



# Customer Analytics

## Case Study

### Major Supermarket Chain

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## 1: Background

Like many supermarkets in the UK, this chain has experienced rapid growth in the number of people shopping online. However, as the market for on-line shopping gets bigger, competition for these customers becomes more intense and marketing campaigns have to be smarter.

One way to better understand your customers is to carry out market research to find what will attract customers to your brand. However, this can be slow and tends to measure what is happening at a fixed point in time, which is not so useful in a dynamic market. A much better way is to analyse how your customers are behaving by looking at behavioural data, and this is what the client decided to do.

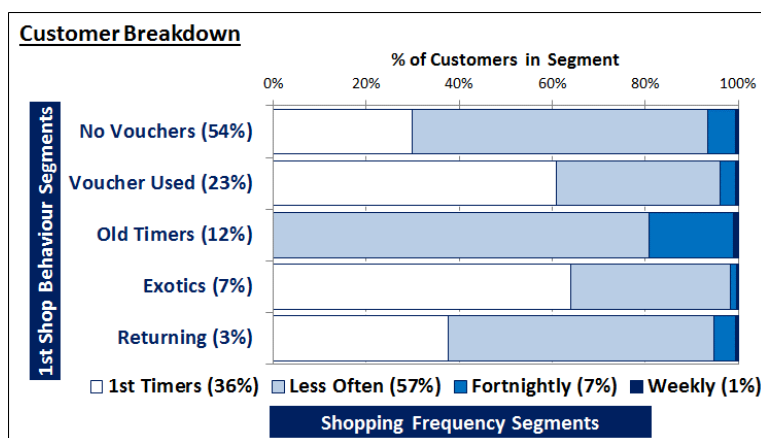
## 2: Why the company came to us

They needed a company who had experience of analysing similar data and could perform the in depth statistical analysis and come up with insights which would allow them to implement a strategy based on the results. They were particularly interested in seeing if their existing data on customer transactions would allow them to identify which customers would be likely to shop again with them and which ones would not. By doing this, they could then measure the return on investment of any marketing campaign in terms of how many customers would respond to their offer and whether they would continue to shop with them. To this end they engaged us to carry out the statistical analysis and one of our partners, Andalus Solutions, to implement the results in their business intelligence platform.

## 3: The Solution

Initially, we focused our analysis on the first time that the customer shopped on-line. We identified 7 pieces of information that was informative of customer online shopping behaviour e.g. when was the order placed, number of product lines in the order, etc.

Using a statistical technique known as Agglomerative Hierarchical Clustering (AHC), we carried out a segmentation analysis of these first time orders. We identified 5 types of shoppers (1st Shop Behaviour Segments). Following their 1st shop, some customers would shop again. This meant we could add a second dimension, the frequency of their orders. Our analysis suggested that shopping frequency should be split into 4 segments (Shop Frequency Segments). When combined with the 5 1st Shop Behaviour Segments, this meant that the supermarket could allocate each of their customers to 1 of 20 segments (see chart).



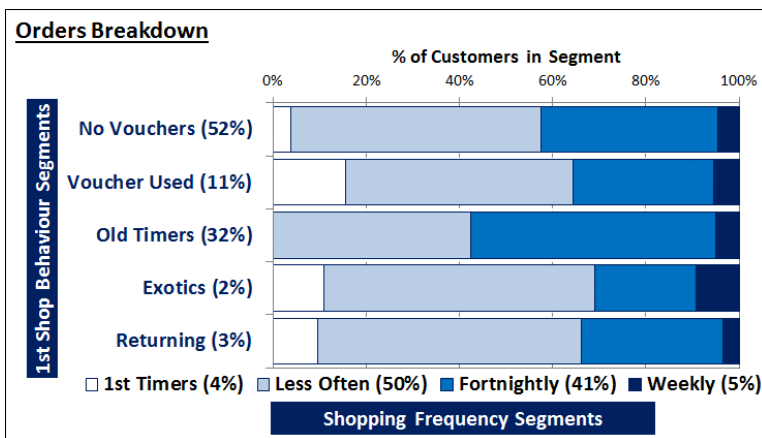
Over half of their customers (54%) fell into a 1<sup>st</sup> shop segment called No Vouchers. Within this segment, about 30% fall in the white bar which represents customers who have so far only made 1 order i.e. they have not shopped again.

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The next largest segment were those who had used a voucher accounting for 23% of all customers. Within this segment, nearly 60% had not shopped again. So the use of a voucher is a signal that the customer is not likely to be loyal. Clearly this is a signal to the marketing department to think carefully about the value of any promotion!

The 3 smaller segments represent different behaviours. The Old Timers are those that have shopped online at the supermarket for over 5 years. Returning customers were those that had not shopped online for at least 2 years. Finally there was the exotics segment which consisted of those with highly unusual purchasing patterns.

When the 5 1<sup>st</sup> shop segments are considered together as a single group, we can see that only 8% of customers shop at least every fortnight whilst over a third have yet to make another shop. However



because of their shopping frequency, this 8% of customer account for 46% of all orders placed on line. This effect is particularly noticeable when comparing the largest 1<sup>st</sup> shop segments No Vouchers & Voucher Users. Voucher Users make up 23% of customers but only 11% of orders which is another signal that marketing campaigns to attract new customers may end up attracting disloyal customers.

### 4: The Results

The previous two charts show quite dramatically the benefits to the supermarket chain if they can find the trick of encouraging 1<sup>st</sup> Timers & Less Often shop groups to come back and shop more frequently. This benefit is more clearly expressed in the chart to the right which shows what % of customers in each segment made another shop at some point in the year following their 1<sup>st</sup> shop.

Our client was delighted with the insights this analysis offered to their marketing strategy. The algorithms for these segments

were incorporated in their business intelligence platform allowing them to instantly allocate all new customers to a 1<sup>st</sup> Shop Segment and then dynamically update their Shop Frequency Segment. This also allowed them to proceed to the next step of analysing what the return on investment was for each campaign.

