to buy fair-trade"	seven options - see below
It is too expensive for my budget	
It doesn't taste as good / There's no difference in taste	
I am not interested in the issue of fairtrade	
It's not available where I shop	
I tend to stick to brands I like out of habit	
Other / None of the above	
There isn't much difference in price	
It tastes nicer	
I want to support producers in developing countries	
It's readily available where I shop	
I tend to buy fair trade tea out of habit	tick all that apply
Other / None of the above	
D.3 Seek Fairtrade Coffee	
It is too expensive for my budget	
It doesn't taste as good / There's no difference in taste	
I am not interested in the issue of fairtrade	
It's not available where I shop	
I tend to stick to brands I like out of habit	
Other / None of the above	
There isn't much difference in price	
It tastes nicer	
I want to support producers in developing countries	
It's readily available where I shop	
I tend to buy fair trade coffee out of habit	
Other / None of the above	

Healthy balanced diet

So long as I eat 5 portions of fruit and vegetables a day it doesn't matter about the rest of my diet	Strong agree Tend agree Neither Tend disagree Disagree
I try to meet the daily guidelines for eating portions of fruit and vegetables a day	
I try to limit how much saturated fat I eat	
I try to limit how much salt I eat	
Biscuits (Usually has high levels of saturated fat)	
Biscuits (Usually has high levels of salt)	
Sausages (Usually has high levels of saturated fat)	
Sausages (Usually has high levels of salt)	

Chicken breast (Usually has high levels of saturated fat)	
Chicken breast (Usually has high levels of salt)	
Fresh fruit & vegetables (Usually has high levels of saturated fat)	yes/no
Fresh fruit & vegetables (Usually has high levels of salt)	
Hard cheese (Usually has high levels of saturated fat)	
Hard cheese (Usually has high levels of salt)	
Lean ham (Usually has high levels of saturated fat)	
Lean ham (Usually has high levels of salt)	
None of the above (Usually has high levels of saturated fat)	
None of the above (Usually has high levels of salt)	
E.2 When shopping for food, I actively seek products that will ensure my diet is healthy and balanced	seven options - see below
I don't like the taste of healthy food	
I don't know how to cook healthy food	
I don't want to give up the foods I like	
Healthy foods are too expensive	
Healthy food doesn't keep as long	
I can't resist less healthy food	
I would feel self-conscious eating healthy food in front of others	
I buy the same food out of habit and don't think about diet	tick all that apply
Other / None of the above	
I really like the taste of healthy food	
I know how to cook in healthy ways	
I ensure I still enjoy a treat from time to time	
It's not expensive to eat healthily	
I don't like the taste of less healthy food	
It would feel self-conscious eating unhealthy food in front of others	
I buy mostly healthy food out of habit	
Other / None of the above	

Sustainable Fish

F.1 Understand sustainable	<p style="text-align: center;"> Strong agree Tend agree Neither Tend disagree Disagree </p>
Retailers should ensure that the fish and shellfish they offer comes from a sustainable source (such as certified by Marine Stewardship Council (MSC))	
Higher value ranges in supermarkets, such as 'taste the difference' or 'finest' use sustainable fish and shellfish	
I do not know how to tell if fish and shellfish comes from sustainable stocks	
F.3 I actively seek to buy fish and shellfish labelled as sustainable by Marine Stewardship Council (MSC)	seven options - see below
It is too expensive for my budget	
I don't care whether fish is sustainable	
I don't think it will taste as nice	
I buy the same fish out of habit and don't think about other issues	
I have not heard of the Marine Stewardship Council (MSC) label	
MSC fish does not include the species I like	
MSC fish is not available where I shop	tick all that apply
I buy other sustainably sourced fish	
Other / None of the above	
There isn't much difference in price	

I believe the sustainability of fish is an important issue	
Sustainable fish tastes nicer	
I always buy MSC labelled fish out of habit	
It makes me feel good to know that I have helped to sustain fish stocks with my purchase	
Other / None of the above	

Environmental

The effects of climate change are too far in the future to really worry me	
It's not worth me doing things to help the environment if others don't do the same	
If things continue on their current course, we will soon experience a major environmental disaster	
It's only worth doing environmentally-friendly things if they save you money	
People who fly should bear the cost of the environmental damage that air travel causes	
It's not worth Britain trying to combat climate change, because other countries will just cancel out what we do	
I don't pay much attention to the amount of water I use at home	
The Earth has very limited room and resources	
Being green is an alternative lifestyle, it's not for the majority	
It would embarrass me if my friends thought my lifestyle was purposefully environmentally friendly	
I would only travel by bus if I had no other choice	
People have a duty to recycle	
The so-called 'environmental crisis' facing humanity has been greatly exaggerated	
For the sake of the environment, car users should pay higher taxes	
I find it hard to change my habits to be more environmentally-friendly	
We are close to the limit of the number of people the earth can support	
G.3 Lifestyle and environment	
G.4 Food throw away	
X.1 Consider organic	
For animal welfare	
For the environment	yes, no
For the nutrition value	
For health reasons	
Other reason	
X.3 Change Diet	yes, no, maybe

