

Pricing Strategy: The Lessons of Inflation

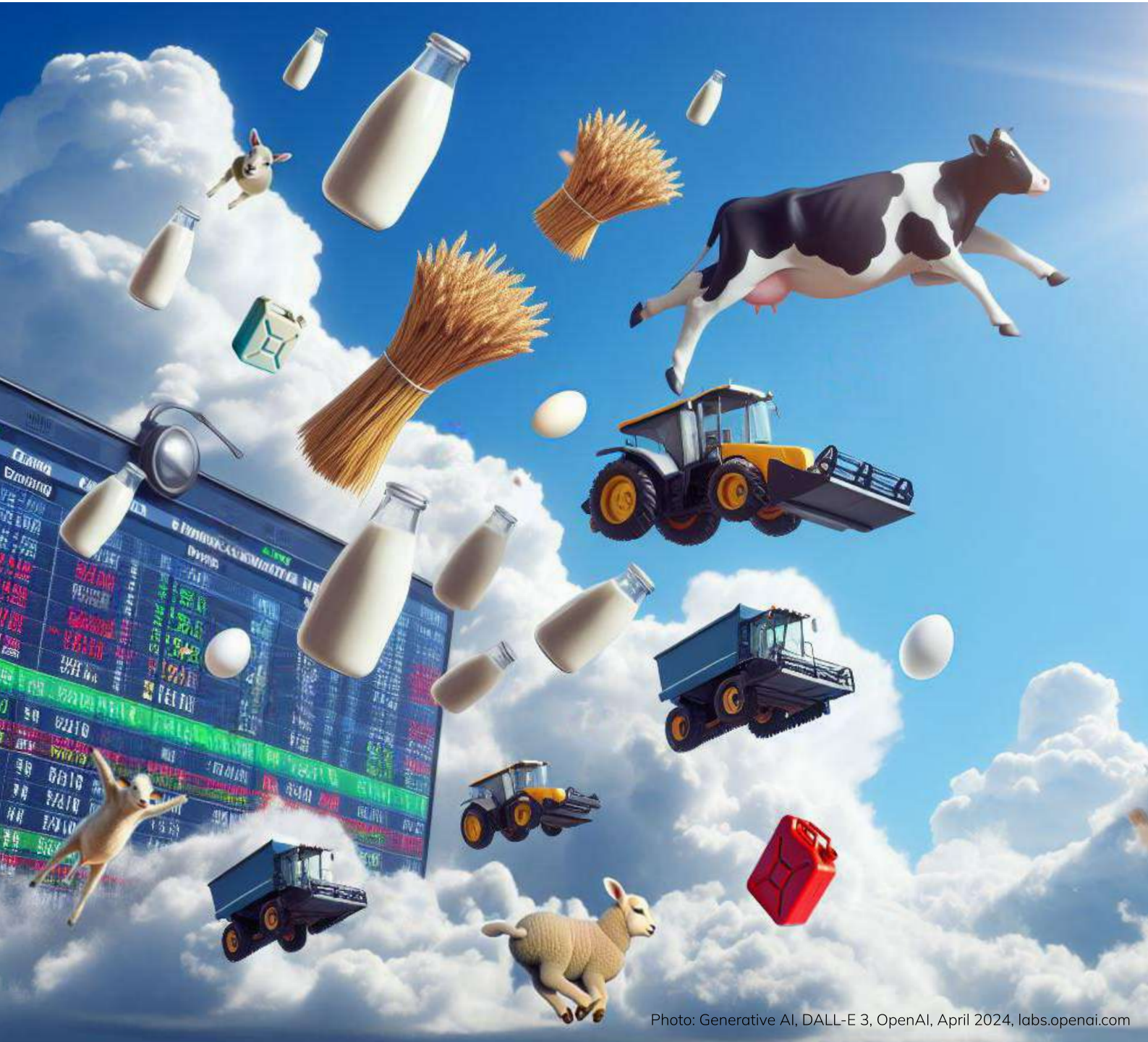


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Executive Summary



The Cost of Living crisis has delivered inflation levels in the UK, US and EU not experienced for a generation. Painful as this has been for many, it has also generated a unique dataset on how people perceive, interpret, and alter their behaviours in response to large and well publicised price rises. In effect, with inflation varying from sector to sector, the UK has inadvertently undertaken a large-scale, natural experiment into the dos and don'ts of increasing your prices.

This report combines that field data with our own Behaviourlab experiments to extract and explore those insights. Based on this, we draw the following main conclusions:

Media Mediates Perceptions: Naturally, people's inflation judgements are not a carefully weighted blend of personal price rises. They are a chaotic collage of known value item prices, word of mouth, media and so forth.

Price Mavens Matter: 12% of consumers account for 65% of price rise noticings. These professional shoppers, Price Mavens, turn up in every study we've run over two decades. It's their opinion you need to manage.

Beliefs are Inaccurate: Because inflation judgements come from a collage of events, they are weakly correlated with reality. In practice, many people over-estimate inflation (cf. petrol's rise and fall leaving behind an inflation belief).

There's a Narrative: Consumers have beliefs about inflationary causes. This includes input costs rising and profiteering. Their beliefs vary substantially by category. Some causes are judged fairer than others.

Large Long-Term Effects: People trade-down and buy less in response to inflation. But they also do a lot of complaining. This has knock-on effects that will cause greater long-term damage to enterprise value.

Narrative Dominates Numbers: The reason behind the inflation is more influential than the inflation itself. A price rise for a bad reason has the same behavioural effects as a +16% higher price rise for a good reason.

Narratives are Sector Specific: Everything varies by category. Different categories have different Price Mavens, existing trust levels, acceptable inflation causes, behavioural responses and so on.

These insights and recommendations will be useful for Pricing teams who need to implement future price rises, Commercial teams who want to forecast the effects of those price changes and Marketing teams who need to manage price communications. There are, of course, more details. If you'd like to ask questions, have us present or give feedback, it's always lovely to hear from you.

