



# Select News..ws

be selective



## Understanding Attitudes Towards Recycling in Conwy County

Select recently had the opportunity to work with Conwy County Borough Council on the analysis of their Recycle More Survey. The unitary Local Authority issued the recycling survey across the county to ask households about their attitudes towards recycling, their perception of how much they recycle and their opinions on proposed changes to general refuse collections.

We provided summaries and visualisations of the survey responses, breaking the results down by socioeconomic group. Our analysis will be used as evidence in the democratic process regarding possible changes to bin collection frequency in the county.



## pet remedy Dog Groomer Satisfaction Survey

Select has previously worked with Unex Designs Ltd. to test the effectiveness of their Pet Remedy treatment for dogs with behavioural issues. Select were pleased to have the opportunity to work with Unex again, this time to help with a survey of professional dog groomers regarding their experiences with using Pet Remedy in their salons.

In conjunction with a dog behaviour specialist, we provided statistical support with the design of the questionnaire, facilitated the set-up and running of the online survey via SurveyMonkey, and undertook the statistical analysis of the results.

Overall, over 95% of the groomers who responded to the feedback questions said that they would recommend Pet Remedy to their clients. Furthermore, for 84% of the dogs included in the survey, the groomers felt Pet Remedy moderately or significantly improved the dog's behaviour.

### Our Services:

#### Advice

Our statistical advice service offers detailed expert guidance on all areas of statistical analysis and interpretation to allow your staff to understand or perform their own statistical investigations.

#### Analysis

Our statistical analysis service aims to identify and apply the most appropriate statistical tools to make best use of your data in addressing the questions that you need answering.



#### Research

Our statistical research service extends the analysis service above to tackle problems that lie beyond the boundaries of current statistical know-how perhaps because of the inherent complexity of your data or simply because the usual underlying assumptions don't apply.

#### Training

We provide training for statisticians and nonstatisticians alike and can cover any statistical topic from the applied end right through to cutting-edge methodological research.



#### Data

We can source, collect, collate and cleanse data either simply for presentation direct to the client or for subsequent analysis.

#### Surveys

Often the easiest and best method to obtain information you need from people is simply to ask them. We can conduct online, phone and face to face surveys starting from initial design through to final analysis.

### Making numbers work for you

If you would like more information on any of the Services that Select Statistics offer, please contact us on 01392 440426, email: [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk) or complete the online contact form on our website: [www.select-statistics.co.uk](http://www.select-statistics.co.uk)



## RSS 2015 in Exeter

The Royal Statistical Society's 2015 Conference took place this September at the University of Exeter. With its focus on current statistical issues, information sharing and networking, this international conference was a must for all statisticians and users of data from the UK and further afield.

With the conference on our door step, the whole Select team attended and spent three days attending a number of engaging talks, workshops, posters as well as taking the opportunity to network and meet other users of statistics. There was a fantastic attendance at the conference and some fascinating topics discussed including data science, the environment and ecology, statistics in medical trials and administrative data to name just a few.

We were also really pleased to meet the two winning teams from the RSS Challenge 2015 an analytics challenge set by the Young Statisticians Section and Research Section of the RSS and sponsored by Select. As part of their prize they received the registration fees for the conference and were invited to present their findings. Congratulations to the overall winners, 'The Cambridge Regressors' from the Cambridge Centre for Analysis.

The Select team had a very informative and enjoyable three days attending the conference. We'd like to thank the RSS team who did a fantastic job at organising such a diverse and engaging conference in Exeter!

## Saving to Prevent Problem Debt

Select previously helped StepChange Debt Charity to investigate the link between cash savings and problem debt. A key finding from that research was that a lack of cash savings is an important predictor of problem debt, and that savings of £1000 is often enough to safeguard against the problem. We were pleased to have the opportunity to work with StepChange again on a follow-up project, conducting an analysis to understand which types of households are failing to save, and also to identify attitudinal factors that might influence their decision not to save.

