mindlab

Case Study

Finding the optimal pricing strategy

Key Points

- Mindlab has developed an exciting new methodology for finding optimal pricing strategies.

- We used this methodology to help a multinational drinks manufacturer develop a dynamic new pricing plan for one of their key portfolio brands.

- These insights helped the client to rethink their approach to pricing so as to confront a variety of significant challenges, including changes to the tax regime in the US and changes in consumer behaviour.

Mindlab was approached by a large drinks manufacturer with a challenging question: what was the optimal pricing strategy for their signature liqueur in the US, the UK and Germany?

The liqueur was usually sold at a discount in certain seasons, but the manufacturer wanted to explore the dynamics of boosting sales at higher prices during the rest of the year. They also wanted to understand the way that discounting larger packs might impact the sales of undiscounted smaller packs.

Mindlab has developed an innovative methodology for tackling just such questions. This case study gives a brief overview of how we used this new approach to help a client make some important strategic decisions about pricing.

Online phase

Our bespoke pricing paradigm uses the principles of implicit testing to measure the intuitions that consumers have about price points in store. It combines our tried and tested virtual shelf displays with some of the latest statistical techniques to capture the complex decision making that goes on inside consumers' minds when making even small purchases.

Mindlab began by working closely with the client to create a carefully designed set of scenarios that would address pricing, format and discounting in a competitive landscape. Each scenario consisted of a virtual shelf display with a range of bottles of alcoholic drinks - including different pack sizes of the client's liqueur together with a number of competitor products. Each bottle displayed a price tag, which could either show just an undiscounted price - or two prices (the sales price and the original price). Participants had to say which products they would buy.

By varying the prices of the different packs in a systematic way, Mindlab was able to collect significant data to show how demand varied with price for different pack sizes under different pricing and discount scenarios.

Insights for the client

Mindlab was able to highlight the pack sizes for which a price increase was feasible and those where it was not. We also identified discounting plans that would increase total demand without hurting profitability. For example, we quantified precisely how discounting would work for the largest pack sizes (1L and above) outside the Christmas season, but only in the context of short-term promotions.

Mindlab also helped the client to identify price points for different pack sizes that would tempt consumers to switch to smaller or larger pack sizes so as to increase total revenue when various pack sizes were displayed together. For example, we found that consumers would switch to the larger pack sizes in increasing numbers as the large packs were discounted by greater amounts, but we also identified the limit of this strategy, when switching caused overall sales to decrease.

These insights helped the client to update their pricing strategy so as to confront a variety of significant challenges in 2020, including tax increases in the US and a challenging retail environment in all three markets. Mindlab continues to work with the client to develop the pricing model further.

Data analysis

We used the data we collected to build a detailed model of how consumers respond to changes in price for different pack sizes of the liqueur. To construct the model we used a Bayesian approach, with Monte Carlo Markov Chain probabilistic programming techniques.

On the basis of our model we created a series of graphs showing the demand curve for the various shopping scenarios. For some scenarios, the graph was relatively simple:

US scenario 1
750ml demand at various price points
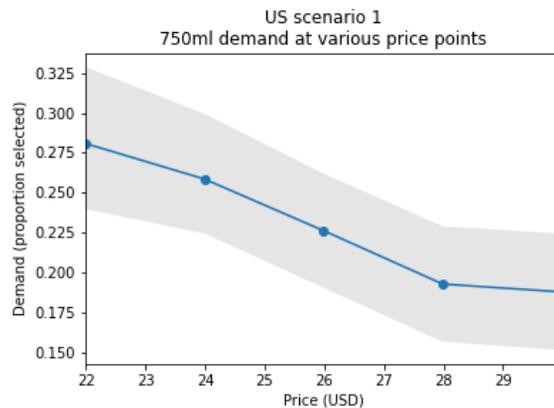
This graph shows the price in dollars along the horizontal axis, and an index of demand on the vertical axis. From this graph we can see that demand for the 75cl pack in the US falls steeply as price increases and then flattens after the price goes above $28. This suggests that consumers are very sensitive to price for this pack size, and that there is little room for a price increase in the normal range of prices (below $28).

In other scenarios, we looked at more complex conditions involving the presence of multiple formats on shelf with and without discounting.

German scenario 3
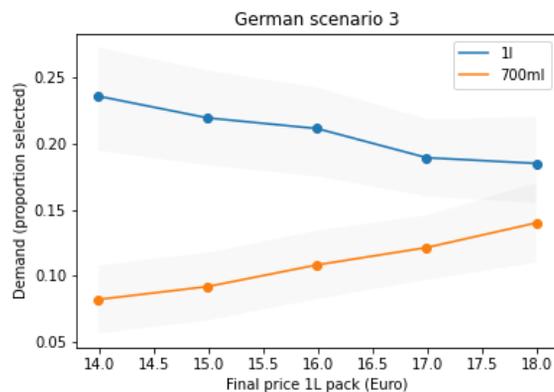
In this graph, the blue line shows how demand for the 1L pack varies with different levels of discounting. The orange line shows how demand for the 70cl pack (always displayed at a fixed price) drops as consumers switch to the 1L bottle in increasing numbers as it is discounted by greater amounts. However, the increase in demand for the 1L bottle does not fully compensate for the decline in demand for the 70cl bottle. This suggests that steep discounts for the 1L bottle may be counterproductive in certain circumstances, and may be undercutting the brand equity of the liqueur as a whole. These considerations give an insight into the complexity of the decisions surrounding pricing strategies.