SUMMARY RECOMMENDATIONS

The report then makes the following six main recommendations:

- **Correct Misconceptions:** Identify and remedy when and where you are being unfairly faulted for large price rises that didn't happen.
- **Engage Price Mavens:** Communications should engage the 12% of consumers who will notice price changes and are interested in the causes.
- **Manage the Narrative:** You need to communicate the narrative underlying any price rises. Providing no reason is typically the worst strategy.
- **Optimise the Justification:** Spend as much time identifying the optimal narrative as you spend identifying the optimal price.
- **Track Beyond Sales:** You should track the other long-term effects of a price rise using Word of Mouth metrics and try to shape that dialogue.
- **Tailor, Tailor, Tailor:** Make sure everything is adapted to your specific product in this competitive market and at this stage of the economic cycle.

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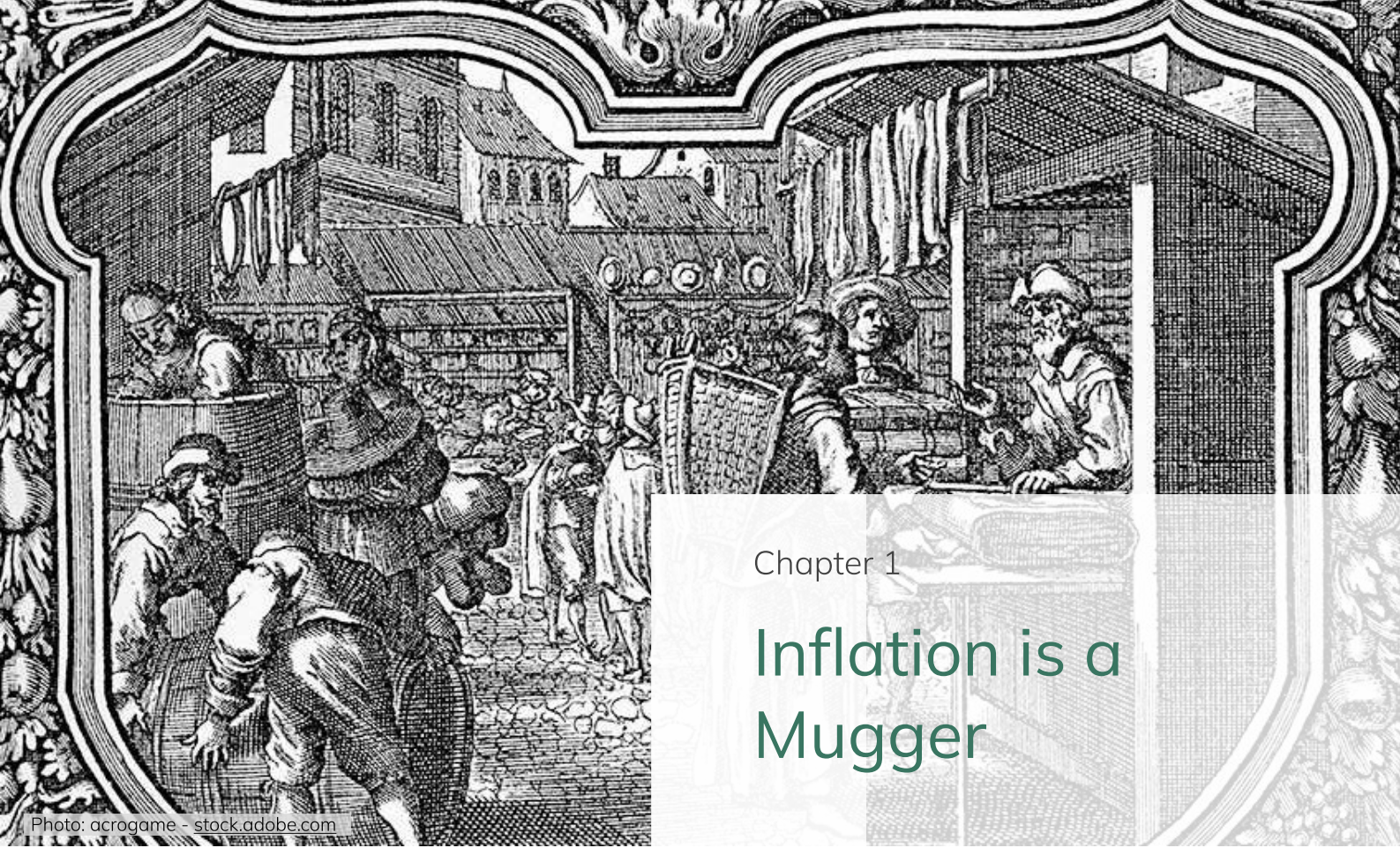


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Chapter 1

Inflation is a Mugger

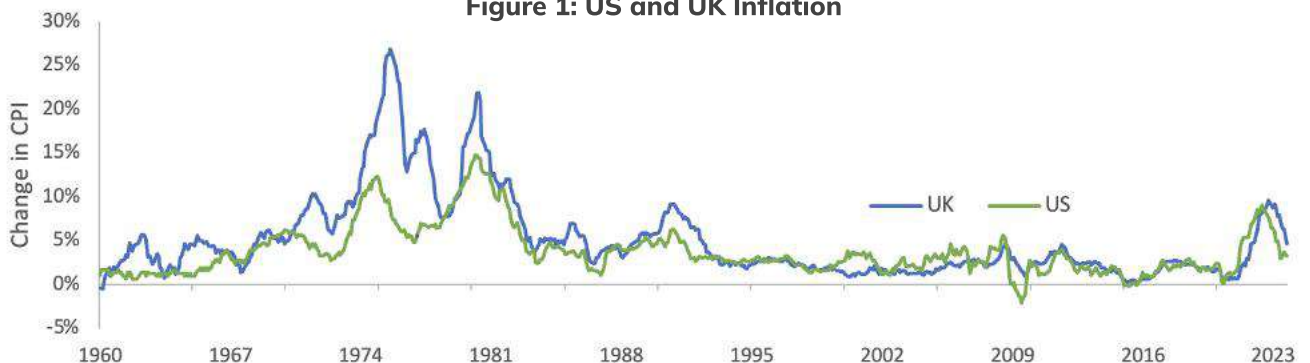
According to Google Trends the Cost of Living Crisis is over. Searches for that phrase peaked in September 2022 before falling back over the following year.

