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Is Psychological Pricing A Pricing Strategy or A Loophole

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Abstract

Ever wondered why prices end in 90 or 99? You can find '99' price tags everywhere, from your bar of chocolate at the supermarket to your monthly gym subscription. So why do products have prices ending in 99 rather than rounded up to the next figure? Or every time you see a discount, a 'limited-time offer,' or a 'best deal'—are you making the choice, or is it being made for you?

Welcome to the loophole of pricing strategies. These strategies are often viewed by consumers as straightforward business tactics, but they also operate on a psychological level that subtly manipulates consumer behaviour. This research paper dives into the concept of psychological pricing, examining how businesses leverage subconscious biases to influence purchasing decisions.

Key strategies such as charm pricing, price anchoring, compromise effect, scarcity illusion, loss aversion, transaction utility theory, and decoy pricing are analysed and discussed with real-world case studies. The findings below suggest that businesses use psychological triggers to maximize sales, trapping the consumer in an endless cycle of shopping.

1. INTRODUCTION

Pricing is far more than just covering costs or ensuring profitability- it is a psychological tool that shapes consumer perception and influences purchasing decisions. Every price tag we see has been carefully crafted to trigger specific emotions and behaviours, often without us even realizing it. Businesses use psychological pricing strategies to subtly manipulate our choices, making deals seem more attractive, urgency feel more pressing, and products appear more valuable than they actually are. From charm pricing ($9.99 instead of $10) to price anchoring (displaying a high original price to make a discount seem valuable), these tactics are designed to push consumers toward making purchases they might not have planned.

But do these strategies truly work, or are they just clever tricks? How do they influence real-world businesses, from high-end luxury brands to everyday grocery stores? Through real-world case studies and consumer research, the paper researches how businesses use pricing as a silent but powerful force of attraction that shapes markets, impacts profits, and even alters the way we perceive value of products itself.

2. Theoretical Framework

The study of psychological pricing falls under behavioural economics and consumer psychology. Key theories include:

- Charm Pricing: Setting prices just below a round number (e.g., $9.99 instead of $10) to make them seem lower and more appealing.

- Compromise Effect: Consumers choose a middle option between extremes, perceiving it as the most balanced and reasonable choice.
- Decoy Pricing: Aa strategy where a less attractive option is introduced to make another choice seem like a better deal.
- Loss Aversion: Consumers perceive gains and losses differently, leading to irrational financial decisions.
- Anchoring Effect: The first price a consumer sees influences their perception of what is reasonable.
- Scarcity Illusion: People fear losses more than they value gains, making them more likely to spend when faced with perceived scarcity.
- Transaction Utility Theory: Consumers value a purchase based on both its actual worth and the perceived deal or fairness of the price.

3. 3.Key Psychological Pricing Strategies

3.1 Charm Pricing & The Power of '9'

Research shows that prices ending in .99 or .95 create the illusion of a lower cost (e.g., $9.99 vs. $10.00). Consumers perceive the first digit as the primary reference, making $9.99 feel significantly cheaper than $10.00, despite the negligible difference. Due to what is known as the left-digit effect, customers tend to round to the next lowest monetary unit. Consumers see the left digit first, and so instinctively form an opinion on price before our rationale can catch up. A lower first number at the start of a price (e.g. $3.99 vs. $4.00) has a huge psychological impact, even though the price is more or less the same. Endings in 99 increase sales of low value items, with the customer focusing on the lower digit on the left. Prices are a key product feature. They are immediately evident and extremely relevant when customers make their purchase decision. However, the 99 example tells us a lot more than just why there is a pile of one cent coins lying at the bottom of every wallet. More importantly, this pricing tactic highlights how customers are not always rational when thinking about price. And this is where psychological pricing comes into play. The left-digit effect is one of the oldest and simplest examples to explain customer behaviour.

3.2 Price Anchoring

For some products, customers have certain price points in mind. For others, they need an anchor. The trick is to create a reference price that is higher than the final price. In an experiment, a group of customers were asked if they would be willing to pay $189.99 for a new TV, and the majority considered the product to be overpriced. The next group were presented with a slightly different scenario: they had the opportunity to buy a $500 TV with around 62% reduction, a radio for $189.99. Both groups were actually offered the same radio for the same price, but the group offered the discount were much more willing to buy the product. Retailers set a high initial price before offering discounts, making the final price seem like a bargain. For example, luxury brands often introduce a 'premium' model to make the standard model appear more affordable.

3.3 The Compromise Effect

Imagine you are in the supermarket, looking for a bottle of juice. You have the choice between three, one for $5 other for $ 10 and one for $15. You are not familiar with the brands or quality. Which one do you buy? Did you choose the juice for $10? Few people will stand in a supermarket aisle calculating the optimal price for one product. Customers tend toward the middle, especially with decisions that seem insignificant. They assume they can't go wrong with the standard, middle option. Choice architecture can play a fundamental role in the pricing of a wide range of products and services. Providing an adequate

number of available options can nudge the customer to a more valuable product choice, and by that it means also valuable for the seller. When given three choices—one cheap, one expensive, and one in between- consumers tend to choose the middle option. This technique is seen in subscription plans too for apps such as Netflix (e.g., Basic, Standard, Premium).

