

The Decoy Effect: Evidence from Consumer Pricing Decisions

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Abstract

This study investigates the effectiveness of the decoy effect in influencing consumer decision-making under different pricing conditions. An online survey was conducted among 91 participants using hypothetical scenarios involving streaming service subscriptions and fast-food meal plans. Participants made purchasing decisions under control, discount, and markup conditions before and after being informed about the decoy effect. The results suggest that the decoy effect influenced purchasing decisions, with discounts increasing preference for the target option and markups reducing its attractiveness. After participants became aware of the pricing strategy, its influence weakened. Only minor differences were observed across age groups and gender, while ethical perceptions of personalised and decoy pricing were generally neutral. These findings highlight the importance of pricing strategies and consumer awareness in shaping purchasing behaviour.

Keywords: Decoy effect; Consumer behaviour; Personalised pricing; Consumer awareness; Pricing ethics

1. Introduction

Consumer decision-making has long been an important area of research in economics, marketing and psychology. Understanding how consumers choose between competing products enables businesses to develop more effective marketing strategies, improve customer satisfaction and increase profitability. Traditional economic theory assumes that consumers make rational decisions by carefully evaluating all available alternatives and selecting the option that maximises their utility. However, behavioural economics has demonstrated that consumers frequently rely on heuristics and cognitive biases, causing them to deviate from fully rational behaviour. One of the most widely studied cognitive biases is the decoy effect, whereby the introduction of an additional but less attractive option alters consumers' preferences between two existing alternatives.

The growing use of sophisticated pricing strategies has made the study of the decoy effect increasingly relevant. Advances in artificial intelligence, business analytics and digital marketing have enabled firms to collect large amounts of consumer data and use this information to personalise prices, recommendations and promotional offers. Pricing strategies such as personalised discounts, markups and dynamic pricing allow businesses to influence purchasing decisions more effectively than ever before. Although these approaches may improve business performance, they also raise important questions regarding consumer autonomy, fairness and the ethical use of behavioural marketing techniques.

Previous research has consistently demonstrated the existence of the decoy effect across a variety of experimental settings. However, recent studies suggest that its effectiveness may depend on several con-

textual factors, including the type of product being evaluated and the characteristics of consumers. In addition, relatively little research has examined whether consumers become less susceptible to the decoy effect after learning about the pricing strategy, or how consumers perceive the ethical acceptability of personalised pricing and decoy pricing. Given the increasing use of artificial intelligence and data-driven pricing strategies, these issues have become increasingly important for both researchers and practitioners.

The aim of this study is to investigate the effectiveness of the decoy effect under different pricing conditions. Specifically, the study examines whether personalised discounts and markups influence purchasing decisions, whether awareness of the decoy effect changes consumer behaviour, whether responses differ across age and gender groups, and how consumers perceive the ethical acceptability of these pricing strategies. To address these objectives, an online survey was conducted using a series of hypothetical purchasing scenarios involving streaming services and fast-food meal plans. The remainder of the paper is organised as follows. Section 2 introduces the decoy effect and its underlying principles, Section 3 reviews the relevant literature, Section 4 describes the survey design and methodology, Section 5 presents the empirical findings and compares them with the existing literature. Section 6 provides implications, and Section 7 concludes the study.

2. Decoy Effect

Asymmetric dominance is the technical term for the decoy effect (or attraction effect). This phenomenon occurs when an apparently irrelevant third alternative (the decoy) is added to a choice set and thereby alters the relative preference between the two original options. The decoy itself is *asymmetrically dominated*: One option is dominant over another if it is better in every respect (e.g., cheaper and higher quality), whereas asymmetric dominance occurs when this superiority holds only relative to one of the two original options. The decoy is constructed to be inferior only to just one of the original choices (the target) which has the effect of increasing preference for the dominating option. A common example appears at cinemas or coffee shops, where the medium size is priced so close to the large that it functions as a decoy, nudging customers toward the large. This works because consumers often struggle to judge absolute value and instead rely on relative comparisons between the options presented.

Because the decoy is priced similarly to the target but offers noticeably less value, it makes the target appear far more attractive by comparison, biasing choice away from the competitor. In a straightforward two-option choice, each alternative might be selected roughly 50% of the time; once a decoy is introduced, the target might rise to 60% while the competitor falls to 40%. The decoy itself is rarely chosen, since it is transparently inferior to the target, yet its mere presence shifts the ratio of choices between the other two options. This also generates something of an illusion of control: consumers feel they have correctly identified and avoided the “bad” option, reinforcing confidence in a choice that was, in fact, shaped by the decoy’s presence.

Personalised algorithms extend this logic by using consumer data to estimate an individual’s maximum willingness to pay, then constructing a custom decoy matrix so the consumer completes the purchase without feeling overcharged. By adjusting perceived value in real time, firms can steer consumers toward a specific product while charging close to the maximum they are willing to spend. This functions as a form of anchoring, where the decision may feel logical and economical to the consumer, even though the underlying reference point (their sense of what represents “good value”) has itself been engineered (Farmer et al., 2017).