As Figure 1 shows, this exactly parallels headline inflation, highlighting the role of the media. In practice, monthly inflation had peaked four months earlier in May 2022. But the news always focuses on the trailing 12-months. The implication is that people's inflation perceptions are as much about what the papers say as any detailed understanding of their own expenditure. And, as The Price is Right shows (see boxout on page 7) the media coverage also

makes people more sensitive to their own expenditure.

The graphic highlights two other media phenomena associated with inflation. First, whilst the press have positioned this inflation as a "return to the 70s" the reality has been nowhere near as severe. 70s inflation was both higher and longer, leading to Ronald Reagan's accusation that it was stealing Americans' money. Likewise, media complaints that UK inflation is currently higher than in the US forgets that US inflation started earlier. By the end of 2024 the cumulative increase in prices since 2020 in the US and UK will be nearly identical.

Figure 1: US and UK Inflation



Source: OECD (2023). Consumer Prices. <https://www.oecd.org/newsroom/consumer-prices-oecd-updated-4-july-2023.htm>

So, against this backdrop, how do consumers form their inflation judgements? The answer is not obvious. And some of the problems are well illustrated by how the Office of National Statistics (ONS) undertakes the actual task. The idea of inflation goes back to the late nineteenth century. Changes in specific prices can be measured. But how should they be blended into a single figure? An economist from Saxony, Étienne Laspeyres, weighted the prices by what people were purchasing at the start of the measurement period.

However, because prices change, so does this basket of goods. People buy less of the stuff that goes up more. Hermann Paasche, a Prussian statistician, proposed weighting the basket with volumes from the end of the measurement period. Because of price elasticity, this puts less weight on the higher inflation items. Paasche's measure is typically a few percent below Laspeyres'. This discrepancy matters. Over forty years, low inflation has framed wage negotiations. Should pay have increased 2% or 0% per year? When the UK Government pays interest on £600bn of Inflation-Linked Bonds, should they include the extra £12Bn or not?

Anyway, the ONS does a heroic job. They track prices across channels, geographies and retailers for 700 items, generating hundreds of thousands of prices, alongside multiple sources of purchasing volumes. Then they undertake some epic analysis to yield CPI. Yet inevitably it's impossible to convert all this information into a single figure. What people purchase varies from person to person and changes over time. Product attributes, like quality and weight, fluctuate. Penguin biscuits stayed at £1.25 last year. But now there's seven in a packet, not eight. New products are being invented and old ones phased out. It's a mess.

Our main conclusion is that it can't be done. To truly measure a person's inflation, you'd need to figure out how much more money they'd have to spend today in order to get the same level of well-being as they did before. But well-being isn't particularly related to consumption^{1,2} and as a result, in our view, such an analysis would also be doomed. There simply isn't a right answer.



***Inflation is as violent as a mugger,
as frightening as an armed robber
and as deadly as a hit man.***

Ronald Reagan



So why do we all think that there's inflation? Because we see individual price rises? Because our weekly shop is more expensive? Because we have less money left at the end of the month? Because the ONS tells us? This brief explores some of these questions, particularly the ones that are relevant to the people setting the prices. We've argued here that inflation is a belief, not a concrete fact. That means it's an impression that should be managed. Specifically, we discuss who notices price changes, how they form their inflation judgements, and - crucially - how they change their behaviours in response.

¹ Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. *Nations and Households in Economic Growth*. 89-125. <https://doi.org/10.1016/B978-0-12-205050-3.50008-7>
² Horner, F. B. (1971). Effect of grouping of data on the divergence between Laspeyres and Paasche Forms of quantum indexes. *Review of Income and Wealth*, 17(3), 263-272. <https://doi.org/10.1111/j.1475-4991.1971.tb00779.x>

The Price is Right

The Price is Right first aired in the United States on NBC in November 1956. Originally sponsored by Unilever, and frequently featuring their products, it has become America's longest running game-show with over 9,000 episodes to-date. For the uninitiated, the show is as it sounds. Contestants guess product prices and the most accurate contestant wins.

It occurred to Jonathan Hartley, then studying for a PhD at Stanford, that The Price is Right was a huge natural experiment³. An experiment of the type that won David Card and his colleagues a Nobel Prize for Economics in 2021. Focusing on the one-bid Contestant's Row element of the game, he evaluated 120,000 bids across 30,000 trials that took place between 1972 and 2019. There were a couple of surprising conclusions.

First, contestants have consistently underestimated prices. Basically, you could increase your chances of winning by estimating the price and then adding 15%. It's both fascinating and sobering that a repeated and incentivised market like this fails to arbitrage out such a systematic error. Indeed, this pricing gap has become larger over time. It makes you wonder which other prices in the world are out by 15%.

Second, why did that under-estimation become worse? When the rebooted show started in 1972, the average bid was 8% too low. By 2010 the gap had widened to 20%. Hartley showed that the week-to-week discrepancy correlated with inflation. Higher inflation was making people more accurate by making them more attentive to prices when shopping.

Figure 2: The Price is Right Presenters



Source: Bob Barker, Janice Pennington and Anitra Ford, hosts of The Price is Right, in 1972.