3.4 Scarcity Illusion

The less of something there is, the more people tend to want it. This is what the Scarcity Illusion is about. It is a psychological trigger that influences consumer behaviour by creating a sense of urgency. Businesses frequently employ tactics such as limited-time offers or low-stock alerts like 'Only 2 left in stock', to encourage impulsive purchasing decisions. This strategy is widely used by drop shippers, e-commerce platforms, and retailers to drive sales by leveraging the fear of missing out (FOMO). The effectiveness of this approach can be explained through Robert Cialdini's Principle of Scarcity, one of the six principles of persuasion outlined in his book Influence: The Psychology of Persuasion. Cialdini argues that people instinctively perceive scarce or exclusive items as more valuable- such as limited-edition items, often prioritizing them over readily available alternatives. This reaction is deeply rooted in human psychology, as scarce resources historically signified survival advantages.

For instance, imagine you are in a shopping mall and see a sign outside a popular sneaker store that reads, 'Limited Stock: Last Few Pairs Available!' Even if you weren't initially planning to buy shoes, you might feel an urge to purchase them immediately, fearing you'll miss out. This sense of urgency overrides rational decision-making, pushing you to act quickly before the opportunity disappears. When businesses create artificial scarcity—whether through limited stock, flash sales, or exclusive memberships—they tap into this ingrained response, driving higher sales while making their products appear more desirable and exclusive.

3.5 Loss Aversion in Pricing

Consumers are more likely to pay for a subscription they barely use rather than cancelling it, as cancelling feels like a loss. Gyms and streaming services capitalize on this psychological bias.

A well-known experiment that demonstrates loss aversion is the Kahneman and Tversky (1979) Prospect Theory Study.

In this experiment, participants were given two sets of choices:

Gain Scenario:

- Option A: A guaranteed gain of $500.
- Option B: A 50% chance to gain $1,000 and a 50% chance to gain nothing.

Most participants chose Option A because they preferred a sure gain over a risky but potentially larger gain.

Loss Scenario:

- Option C: A guaranteed loss of $500.
- Option D: A 50% chance to lose $1,000 and a 50% chance to lose nothing.

  Surprisingly, in this scenario, most participants chose Option D, opting for the gamble to avoid a sure loss, even though the expected value was the same.

3.6 Transaction Utility Theory

A social experiment involving transaction utility theory was conducted by Richard Thaler, who originally

proposed the theory. It involved how people perceive the fairness of prices in different contexts. In this **experiment, participants were told the following scenario:**

- They were at a store looking at a radio priced at $50.
- A friend then tells them that the same radio is available for $40 at another store just 20 minutes away.
- The participants were then asked: Would they travel to the other store to save $10?

In a second version of the experiment:

- Participants were instead asked about a more expensive item, such as a TV priced at $500, with a discount at another store for $490.
- Again, they were asked whether they would travel 20 minutes to save the same $10.

In the case of the $50 radio, a significant number of people said they would travel to the other store to save $10. However, for the $500 TV, far fewer people were willing to travel for the same $10 savings.

This experiment demonstrates transaction utility theory because people don't evaluate savings in absolute terms (i.e., $10 is $10), but rather in relative terms. A $10 discount on a $50 radio feels like a better deal (20% off), whereas a $10 discount on a $500 TV feels negligible (only 2% off), even though the savings are identical.

This highlights how people perceive deals based on the relative value of savings compared to the original price, not just the actual monetary benefit.

3.7 The Decoy Effect

In some cases, businesses strategically introduce a product that is not intended to sell but rather to influence consumer decision-making. This technique, known as decoy pricing, involves adding a deliberately less attractive option to make another choice appear more favourable. It is particularly effective in upselling bundles and guiding consumer preferences.

For instance, a newspaper initially offered two subscription options: 'online only' and 'print + online.' Observing that most subscribers chose the lower-value online-only package, they introduced a 'print-only' option at the same price as 'print + online.' This decoy option made the bundled package appear significantly more valuable, leading to a substantial increase in its adoption. By incorporating an intentionally inferior choice, businesses can manipulate perceived value and subtly steer consumers toward a more profitable option, leveraging their natural tendency to compare relative benefits.

4. Case Studies

Apple Inc.: Price Anchoring Strategy

Apple Inc. Employs price anchoring as a key component of its pricing strategy. Rather than introducing premium models first, Apple introduces both its premium models (iPhone 14 Pro and iPhone 14 Pro Max) and base models (iPhone 14 and iPhone 14 Plus) simultaneously. However, the Pro models are significantly pricier, with the iPhone 14 Pro beginning at $999 and the iPhone 14 Pro Max at $1,099, compared to the base models which begin at $799 for the iPhone 14 and $899 for the iPhone 14 Plus. By grouping the pricier Pro models alongside the cheaper base models, Apple uses price anchoring to make the cheaper models look like better deals. This psychological strategy makes mid-range products more appealing, and consumers perceive them as more reasonable in comparison. Apple's successful implementation of price anchoring has driven sales, which has resulted in the brand's strong stance in the market. Apple's 2022 average selling price for iPhones was $899, which illustrates how consumers will opt for mid-to-high-end versions if premium versions are priced alongside them.