3. Related Literature

3.1. Consumer decision-making and the decoy effect

Consumer decision-making has long been a central topic in economics, marketing and psychology. Traditional economic theory assumes that consumers behave rationally by evaluating all available information and selecting the option that maximises their utility. However, behavioural economics has challenged this assumption by demonstrating that individuals frequently rely on heuristics and cognitive shortcuts when making decisions, causing them to deviate from fully rational behaviour. These systematic deviations, commonly referred to as cognitive biases, influence how consumers evaluate information, compare alternatives and ultimately make purchasing decisions. According to Kahneman (2010), understanding these biases enables businesses to better anticipate consumer behaviour and develop more effective marketing strategies. Similarly, Wolf (2016), argues that cognitive biases reflect natural tendencies in human thinking that often lead individuals to make irrational decisions while remaining convinced that they have behaved logically.

One of the most widely studied cognitive biases in consumer behaviour is the decoy effect. The decoy effect occurs when consumers alter their preference between two existing alternatives after the introduction of a third option that is intentionally designed to be less attractive. Although the additional option is rarely selected, its presence changes the perceived value of the remaining alternatives, making one of them appear substantially more attractive. Chen et al. (2025) define the decoy effect as a situation in which individuals modify their preferences between two initial options following the introduction of an asymmetrically inferior third alternative. Likewise Frederick et al. (2014) explain that the unattractive third option enhances the attractiveness of the option it most closely resembles, thereby influencing consumer preferences despite providing no additional value itself.

The foundations of the decoy effect were established through the pioneering work of Huber et al. (1982) and Tversky and Simonson (1993), who demonstrated that consumer preferences are often context dependent rather than fixed. Their experiments showed that introducing an asymmetrically dominated alternative could systematically shift preferences towards the dominant option, even though the decoy itself was rarely selected. Since these early studies, considerable research has examined both the existence of the decoy effect and the psychological mechanisms responsible for it. As a result, the decoy effect has become one of the most influential examples illustrating that consumer decisions are affected not only by the characteristics of individual products but also by the context in which alternatives are presented.

The mechanism underlying the decoy effect is relatively straightforward. Consumers frequently evaluate products across multiple attributes, such as price, quality, features or perceived value. Wedell and Pettibone (1996) explain that the introduction of a carefully designed decoy directs consumers' attention towards one of the original alternatives, increasing its attractiveness despite no objective improvement in its characteristics. Connolly et al. (2013) describe the phenomenon using two competing alternatives that each dominate on different attributes. A third option is then introduced that is clearly inferior to one of the existing alternatives while remaining comparable to it. Logically, since the decoy is dominated, rational consumers should simply ignore it, leaving preferences between the original two alternatives unchanged. In practice, however, the decoy substantially increases the likelihood that consumers select the superior neighbouring option, illustrating that purchasing decisions are influenced by relative comparisons rather than objective evaluations alone.

Ariely (2008) further argues that purchasing decisions rarely involve a single attribute. Consumers simultaneously evaluate prices, product quality, additional features and perceived benefits, making them particularly susceptible to contextual influences. By strategically introducing a decoy, marketers can redirect consumers' attention towards the option they wish to promote without altering the underlying characteristics of the products themselves. Consequently, consumer choices that appear rational may in fact reflect subtle psychological influences embedded within the decision environment. This observation has contributed to the growing application of decoy pricing across a wide range of markets and has established the decoy effect as one of the most influential concepts within behavioural marketing research.

3.2. Factors influencing the effectiveness of the decoy effect

Although a substantial body of research has demonstrated the existence of the decoy effect, its robustness and practical significance remain subjects of continuing debate. Numerous experimental studies conducted over the past several decades have consistently shown that introducing an asymmetrically dominated option can influence consumer preferences. However, more recent research has questioned whether these findings generalise beyond carefully controlled laboratory environments. Devine et al. (2025) note that although considerable progress has been made in understanding the cognitive mechanisms underlying the decoy effect, the conditions under which it reliably occurs remain uncertain. Their review highlights several replication studies suggesting that the effect is more consistently observed when consumers evaluate numerical product attributes under laboratory conditions than when choices involve visual representations or real-world purchasing environments.

Similarly, Kaptein et al. (2016) argue that while the existence of the decoy effect itself is not disputed, recent failures to replicate earlier findings have led some researchers to question its broader scientific and practical importance. These mixed findings suggest that the effectiveness of the decoy effect may depend upon a variety of contextual factors rather than representing a universal feature of consumer decision-making. Consequently, further research examining different purchasing environments and pricing strategies remains valuable for improving understanding of when the decoy effect is most likely to influence consumer behaviour.