³ Hartley, J. (2019). *Inattention and prices over time: Experimental evidence from "the price is right" (1972-2019)*. SSRN. <https://ssrn.com/abstract=3469008>



Photo: freshidea - stock.adobe.com

Chapter 2

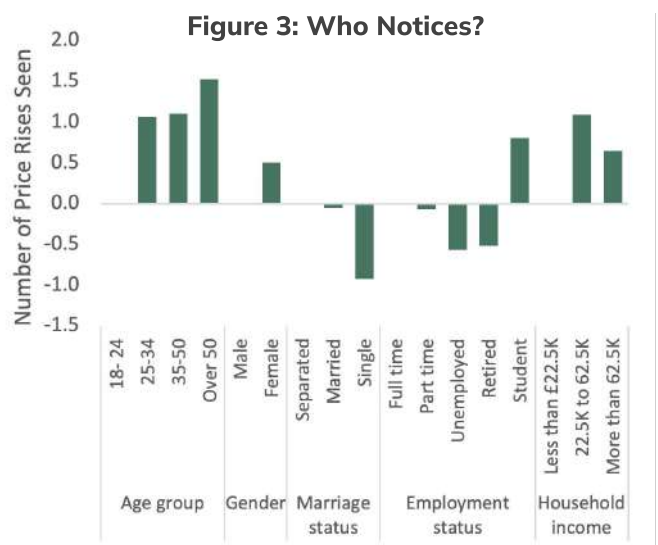
Price Rise Perception

Surprisingly few customers actively engage with prices. We first made this observation over twenty years ago working at Tesco when, segmenting shoppers based on their purchasing behaviours, we identified a group we coined Price Mavens. They were about 10% of the population and the only way to describe them was full-time, professional shopper. It was literally what they did for a living -- Head of Procurement.

Today, for the sixteen products shown in Figure 4, the typical respondent had noticed price rises in only half, even though there had been inflation across nearly all. But 12% of our respondents had noticed price rises in at least 13 categories. The Price Mavens are still out there and when you raise prices, it's them you need to bring along. In this data set, Price Mavens account for 65% of all the price rise noticings.

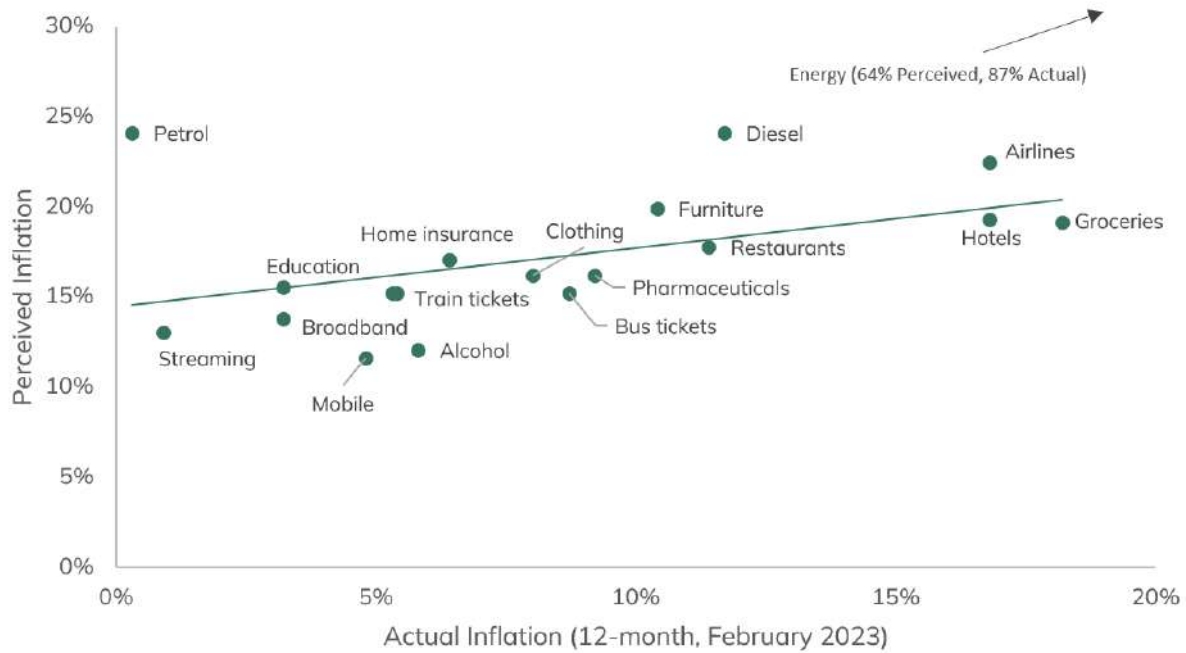
So who are these Price Mavens and how do you talk to them? Figure 3 shows the demographic signature. Single people notice one fewer price

rise across the sixteen categories relative to the average shopper. Price Mavens are older, married, mid-income and so on. Nevertheless, as is often the case with our research, demographics aren't that helpful. Price Mavens are best defined by their purchasing behaviours. They visit Price Comparison Websites, use coupons, and shop promotions.



Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). Respondents were asked for which of 16 products they had seen price increases in the past 12 months. Product categories were selected based on those used by the ONS. The graphic shows regression betas using demographics to predict how many rises that respondent observed.

Figure 4: Perception Accuracy



Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.) together with March 2023 ONS consumer price inflation. Respondents were asked for inflation estimates for three products where they'd seen price rises.

Having found the people who notice price changes, how do they form their opinions? The research literature is useful. People are better at encoding prices than recalling them⁴. In effect, when we see a packet of Penguins at £1.25, we form a noisy memory of £1.25. Later on, asked whether we'd pay £2.00, we can confidently say it's bad value. But asked to recall the exact price, we guess, judge, iterate, and then give up because it's an irksome question. Hence our actual price recall is poor.

We aren't computers with high fidelity price memories that can be compared over time and then aggregated, like the ONS. It's expected that our inflation opinions are sloppy, event contingent and derived from multiple sources – direct experience of sticker-shocks, what's in the news, a friend complaining about being ripped off and so on. Figure 4 corroborates this view. It shows actual inflation versus people's perceptions across categories. There are several insights.

