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Covering What Matters

The Power of Rank:
Behavioural Insights into Pricing

Pricing is an inevitable and vital commercial decision. So how do you establish the best price? Using a behavioural approach, called Pricelab, which recreates a facsimile of a shopper's purchasing environment, we examine this question. We show how, in a car insurance renewal task, customers are powerfully influenced by various factors, including price rank. These insights have important implications for determining the optimal pricing strategy, designing out-bound sales activity, handling in-bound enquiries, and so forth. Traditional econometric and market research methods miss these insights because they lack the necessary behavioural underpinnings.

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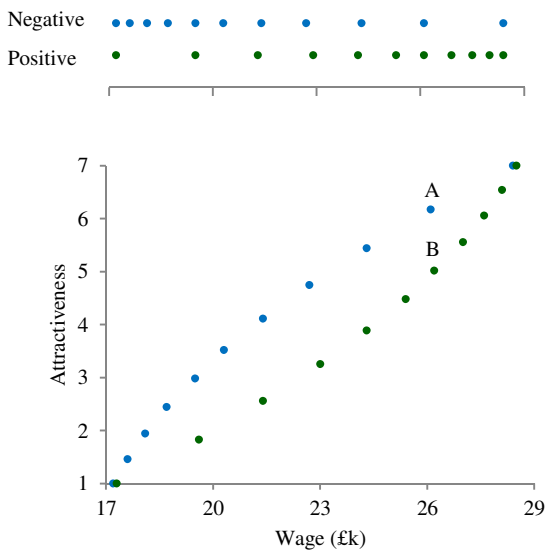
It's one thing to acknowledge that you need to pick the right price for a product. It's quite another to quell the bickering that then ensues. The Finance department? They have an econometrician who wants to put the prices up. The people in Sales did some market research that says the opposite. Sound familiar? In this brief we describe how Pricelab, a strategy drawn from both approaches but different from either, can help resolve such debates. We demonstrate, too, influential pricing effects that typically pass unnoticed when using traditional methods. Notably, we discuss how buyers are more ordinal than cardinal. That is to say, they care more about how your price ranks against your competitors, and against other reference points, than they do about the absolute price itself. An intuitive and innocuous insight? Certainly. Yet it has profound implications for how to peg your prices, design your website, pitch your promotions and so on.

Small Compensation

Take wages. To the American satirist H. L. Mencken[a] "a wealthy man is one who earns $100 a year more than his wife's sister's husband." What you earn matters less than whether it trumps a crucial threshold.

Figure 1: Salary Judgements



Mencken's observation that a paycheque is relative (in his example, literally), and that a salary is rarely just a salary, is borne out by the research[b]. For example, when people were shown a list of 11 salaries and asked to judge the attractiveness of each wage, their verdicts reflected more than just the cold cash.

The graph in Figure 1 plots two of the alternative lists presented to the respondents. People instinctively convert the unevenly distributed range of salaries into an evenly distributed range of relative attractiveness. So rather than its being invested with an absolute value, the common £26,000 salary (labelled A and B) seems better or worse depending on whether it ranks second or fifth in the salary range, respectively. It's not just what you earn, but how you rank[c]. We are all casting at least one eye at those Joneses next door. How we fare in comparison to others can swell, or shrink, our sense of satisfaction with our lot. It's the same quirk of human nature that led Gore Vidal to remark "It's not enough to succeed. Others must fail".

Pricelab

Does this phenomenon extend to product pricing? Like Jefferson Airplane and the Canadian flag, the assertion that people respond to ranks, rather than to absolute amounts, has been going strong since 1965[d]. We studied the interplay between a product's price and rank using our Pricelab approach in car insurance. Pricelab recreates a decision environment, tests different variations across people, and then statistically analyses the resultant behaviours. Such randomised controlled trials are the scientific gold standard for measuring what influences people.

Figure 2: Product Choice Task

Here are your insurance quotes…

Provider	Price	Excess	Service	
PRUDENTIAL	£379	£75	★☆☆☆☆	Proceed
insurancefactory	£396	£200	★★★★☆	Proceed
swinton	£417	£75	★★☆☆☆	Proceed
Lloyds TSB	£443	£150	★★☆☆☆	Proceed
esure	£464	£150	★★☆☆☆	Proceed
RSA echoice	£497	£75	★★★★★	Proceed
direct line	£526	£125	★★★☆☆	Proceed
churchill	£532	£100	★☆☆☆☆	Proceed
AVIVA	£559	£250	★★☆☆☆	Proceed
RAC insurance	£589	£150	★☆☆☆☆	Proceed

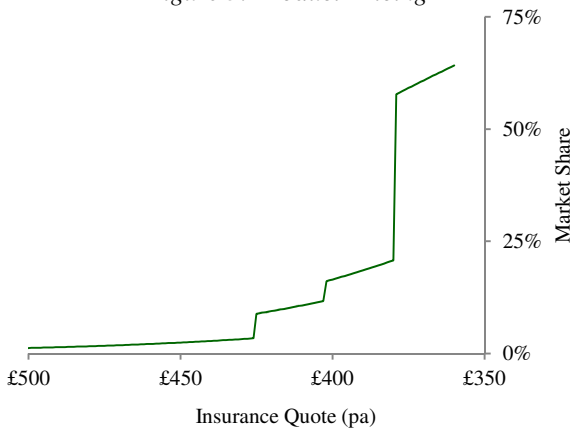
For the task, people chose a policy from ten rival insurers using the comparison website shown in Figure 2. While the set of providers was fixed, different participants saw randomly allocated prices, excesses and verdicts for service rating[e]. We also collected personal details and brand perceptions.