Amazon: Scarcity Tactics and Charm Pricing

Amazon effectively uses scarcity tactics and charm pricing to create urgency and boost conversions. For example, product pages usually contain alerts such as 'Only 3 left in stock-order soon,' which triggers consumers' fear of missing out (FOMO) and results in impulsive purchase decisions. In addition to this, Amazon also uses charm pricing, in which products are priced just below a round number (e.g., $19.99 instead of $20), using the left-digit effect to make the price appear lower than it is. Prices ending in .99, a study by Cornell University discovered, can increase sales by up to 24%. This combination of scarcity and charm pricing is one of the primary drivers of Amazon's success, as the organization has generated over $500 billion in revenue as of 2022 on an annual basis. Through infusing rapid and impulsive buying behavior, Amazon maintains its reign over the e-commerce market.

McDonald's: Decoy Pricing in Meal Combos

McDonald's utilizes decoy pricing as an effective strategy to encourage higher spending on meal combos. McDonald's offers a 'decoy' meal option- a larger meal or extra item- at a low price difference which makes the next larger option appear to be a better value. As an example, a small combo might be $5, medium $6, and large $6.50. The subtle difference between the medium and large sizes encourages customers to opt for the bigger combo, as they believe they're getting more value for a small price add-on. This strategy has been shown to increase average transaction values significantly. In fact, McDonald's reported that their combo and value meal strategies were among the drivers of their U.S. sales that totaled more than $23 billion in 2022. This pricing strategy enhances customer satisfaction while enhancing overall revenue by encouraging larger purchases.

- Walmart's Pricing Experiment: Charm Pricing
  Walmart tested traditional "9-ending" prices ($4.99) versus round prices ($5.00). Sales of items priced at $4.99 increased significantly, confirming the power of charm pricing.
- MIT & University of Chicago Study on Women's Clothing: Charm Price and Compromise Effect.
  Researchers tested three prices for the same item ($34, $39, and $44). The $39 price fared best of the three, proving that customers selected the "9-ending" price even when it was not the lowest.
- Economist Subscription Model: Decoy Effect Study
  In a prominent pricing study by Dan Ariely, The Economist offered three subscription models:

1. Online-only: $59
2. Print-only: $125
3. Print & Online: $125

Few chose the print-only option, but its presence made the print + online option appear to be a great deal. After the print-only option was removed, more people chose the cheaper online-only plan. This showed how placing a well-positioned "useless" option can push consumers towards a specific option

5. How the Brain Responds to Pricing: Neuroscientific insights

5.1 Amygdala (Emotional Decision & Fear Response)

Pricing at the higher end could stimulate the amygdala, which is associated with the sense of pain. This is why high-end brands underpin high prices with rarity, so that the buying becomes a reward rather than an expense.

Example: When people see "Limited Time Only" or "Exclusive Offer," their amygdala triggers a fear of missing out (FOMO), leading to an impulse buying.

5.2 Nucleus Accumbens (Reward Centre Activation)

Discounts and promotions activate the reward centre of the brain, leading to the release of dopamine. That is why flash sales and discounts (e.g., Black Friday) are so tempting and create a sense of urgency.

Study: fMRI scans showed that when people looked at a price cut, their nucleus accumbens was stimulated, indicating pleasure and reward expectation.

5.3 Prefrontal Cortex (Rational Thinking & Value Judgments)

Customers rationalize purchases with the prefrontal cortex. That is why price anchoring works—if a higher price is presented first, the lower price appears to be a bargain.

Example: Restaurants place the most expensive item first on a menu to make everything else appear less expensive.

5.4 Pain of Paying: Why Credit Cards Reduce Spending Pain

People feel more "pain of paying" when they pay in cash compared to credit cards since paying cash engages the insula, that part of the brain associated with loss aversion. That is why companies embrace digital payments-they reduce inhibition to spend.

6. Conclusion

Should companies be allowed to manipulate consumers perceptions? Are consumers making right decisions, or are they being deceived?

Psychological pricing is more than just a set of business tricks—it's a subtle, yet powerful force that shapes how we make buying decisions. From the seemingly harmless "$9.99" price tag to the fear of missing out on limited-time offers, businesses use these strategies to tap into our subconscious, guiding us toward purchases we might not have made otherwise. But are we truly making our own choices, or are we being gently nudged in directions we never intended? While these tactics can lead to higher sales and greater profits, they also raise questions about how far companies should go in influencing our choices.

At its core, psychological pricing isn't just about numbers on a tag—it's about understanding the way our minds work and how our perceptions of value can be shaped. As consumers, becoming more aware of these techniques helps us make smarter decisions and resist being nudged in ways we don't fully realize. In the end, this research shows that pricing isn't just a business strategy; it's a reflection of how deeply our emotions and biases are tied to the choices we make in the marketplace.

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