First, everyone feels maligned. Though headline inflation was 9% at the time, all the estimates are higher. Higher even than the peak six months earlier. Second, the R² of this scatterplot is a moderate 21% if you exclude Energy: people's estimates contain some convergent

signal that binds them to the ONS assessment. Third, there's substantial mean reversion so that the range of people's estimates across categories is much smaller than the ONS's. Finally, people are imprecise with time. Petrol started 2022 at 145p per litre, went up to 191p and then fell back to 149p. As such, the chart shows nearly no ONS inflation. This is technically correct, but not how people feel.

The headline, then, is that people's price rise perceptions are derived from many sources and are not particularly scientific or accurate, in that sense. As such, it's not just about the actual price. It's about signalling, messaging, framing and so forth. There is something here that needs informed management as a retailer. You can't just meticulously determine the optimal price and then post it. You have to then sell that price rise.

⁴ Monroe, K. B., & Lee, A. Y. (1999). Remembering versus knowing: Issues in buyers' processing of Price Information. *Journal of the Academy of Marketing Science*, 27(2), 207–225. <https://doi.org/10.1177/0092070399272006>

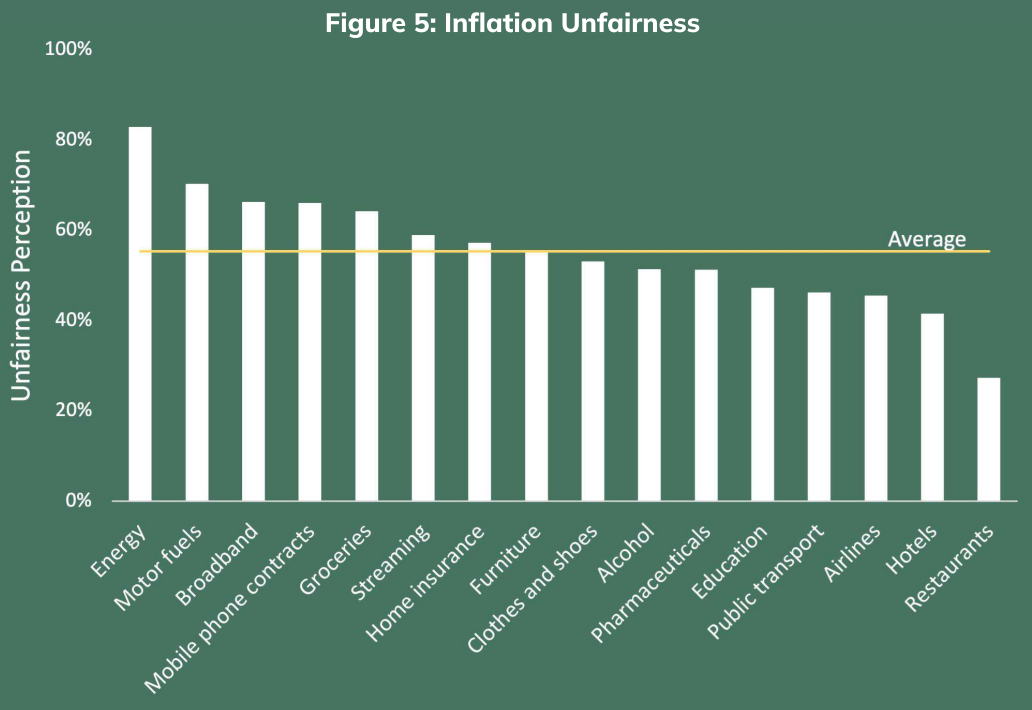
Fairness

People noticed inflation in 2022, but did they think it was fair? This is an important question for several reasons. First, there’s extensive evidence that perceived fairness affects repurchasing⁵. Exploitative pricing drives churn. Second, unfair price increases erode trust and thereby longer-term enterprise value. Beyond the direct sales impact there’s always additional collateral damage. Third, the public’s poor opinion can cause industry-wide problems such as more legislation, an upset regulator and so on. Of course, you need your customers on-side.

Figure 5 shows how many people thought that the experienced price rises were unjustified. The fairness judgements vary considerably. Despite well-publicised wholesale energy price increases, 80% of consumers thought that their higher electricity bills were too high. People also thought that the higher pump prices in mid-2022 were excessive. Conversely, these wholesale

energy cost pressures were seen as justifying higher prices in hospitality and travel. These businesses were still recovering from the pandemic and, in the case of restaurants, differentially shopped by a type of consumer - those with higher incomes - who tend to be less resentful of price increases.

Clearly, bigger price rises generate greater consternation. However, the chart shows that this isn’t the whole story. We are more or less tolerant of price increases depending on the industry’s circumstances, in line with the research literature. For example, Kahneman et al.’s work⁶ on price fairness concluded that passing through higher input costs (i.e. cost plus pricing) was more acceptable than charging more because you can (i.e. value minus pricing). In their experiment, charging more for snowshovels when it started snowing, and there was limited supply, was not a crowd pleaser.



Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). Respondents were asked to indicate on a 7-point Likert scale ranging from “Justified” to “Unjustified” how they felt about the price increases for three of the products where they had seen price rises. Scores of 1 to 3 were classified as unfair.

⁵ Homburg, C., Koschate, N., & Hoyer, W. D. (2005). Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay. *Journal of Marketing*, 69(2), 84–96. <https://doi.org/10.1509/jmkg.69.2.84.60760>
⁶ Kahneman, D., Knetsch, J. L. & Thaler, R. (1986). Fairness as a Constraint on Profit Seeking: Entitlements in the Market. *American Economic Review*, 76 (4), 728-741.



Chapter 3

Beliefs & Behaviours

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As the boxout on Fairness discusses, the inflation levels experienced across some sectors were seen as more justifiable than others. And these fairness judgements were a function of both the inflation amount and the perceived cause.