Price and Rank

It is hardly a shock to find that the Pricelab data confirms market share rises with falling prices. To find otherwise would be as unlikely as one of these insurers offering George Michael a no-claims discount. But what the Pricelab data more crucially shows is that this response to changing prices depends additionally on the insurance quote's ranking within a range. Figure 3 shows how the market share of a given insurer changes from just over 0% to 65% as its quote migrates from £500 to £350. However, this is no smooth transition. There are substantial discontinuities as the quote migrates into third, second or first place

on the comparison site, reflecting how people use rank, over and above price, to shape their purchasing choice.

Figure 3: Product Pricing



This study underlines why we advocate a behavioural approach to customer insight. Econometric modelling rarely starts out with insights into how people actually make decisions. It can therefore overlook the whims and impulses that might propel us to purchase one product over another. The result is that it misses important effects such as framing. A traditional elasticity approach would fit a smooth curve through Figure 3 and thereby completely misdiagnose the optimal pricing strategy.

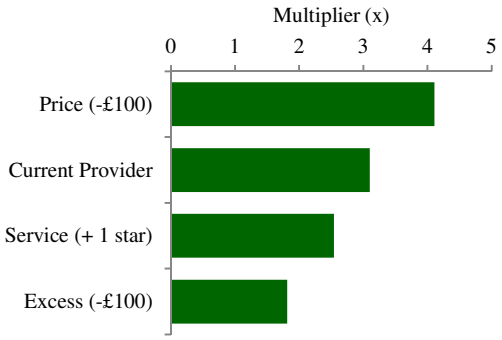
Meanwhile, whilst traditional market research seeks to understand consumers 'as they are', it uses unreliable self-report rather than actual behaviour (ask a doctor how much they believe their patients' claimed levels of weekly exercise). Or else it is based on an unrealistic and inflexible task, as is the case with conjoint analysis, to try to divine the most valued permutation of features in a product. Neither of these approaches therefore leads to the kind of credible, rigorous, quantitative output needed to drive pricing strategy or mobilise an organisation.

Branded

Using Pricelab we can also study other experimental variables and participant characteristics. Some of these are shown in Figure 4. The figure highlights two arresting insights. First, being the current provider triples your chance of being selected. This is worth about £80 (or 20% on a £400 policy). So you can afford to put your prices up after acquiring a customer, at renewal, though there is a limit. Inertia isn't infinite.

Second, the figure is noteworthy for what is missing. UK insurance providers spend over £100m each year on TV adverts. Yet, rather startlingly, not one brand proved itself to be any more attractive to consumers than would be accounted for by its role as the incumbent and its service rating. Similarly, no specific brand images drove product choice. The only impact was a tiny propensity for people to pick a brand that they regard as 'creative'. Either the brands don't credibly stand for anything, or else what they do credibly stand for doesn't influence purchasing in this context[f]. So that resolves the famed conundrum[g] about not knowing which half of your advertising budget is wasted. Guess what? In auto insurance it's both.

Figure 4: Market Share Drivers



It's worth noting that in such brand vacuums, price can become a quality signal. David Foster Wallace, in his essay "Consider the Lobster", wrote how some New England colonies had laws against feeding lobsters to prison inmates more than once a week because it was considered cruel, "like making people eat rats". Then, as overzealous harvesting eroded supplies and drove up prices, lobster consumption became a wealth signifier. Today, with dockside-prices in Maine at a 30-year low and nearly a thousand Red Lobster 'casual dining' restaurants worldwide, we may be witnessing this process in reverse.

So we'd observe that higher prices can also be turned into a good thing and that Pricelab can be used to measure these brand effects. Pricing is more chemistry than physics. We may yet live in a world where higher cost auto insurance is the mark of a reassuringly higher specification product, rather than simply an irritating rip off. We may yet live in a world where lobsters are the new kebabs.