To address these questions we analysed data from the Wealth and Assets Survey, a survey of British households conducted by the Office for National Statistics. Using a model known as a classification tree, we partitioned the survey respondents into groups according to a number of socio-economic factors maximising the differences between the groups' propensity to save. The outcome was 12 groups of households, graded according to the percentage within each group that has at least £1000 cash savings.

To account for any potential biases in the WAS data (from, for example, non-response), we applied survey weights to ensure that the results were representative of the British population. This meant that we could accurately infer from the survey the percentages of households amongst the British population that have at least £1000 cash savings. For example, we found that the subset of the population with the lowest propensity to save is low-to-moderate income renting households, amongst whom around 40% have at least £1000 cash savings. The next lowest subset is very low income households with mortgages and at most one child, amongst whom 60% have at least £1000 cash savings.



To identify attitudinal factors that might influence the decision not to save, we analysed the responses within each of the groups identified above to a number of attitudinal questions in the survey. For each group we determined the distribution of answers to questions such as:

- How strongly do you agree or disagree with the statement "I prefer to buy things on credit rather than save up and wait"?
- If you had a choice of receiving £1000 today or £1100 next year, which would you choose?

The results showed that groups with a lower propensity to save tend to respond more often in ways that suggest that they do not prioritise the long term financial advantages associated with saving. For example, as propensity to save increases there is a greater tendency to express a preference for "£1100 next year" rather than "£1000 today".

StepChange Debt Charity used our work as the basis for their discussion paper *Becoming a Nation of Savers*. This paper describes which families in the UK are least likely to have enough saved for a rainy day and calls on government and financial services firms to consider ways in which these families could be helped to overcome economic and behavioural obstacles to saving. The report can be accessed via the following link: <http://bit.ly/1LilehE>.

For more information on the work of StepChange Debt Charity, please visit their website: <http://www.stepchange.org/>.



## Case Study: Customer Retention

Customer retention is one of the biggest challenges facing businesses in a wide range of industries, from subscription media and mobile phone operators to fitness clubs and insurance providers. Our client, a national UK business with a customer base of over 800,000, wanted to understand what drives customer retention and attrition. Which types of customer stay longest? What drives customers to leave? And what can be done to increase the lifetime value of customers?

Select were asked to analyse a large dataset generated by customer activity over several years in order to identify drivers affecting the loss of customers (otherwise known as churn). We considered a wide range of factors: indicators of customer behaviour and engagement, customer demographics, indicators of the customer experience, and external factors such as competitor activity.

We used survival analysis to model how the hazard (risk of leaving) of an individual evolves as the factors associated with them change over time. We also



fitted a model to examine the factors that affect the chances of a lost customer returning. This allows a longer term view to be taken, since the loss of a customer who is likely to return has less business impact than the loss of someone who is most likely gone forever.

Prior to our analysis, the client had a number of hypotheses based on anecdotal evidence about which factors are important in retaining their customers. Our analysis was able to confirm some of their hypotheses while refuting others. This allowed the client to move to an evidence based strategy for improving retention in which they focus resources on the areas that have been shown to have high impact.

### Interested in more case studies?

Check out our website for more case studies in marketing, retail and many other areas, as well as details on the many services that Select offers.

## ExIStA Update

The Exeter Initiative for Statistics and its Applications recently hosted a seminar together with the Royal Statistical Society (RSS) South West Local Group where John Curtice joined us to give a fascinating talk on the 2015 Election Polls.

John is Professor of Politics at the University of Strathclyde and President of the British Polling Council, and is a regular media commentator on both British and Scottish politics and has been involved in coverage of elections since 1979. You may well have seen John on the BBC on election night covering the exit and opinion polls.

The 2015 election looks as though it will join the 1970 and 1993 contests as elections when the polls were perceived to have got it “wrong”. Only when the results of the BBC/ITV/Sky exit poll were

released did the first intimation come that in fact the Conservatives were well ahead. John gave us a fascinating talk on the performance of the polls in the 2015 election, describing how the polls were conducted and assessing some of the possible reasons why they overestimated Labour and underestimated Conservative support.