Motivated by this insight, Figure 6 shows what consumers believed caused 2022 inflation. The Overall column shows the main effect. Most people simply blame inflation itself in a “may I use the Xerox machine because I have to make some copies?”⁷ kind of a way. Then respondents start to cite actual underlying causes, such as

corporate greed and input costs, followed by causes of the causes, like Brexit.

Crucially, though, this picture isn’t uniform. Four sectors illustrate this point. As we know, people don’t trust Energy providers. Accordingly, exploitative margin increases alongside higher wholesale energy costs, due to the Russian invasion of Ukraine, are seen as relatively important drivers. Conversely, Airlines are seen as facing the same cost pressures, but aren’t blamed for profiteering. Next, the cost increases from Brexit are perceived as important for Groceries. Finally, Streaming Services have no excuse beyond buying more content and hitting us with higher margins.

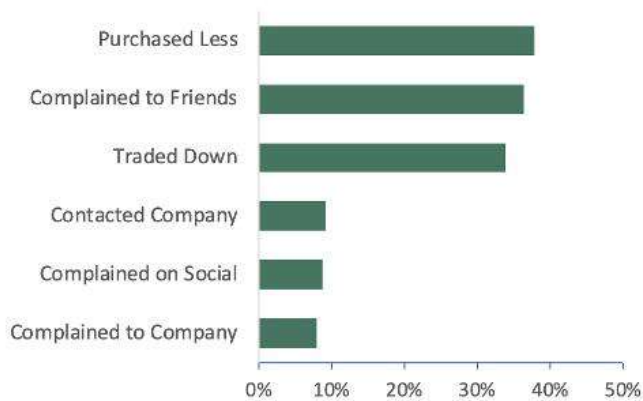
Figure 6: Perceived Causes

	Overall	Relative to Overall			
		Energy	Groceries	Airlines	Streaming
General Inflation	67%	-7%	8%	1%	-9%
Increase Profits	62%	14%	2%	-2%	1%
Increased Costs	54%	-5%	6%	7%	-17%
Brexit	42%	3%	11%	4%	-19%
War in Ukraine	39%	19%	16%	11%	-18%
Increased Demand	32%	0%	3%	8%	-2%
Investment	31%	-1%	-2%	6%	0%

Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). Respondents were asked to indicate on a 7-point Likert scale from “Strongly Disagree” to “Strongly Agree” how much they agreed that the price increases they had seen were caused by various potential reasons. Scores of 5 to 7 were classified as agreement.

⁷ Langer, E. J., Blank, A., & Chanowitz, B. (1978). The mindlessness of ostensibly thoughtful action: The role of “placebic” information in interpersonal interaction. *Journal of Personality and Social Psychology*, 36(6), pp. 635–642. <https://doi.org/10.1037/0022-3514.36.6.635>

Figure 7: Resultant Behaviours



Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). Respondents were asked to indicate from a list of options the behaviours they had undertaken for three of the products where they had notice price increases. Scores of 5 to 7 were classified as agreement.

Figure 7 then shows how this inflation altered respondent behaviours. As noted in the Fairness boxout, price rises drive churn because people either purchase less or trade-down, both widely recognised forms of elasticity in promotion modelling. But they also undertake activities that erode brand value. They complain to friends, they complain on social media, and the optimists complain to the company. As is traditional in these reports, we would stress that these indirect effects are typically more important than short-term sales effects. Just because they are harder to measure and you'll be working at a competitor when they kick in, doesn't mean you should ignore them.

So, consumers estimate inflation and attribute that to different causes. They also judge some inflation as more unfair. This fairness judgement is partly driven by the perceived causes. They then respond with changes to their purchasing and other behaviours. And, perhaps predictably, these behaviours are also mediated by the perceived causes. For example, modelling behavioural propensity, we find the following statistically significant effects:

- **Increased Profits:** More likely to complain to friends and family
- **War in Ukraine:** Purchase less volume, rather than trade-down
- **Brexit:** More likely to trade-down and complain on Social Media
- **Increased Demand:** Greater chance of complaining to the company

Again, you shouldn't only focus your efforts on determining the optimal price increase. You need to worry about how to explain that price increase and attempt to exert some control over that narrative. The perceived reasons for the price increase will impact both short-term purchasing behaviours and long-term enterprise value.

“

A nickel ain't worth a dime anymore

Yogi Berra

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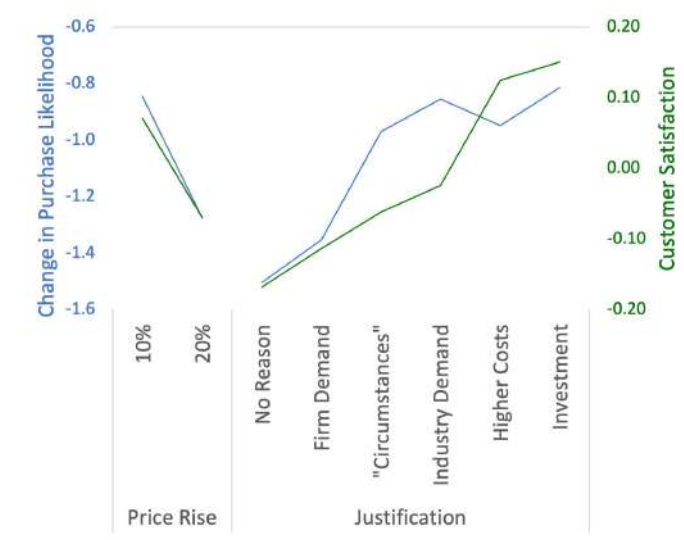
Chapter 4 Raising Prices

Photo (Collage by Dectech): Collage including works by DBFilms, Skórzewiak, ardasavascjogullari, Vitalii Vodolazskiy - stock.adobe.com, and Rohit Jawalkar, Micheile Henderson, Habib Ayoade - unsplash.com

The large-scale, real-world price rise experiment that was the Cost of Living Crisis contains important insights on how retailers should raise prices in future. Predictably, people reduce expenditure and trade-down in response. Price rises also impact other behaviours, like complaining, and, by extension, Customer Satisfaction. Crucially, all these effects depend on what consumers believe has caused the increase.