Seven Options for the Actively Seek Questions
I haven't given this any thought (n)
I don't want to do this (n)
I am thinking about doing this (n)
I am doing this (y)
I am doing this but not as much as I'd like (n/y)
I have done this before but I am no longer doing it (n)
Not applicable – I don't buy this food item

Annex 4 The Behaviour and Demographic data

Demographic Data

01	HOUSE (Household Number)
Description	The household key.
Range	000001 to 999999.
02	INDIVID (Individual Number within house)
Description	The individual key.
Range	01 to 99.
03	STATUS (Employment Status of each individual)
Values	01 Over 30 hours 02 8 – 29 hours 03 Under 8 hours 04 Unemployed 06 Retired 11 Full Time Education (or under school age) 12 Not working
04	MARITSTA (Marital Status of each individual)
Values	1 Married 2 Single 3 Widowed/Divorced/Separated
05	SEX of each individual
	1 Female 2 Male
06	AGE (in years) of Individual
07	VEGINHH which individual in household are vegetarians?
Values	0 Non vegetarian 1 Vegetarian
08	REGION
Description	The geographic region to which the household belongs
Values	21 London 22 Midlands 23 North East 24 Yorkshire 25 Lancashire 26 South 27 Scotland 28 Anglia 29 Wales & West 31 South West
09	Status_mainshpr (Employment Status of the Main Shopper)
Description	How many hours the head of household works.
Values	1 Over 30 Hrs 2 8-29 Hrs 3 Under 8 Hrs 4 Unemployed

	6 Retired
	11 Full Time Education (or under school age)
	12 Not working
10	Maritsta_mainshpr (Marital Status of main shopper)
Values	1 Married 2 Single 3 Widowed/Divorced/Separated
11	Sex_mainshpr (Sex of main shopper)
	1 Female 2 Male
12	Age_mainshpr (Age of main shopper in household)
13	SCLASS (Social Class)
Values	1 A 2 B 3 C1 4 C2 5 D 6 E
13	HHincome (Income of Household)
Values	0 Refused to answer /don't know
	1 £0 - £9,999 pa
	2 £10k - £19,999 pa
	3 £20k - £29,999 pa
	4 £30k - £39,999 pa
	5 £40k - £49,999 pa
	6 £50k - £59,999 pa
	7 £60k - £69,999 pa
	8 £70k+
	9 Unknown
14	MAINSHPR (Main shopper)
Description	The individual number of the main shopper.
Range	00 to 09
15	SIZE (size of Household)
Description	The number of people in the household.
Notes	These fields are updated every four weeks and the data is as of the time that the panel was built, not necessarily as of the panel's end period.

Purchases Data

shopSAINSBURYS = spend on shopping in that store for the year

shopTESCO

shopASDA

shopMORRISONS

average spend = average spend per week

more_than_avg = how many trips where shopper has spent more than average spend

more_than_halfavg = how many trips where shopper has spent more than half average spend

more_than_quartavg = how many trips where shopper has spent more than quarter average spend

Egg Spend1 = amount spent on eggs in the first period

Egg Volume1 = amount of volume bought on eggs in the first period (note: check volume description as there are different units for volume, i.e. volume of eggs is number in a pack).

Eggs Packs1 = number of packs of eggs bought in the first period

Repeated for all products and for all 13 periods (13 four week periods)

Eggs_mainshop = main shop for eggs

Eggs_spend_mainshop = spend on eggs in the main shop

Exp_eggs_mainshop = percentage spend on eggs in main shop

Repeated for the other products looked at.

Food Types

FoodTypeCode	Description		FoodTypeCode	Description
1	eggs		22	Fair Banana
2	Freeeggs		23	Tea
3	Chicken (all)		24	Fair Tea
4	Free Chicken (all)		25	Prem Tea
5	Prem Chicken (all)		26	Coffee
6	Organ Chicken (all)		27	Fair Coffee
7	Meat		28	Prem Coffee
8	Prem Meat		29	Choc
9	Free Meat		30	Fair Choc
10	Organ Meat		31	Prem Choc
11	Apple		32	Fruit fresh proc
12	British Apple		33	Fruit organ
13	Pear		34	vegetable
14	British Pear		35	veg organ
15	Potato		36	fruit juice
16	British Potato		37	water
17	Strawberry		38	Chicken
18	British Strawberry		39	Free Chicken
19	Fish		40	Prem Chicken
20	Prem Fish		41	Organ Chicken
21	Banana		22	Fair Banana

Nutrition Data

Calorie_vol : total volume of calories in products purchased

Carbohydrate

Protein

Fat

Saturated fatty acids

Sodium

Sugar

Fibre