To find out more about this seminar, see the news article on our website, via the following link: <http://bit.ly/1NJZyjj>. Please note that John gave this talk in a personal capacity, and not in his role as President of the British Polling Council.

If you'd like to find out more about ExIStA, please visit our website: [www.exista.org](http://www.exista.org) or contact us on: [events@exista.org](mailto:events@exista.org).

## More Welsh School Children “Hooked on Sport”

Having worked on the last School Sport Survey in 2013, Select again worked with Sport Wales over the summer to prepare the response data from the 2015 survey for analysis. The survey, of over 116,000 Welsh school children, is the largest of its kind in the UK and includes a survey of sports participation among school pupils and a survey of the provision of physical education (PE) by schools. The survey is used strategically by Sport Wales and the Welsh Government to monitor and shape sports policy, and by local authorities, governing bodies and schools to inform and plan local delivery.

The results released today show that the numbers of young people taking part in sport or physical activity three or more times a week has risen from 40% in 2013 to 48% in 2015. To see more of the headline results, a short film and some infographics summarising the key findings visit [www.schoolsportsurvey.org.uk](http://www.schoolsportsurvey.org.uk).





## Focus on... Market Research

Market research is an essential activity for every business and helps you to identify and analyse market demand, market size, market trends and the strength of your competition. It also enables you to assess the viability of a potential product or service before taking it to market.

It is a field that recognises the importance of utilising data to make evidence based decisions and many statistical and analytical methods have become popular in the field of quantitative market research. For example, when designing a product or service, or assessing the effectiveness of a new marketing campaign, market researchers commonly conduct quantitative social and opinion research (e.g., surveys, product testing) to gather information about consumer opinions and preferences.

Many statistical and analytical methods have become popular in the field of quantitative market research. Commonly applied techniques include:

- Key Driver Analysis - to investigate the relationships between potential drivers and customer behavior.
- MaxDiff - to understand the relative importance of different product attributes to potential customers.
- CHAID decision trees - to build customer groupings and discover relationships between customer characteristics and their behaviours.
- Customer Segmentation - to divide customers into segments with particular behaviours or preferences to undertake targeted marketing, for example.

To find out more about these and other statistical approaches to market research, visit our website: [www.select-statistics.co.uk](http://www.select-statistics.co.uk), or contact us to discuss how we can help, on: 01392 440426, or via: [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk).



## The Select Network

Select is supported by an extensive network of external consultants based at the UK's top Universities and research institutes and also by a community of specially-selected partner organisations offering skills and services that are likely to be of value to our clients. The Select Network provides us with an enhanced range of skills and expertise to deliver service and value to our clients. Details on how to register your interest in the network are provided in the box below.



### Would you like to join the growing Select Network?

If you are interested in joining the Select Network as a freelance consultant or would like more information, please contact us on: 01392 440426, email: [info@select-statistics.co.uk](mailto:info@select-statistics.co.uk) or complete the online contact form on our website:

[www.select-statistics.co.uk](http://www.select-statistics.co.uk)

## New Website Coming Soon!

We are excited to announce that we are currently in the process of developing a new website to provide better and more focussed content as well as creating a better and more responsive browsing experience.

We have completely redesigned the site based on customer feedback and we'll be creating loads more pages to demonstrate how we're helping clients in different sectors as well as uploading more case studies and a brand new glossary feature.

Hopefully, the site will make it easier for visitors to find the information they need as well as providing a valuable resource for anyone wanting to see how statistics are being used to tackle challenging questions in every sector from retail through healthcare to academia and the law.

We are in the final building phase right now, but the site should be complete by Christmas ready for a launch in the New Year. Once the new website is complete, it will simply launch under the same web address as our current site: [www.select-statistics.co.uk](http://www.select-statistics.co.uk).