To deconstruct and measure their relative importance, we ran a Behaviourlab experiment. The protocol involved choosing between three products (e.g. Basic, Gold and Platinum Home Insurance) and then repeating that purchase decision after prices had risen. This purchase task was drawn from across the five industries shown in Figure 9. Different participants saw different price increases and one of the six inflationary causes listed in Figure 8. The appendix contains more details on the experiment design.

Figure 8: Satisfaction and Purchase Likelihood Impact



Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). The experiment randomly increased prices and displayed one randomly chosen justification. Respondents selected one of three products and then indicated their purchase likelihood on an 11-point scale before and after the price rise. Customer Satisfaction is an approximately N(0,1) principal component based on ratings for seven emotions, post price rise. The graphic shows betas obtained from modelling the data. All effects are statistically significant.

Figure 9: Customer Satisfaction Impact

Justifications	Overall	Telecom	Grocery	Insurance	Airlines	Streaming
No Reason	-0.17	-0.29	-0.23	-0.12	0.21	-0.30
Firm Demand	-0.11	-0.51	0.04	0.00	0.08	-0.32
“Circumstances”	-0.06	-0.24	-0.04	0.12	0.00	-0.15
Industry Demand	-0.02	-0.32	0.03	-0.02	0.13	0.00
Higher Costs	0.12	0.06	0.04	0.06	0.43	0.04
Investment	0.15	-0.21	0.35	0.15	0.42	0.02

Source: Dectech fieldwork March 2023 (N = 2,021 nat. rep.). The Overall Customer Satisfaction effects are the same as those shown in Figure 8. The other columns follow the same betas for models that were restricted to the data of the given category purchasing task.

We measured two main outcomes. First, short-term sales impact was evaluated using the change in purchase likelihood between the pre and post price-rise product choice tasks. Second, we measured Customer Satisfaction after the price rise using a composite score driven by seven emotion ratings (i.e. how happy, annoyed, etc. are you?). In our experience, these composite scores contain more signal, and are therefore more diagnostic, than simpler methods like Net Promoter Score.



Why people think you raised prices has a larger commercial effect than the amount you raised prices.



The change in purchase propensity and Customer Satisfaction shown in Figure 8 have a consistent pattern. Both are significantly worse after a +20% price rise compared to +10%. Likewise, some causes are better than others. Providing no reason has the most adverse effect. Exploiting increased demand is next. The uninformative “due to recent circumstances” is better than nothing. At least the retailer has the decency to own the price rise. The best performers are having to pass through cost increases or needing additional funds for product development.

These findings are aligned with both the prior research and recent UK inflation experience. In 2022, people thought that Energy price rises were partly caused by higher margins and that this was unfair. Conversely, Airline price rises were seen as fairer because they were caused by the need for post-pandemic investment, higher input costs and greater industry-wide demand.

But perhaps the starkest finding from the experiment is the relative scale of these effects. Going from the best to the worst inflationary cause is equivalent to a +16% price increase. In other words, a +20% price rise with an explanation that you’re investing in the product has the same sales effect as a +4% price rise without any explanation. Customer Satisfaction is similar. Why people think you raised prices has a larger commercial effect than the amount you raised prices.

Finally, again resonating with the cross-industry effects seen in 2022, Figure 9 shows how the impact of inflationary causes on Customer Satisfaction isn’t uniform. Different narratives are more or less effective across different industries. For example, whilst “Firm Demand” doesn’t work well in general, it is particularly damaging in Telecoms. Putting the prices up because there’s a surge of people buying your product, even when you don’t have supply constraints, really annoys people. Conversely, raising prices to invest in the product works particularly well in Grocery and Airlines where people want to see better ready-meals and new aircraft.

Recommendations



This inflation research points to six main recommendations on how you should optimise, budget, and communicate price rises in future:

- **Correct Misconceptions:** Consumers' inflation perceptions aren't well calibrated and loss aversion means over-estimates are twice as damaging as under-estimates. You need to identify and remedy when and where you are being unfairly faulted for large price rises that didn't happen.
- **Engage Price Mavens:** Great swathes of your market aren't engaged with prices. They may not care. They might not have the time or ability to take an interest. Any communications should engage the 12% of consumers who will notice price changes and are interested in the causes.
- **Manage the Narrative:** Providing reasons for price rises has as much, if not more, impact on customer behaviour as the size of the price rise. You need to communicate the narrative underlying any price increase. Providing no reason is typically the worst strategy.
- **Optimise the Justification:** Price rises that are beyond your control or will eventually benefit the customer work best. But we have tested a limited set of reasons. Spend as much time identifying the optimal narrative as you spend identifying the optimal price.
- **Track Beyond Sales:** A successful price rise can be partly judged using sales. But there are other long-term effects. You should track these via Word of Mouth and try to shape that dialogue with appropriate call centre scripts, social media strategy, and so forth.
- **Tailor, Tailor, Tailor:** Every product is different. Which customers are Price Mavens differs. Which causes are most credible differs. Make sure everything is adapted to your product in this competitive market and at this stage of the economic cycle.

Detailed Methodology

Sampling

The primary research undertaken for this report was conducted online in March 2023, soon after the Cost of Living Crisis ended, whilst those memories were still fresh in respondents' memories. Respondents were a nationally representative sample of 2,021 UK consumers aged 18 and over who were responsible within their household for purchasing the products later presented to them during the experiment (mobile contracts, groceries, home insurance, flights, and/or streaming service subscriptions).