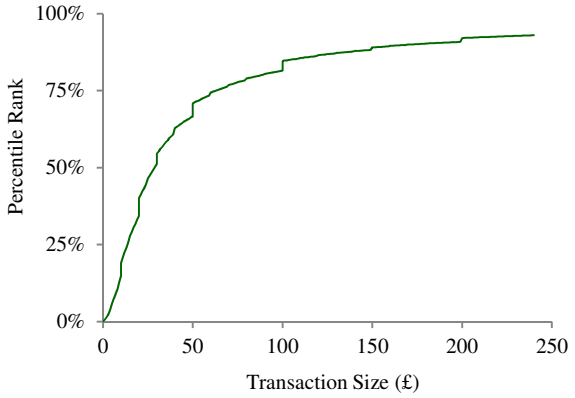
Checking Your References

We have discussed that people respond to how a price ranks against other prices. So the second part of this problem is to understand how these reference sets are constructed during a purchasing journey. This, and the impact of managing those reference sets, is a topic for another brief. But it's worth flagging that for loyal customers the reference prices are often your own. So opaque and volatile pricing can be extremely corrosive for this important segment.

Likewise, prices may simply be compared to everyday costs. Figure 5 shows the cumulative distribution of debits for a UK clearing bank's retail base[h]. So 89% of transactions are less than £150, making this a 'big'

amount. One strategy for making it 'small' is to limit the references to a subset of larger expenditures, such as annual items. For instance, £150 is a big sum compared to a pint of milk but small compared to a holiday. It's simply a matter of playing with perceptions. Those steins of German lager they handed you at Oktoberfest? They seemed huge until you saw those supersize cola servings that Mayor Michael Bloomberg wants to ban in New York. Those cola cups resemble the buckets emergency workers use to put out forest fires.

Figure 5: Current Account Debits



Note, too, how Figure 5 has discontinuities at the 'round pounds'. For example, there are a lot of £10, £20, and £50 debits. The use of everyday expenditures as reference prices is therefore one cause of the 'left digit effect', the well-documented phenomenon by which shoppers' perceptions of how affordable or expensive they consider a product is shaped to a disproportionate (and irrational) degree by the leftmost digit of its price. For example, cutting a £10 price to £9.99 yields a drop in rank on Figure 5 from 19th to 13th percentile whereas going from £10.01 to £10 achieves virtually nothing[i].

Summary

The research shows very clearly that companies need to fundamentally re-think their approach to pricing:

- *References:* Insight teams need to understand where customers are going for price information and what references they bring to a decision.
- *Touchpoints:* Sales teams need to review how they can influence that process by changing web design, renewal letters, call centre scripts, and so forth.
- *Pricing:* Pricing teams need to overhaul their modelling to address the fundamental non-linearity and instability of customer price elasticity.

Pricelab represents an important tool for addressing this last issue because it plugs a gap. It offers a facsimile of the decision environment so companies can explore the impact of changing prices, promotions, bundling, product design, brand, sales process and so forth. Moreover, it's cheaper, quicker and more diagnostic than field testing or sales modelling, enabling companies to pre-test a wider range of alternatives on a tighter development cycle. It offers, too, a safe environment in which to study and refine higher risk strategies, ring-fenced away from the brand. Finally, it may well be the only way to get Sales and Finance into the same room without all that unpleasantness.

References and Footnotes

a From Mencken, H. L. (2007). *A Book of Burlesques.* Whitefish, Montana: Kessinger Publishing (Original work published 1920). Mencken was an American essayist referred to as the Sage of Baltimore. Some claim for a city that spawned both Philip Glass and Oprah Winfrey.

b. Brown, G. D. A., Gardner, J., Oswald, A. & Qian, J. (2008). Does Wage Rank Affect Employees' Well-being? *Industrial Relations, 47(3),* pp: 355-389. The authors also demonstrate that well-being is sensitive to both actual salary and salary rank for 15,000 participants of the Workplace Employee Relations Survey.

c. The authors show that people are also sensitive to range (i.e. where they sit between the top and the bottom). This means that positively skewed salary distributions, where more people are nearer the top (like the blue dots), generate greater overall well-being. High earners are indeed a form of social pollution.

d. Parducci, A. (1965). Category Judgement: A Range-Frequency Theory. *Psychological Review, 72(Nov),* pp:407-418. His frequency is what we're calling rank.

e. Each participant saw the same high and low prices (albeit from different providers). Other prices were drawn at random from this range. The data was fit to a choice model, including cross-terms, using variations in the experiment (i.e. price, excess, etc.) and people (i.e. demographics, personality, brand images, etc.).

f. Note that no cross-terms emerged in the analysis. All the market heterogeneity can be described by people's different starting points (i.e. price and provider) and journeys.

g. The one that goes "I know that half of my advertising budget is wasted, but I don't know which half" which some believe was coined by Lord Leverhulme, the founder of Unilever and others, typically American, attribute to John Wanamaker, the Philadelphian merchant, some thirty years earlier.

h. Stewart, N., Chater, N. & Brown, G. D. A. (2006). Decision by Sampling. *Cognitive Psychology, 53 (1),* pp: 1-26. The figure is missing everyday cash transactions, so the real curve will be even more bowed. The paper proceeds to develop a well-regarded theory about the psychological foundations of utility.

i. For a review of the left digit effect and prices ending '9' see Monroe, K. B. (2003). *Pricing: Making Profitable Decisions.* New York: McGraw-Hill.