

Food Standards Agency: Measuring Public Trust

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Introduction

The Food Standards Agency is an independent government department protecting public health and the consumers' wider interests in the food industry. For an institution, that is funded by the tax payer and that aims

to inform consumers and regulate producers, it is crucial to maintain a high level of public trust. In order to achieve this, the FSA monitors the level of trust every 6 months.

Objectives

As a summer intern, my task was to contribute to the existing knowledge regarding the level of public trust by looking at trends over time. We wanted to find out whether various breakdowns (gender, age, ethnicity, etc.) showed different patterns in the examined 9 year period since the start of the FSA's Public Attitudes Tracker. My research served as trial for a big project that is going to be published for the 10 year anniversary.

Method

The report uses data collected for the Biannual Public Attitudes tracker. The FSA has placed questions on the regular TNS face-to-face Omnibus survey. The survey among many other questions asks participants about trust in and awareness of the FSA and uses random probability sampling.

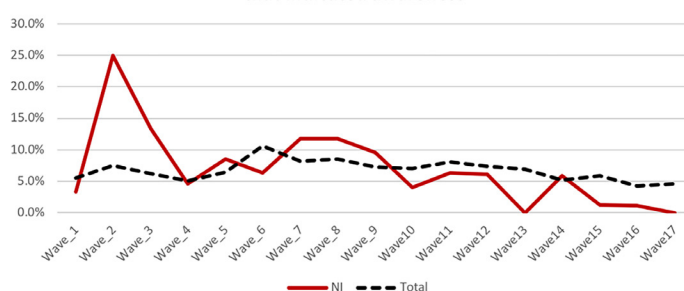
First, the datasets of the 17 waves have been joined into a combined dataset. (Each wave is a different data collection period of 6 months.) This has created various problems on its own as some of these datasets have been coded differently from others. In waves 5 and 10 some questions were given a different name for example. Answers sometimes were coded in various ways as well, so a general cleaning and recoding of the data had to be conducted.

Second, the variables chosen for analysis have been recoded to make statistical testing possible. The public attitude tracker contains many variables that can provide us with important breakdowns. Most general demographics are included in the questionnaire such as age, gender, marital status, children in the household, social grade, country, government region, ethnicity or working status. Various other variables can be also useful, like principal shopper, trust in restaurants and supermarkets or internet access.

To avoid reporting all insignificant differences, the trends for each breakdown were tested to see if they differed over time. The SPSS NOMREG command was used to fit a logistic regression where the binary response was predicted by a categorical variable for the wave, by a categorical breakdown for the relevant breakdown, and by the interaction between them. Where the interaction term was significant at the 5% level, then we have evidence to say that the time trends for the relevant subpopulations do not always run in parallel to each other. Where the overall differences between the trends did not turn out to be statistically significant, they were excluded from further analysis.

Finally, the breakdowns were displayed by cross tabs in SPSS and copied into Excel. Here further statistical testing has taken place to look at specific differences between trends and graphs were created. In most cases the subpopulations are compared to the overall population or to the largest subgroup in the breakdown.

Proportion expressing distrust in the FSA of those respondents that indicated awareness



Results and Conclusions

When we looked at the trends in more detail we found various significant differences in certain periods. These differences had not got much in common. There was some overlap in differences in the wave 4-7 period, but most other anomalies were scattered around the 17 waves. We found a couple of significant differences in longer periods, but the differences were statistically significant in shorter time periods (1-2 waves) mainly.

One of the examples for a statistically significant difference can be seen on the graph above. Northern Ireland is a very low sample size (ranging from 24 to 92). This means that most of the differences we see are natural variations for a sample of this size. From Wave 1 to Wave 2 however we see an extreme increase of 22 percentage points in the level of distrust for NI from 3.3% to 25%. In the same period the distrust for Non-NI respondents only remained 6%. This 21.7 percentage points difference between the NI and Non-NI in the Waves 1-2 period is statistically significant (95% CI 3.0% to 40.3%). A similar difference in trend can be observed in the waves 2-4 period. In this one-year period distrust has dropped by 20.5 percentage points in Northern Ireland. For Non-NI the drop was only 1.6 percentage points. This 18.9 percentage points difference between the two groups is statistically significant (95% CI -37.4% to -0.4%).

As longer-term differences were not obvious after plotting the values, this indicates that longer-term differences may be small compared to wave to wave variation. It is also important to highlight here that due to the high number of statistical tests conducted some of the results might be significant by chance only.

Key Skills Learnt

I have learnt various Excel strategies to clean a dataset and the rules of running regressions in SPSS. I have learnt about confidence intervals and the math behind them. Mastered the art of graph making, practised report writing and got an insight into the life of data scientists. It was a very rewarding and enjoyable six weeks and made my summer unforgettable.