Behaviourlab

Behaviourlab is our bespoke online test platform that uses a randomised controlled trial to address key commercial questions more accurately. The method follows modern academic standards of eliciting consumer preferences and forecasting their behaviours.

This research involved putting participants through a realistic simulation of an online purchase task that was later repeated following a price increase (see Figure 10 for an example). Each participant was asked to purchase one of three products from one of five randomly chosen

industries: telecommunications (mobile phone contracts), grocery store (selection of groceries), insurance (home insurance options), air travel (different class seats for a flight to Spain), and streaming services (different sized bundles of streaming providers). To proceed, participants had to purchase one of the presented products.

Following the first purchase task, participants were asked to answer various questions after which they were again asked to purchase one of the products they had been shown. However, participants were also informed that the prices they had previously seen had increased due to one of seven randomly chosen reasons (see Figure 11). Specifically, these reasons included: (1) no reason given by the company (2) a rather vague "recent circumstances" (3) an increase in demand for the company's products (4) an increase in demand within the entire industry (5) cost increases for the company (6) cost increase industrywide (7) to allow for more investment into improving products. To make sure participants noticed the price increases, the previously seen prices were also shown just before the second task.

Figure 10: Example Product Purchase Journey

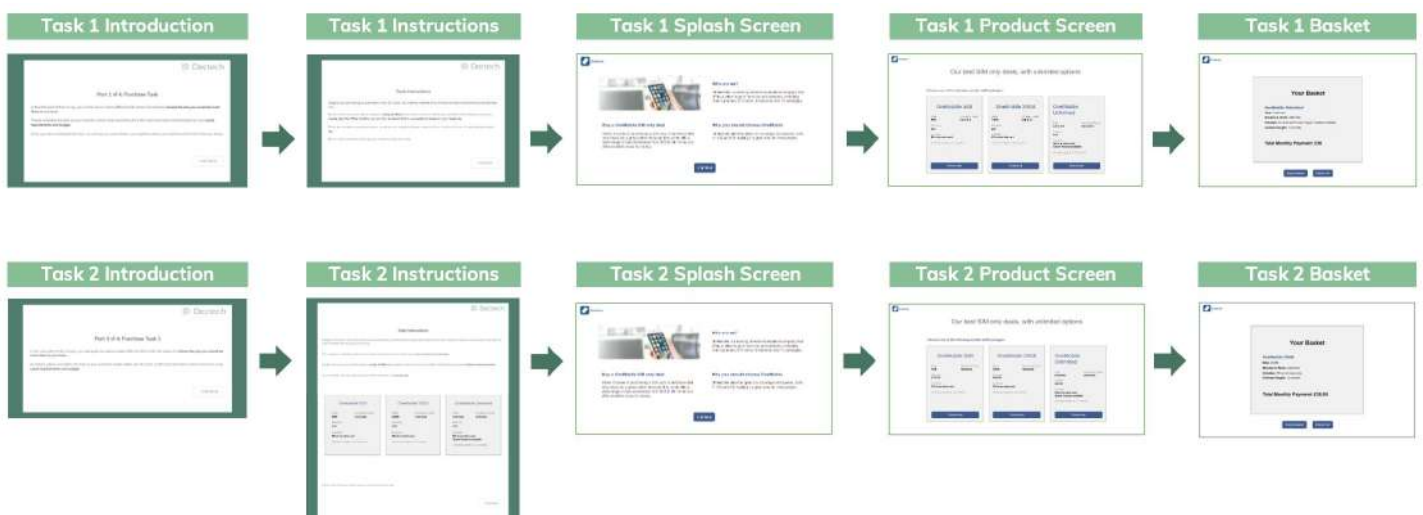


Figure 11: Summary of Experiment Conditions

	Element 1	Element 2	Element 3	Element 4	Element 5	Element 6	Element 7
Industries	Telecom	Grocery	Insurance	Airlines	Streaming		
Price Increase	Small (10%)	Large (20%)					
Justifications	No Reason	"Circumstances"	Firm demand	Industry demand	Firm costs	Industry costs	Investment

Modelling

After choosing a product in each journey, participants indicated their likelihood to purchase the product on an 11-point Likert Scale ranging from "Extremely Unlikely" to "Extremely Likely". By subtracting the purchase likelihood of the second purchase (after the price increase) from the purchase likelihood of the first purchase, we obtained a measure of the change in purchase likelihood. In addition to changes in purchase likelihood, we also saw some trading down to cheaper products. But about 70% of respondents stuck with the same product, which is why we focused on changes in purchase likelihood as a better indication of short-term sales impact.

Participants were also asked to rate the product they chose in the first purchase task on a number of different perception statements and to rate how they felt after seeing the price rise in the second purchase task. The emotion prompts included Happy, Sad, Annoyed, Confused, Interested, Excited, and Angry, and were all rated on a 7-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree". Principal component analysis was conducted with these emotion ratings to find a hybrid measure of Customer Satisfaction. This score was approximately normally distributed (N(0,1)) and was used as an indication of the impact of price increases on long-term brand value.

The analysis involved statistically modelling whether the size of the price increase and justifications shown affected the change in purchase likelihood and Customer Satisfaction. An ordinal logistic regression was used to model purchase likelihood and a linear regression was used to model Customer Satisfaction. The purpose of modelling is in part to control for the impact of other information (such as consumers' age) and thereby isolate and estimate the impact of different benefits on the dependent variables. The set of controlling factors included personality traits, demographics, and usual monthly spend on the product category presented during the experiment. Modelling also allows us to identify the statistically significant effects and avoid reporting insights that are simply noise.

About Dectech



Dectech provides the most accurate and best value forecasts available on how people will behave in new situations. As you can tell, we are enthusiastic proponents of doing behavioural experiments. Founded in 2002, we ran our first Behaviourlab study a few years later. We are based in London and staff owned. We regularly publish reports, podcasts and short briefs. Follow us on social media to receive them or stop by our website to sign up for email notifications.



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