Another important factor concerns the nature of the product itself. Consumer decisions often differ according to whether products are necessities, luxury goods or frequently purchased items. Kubíčková et al. (2023), drawing upon earlier work by Kim and Hasher (2005) and Bettman et al. (1998), argue that purchasing decisions are highly dependent upon product characteristics. Routine purchases, such as food products, are frequently influenced by habits and previous experience, whereas decisions involving luxury goods or premium services typically require more deliberate evaluation across multiple attributes. Consequently, the same pricing strategy may produce different outcomes depending upon the product category being examined. This observation is particularly relevant to the present study, which compares decisions involving a digital streaming subscription with those relating to meal plans, thereby allowing the effectiveness of the decoy effect to be examined across two distinct purchasing contexts.

In addition to product characteristics, researchers have investigated whether demographic characteristics influence consumers' susceptibility to the decoy effect. Age has received particular attention, largely because older adults are often perceived as being more vulnerable to persuasion and manipulation. However, empirical evidence has challenged this common stereotype. Cuddy et al. (2005) noted that older individuals are frequently assumed to be more susceptible to various forms of consumer influence, yet subsequent research has generally failed to support this view. Instead, several studies suggest that

older consumers often make more consistent and rational purchasing decisions than younger individuals. Ross et al. (2014) and Berg (2015), for example, report that older adults demonstrate greater resilience to consumer influences and are less likely to exhibit irrational preferences during decision-making. Similarly, Tentori et al. (2001) and Kim and Hasher (2005) argue that greater life experience enables older consumers to recognise misleading contextual cues more effectively, allowing them to make more prudent purchasing decisions.

Interestingly, this apparent resistance may partly result from age-related changes in cognitive processing. Baltes and Baltes (1990) suggest that older adults become increasingly selective in allocating their cognitive resources, focusing their attention on information they perceive as most relevant. Although certain cognitive abilities, such as memory capacity, gradually decline with age (Sedek et al., 2013; Hess, 2014), this reduced willingness to engage with complex decision environments may actually protect older consumers from sophisticated contextual manipulations. Kościelniak et al. (2018) therefore argue that the decline in cognitive resources may paradoxically increase resistance to the decoy effect by encouraging individuals to disregard distracting alternatives and focus on the most meaningful product attributes. Collectively, these findings suggest that age may influence susceptibility to the decoy effect, although the direction of this relationship remains uncertain and warrants further investigation.

Gender has also been identified as a potential determinant of consumer responses to pricing strategies, although the available evidence remains relatively limited. Wu and Yu (2018) found that mental fatigue increased men's susceptibility to price-based decoy effects, whereas women's purchasing decisions remained comparatively stable. Similar conclusions were reported by Ďuríník (2013), who observed significant gender differences in responses to various product offers, and by Kubalová (2020), who concluded that men were generally more susceptible to decoy pricing than women. In particular, men appeared more likely to choose higher-value or more expensive alternatives following the introduction of a decoy, whereas women tended to remain committed to their original preferences. Although these studies suggest that gender may moderate the effectiveness of decoy pricing, relatively few investigations have examined this relationship, indicating that further evidence is required before firm conclusions can be drawn.

Overall, the existing literature suggests that the effectiveness of the decoy effect depends upon a combination of contextual and individual factors. Product characteristics, purchasing environment and consumer demographics all appear capable of influencing the extent to which pricing strategies affect consumer decisions. However, despite considerable research examining these factors individually, comparatively little attention has been devoted to understanding whether consumers become less susceptible after learning about the decoy effect itself. The present study addresses this issue by comparing purchasing decisions before and after participants are introduced to the concept, thereby examining whether consumer awareness moderates the influence of decoy pricing.

3.3. Artificial intelligence, personalised pricing and pricing ethics

The rapid development of artificial intelligence and data analytics has transformed the way firms interact with consumers. Modern businesses increasingly employ recommendation algorithms, personalised advertising and dynamic pricing systems to influence purchasing decisions and maximise profitability. Digital platforms such as Amazon, Netflix and Spotify continuously analyse consumer behaviour, previous purchases and browsing history to recommend products and services that are most likely to appeal to individual users. According to Yamamoto (2024), these AI-driven recommendation systems have become essential components of modern marketing by enabling firms to predict consumer

preferences and tailor marketing strategies to individual customers. Advances in business analytics and machine learning have further strengthened these capabilities by allowing organisations to optimise pricing decisions using vast quantities of consumer data.

One important consequence of these technological developments has been the increasing use of personalised pricing. Unlike traditional pricing strategies, personalised pricing allows firms to charge different prices to different consumers based upon their purchasing behaviour, willingness to pay or estimated demand. Similarly, dynamic pricing enables businesses to adjust prices continuously in response to changing market conditions. While these approaches may improve business efficiency and profitability, they have also generated growing concern regarding their impact on consumer welfare. Kamraju (2025) argues that algorithm-driven pricing strategies, personalised pricing and other forms of data-driven price discrimination raise important questions concerning market fairness, purchasing power and consumer protection. Consumers may unknowingly face different prices, experience hidden forms of price discrimination or be exposed to subtle pricing strategies designed to maximise company profits rather than consumer welfare.

These developments have contributed to an emerging literature examining the ethics of modern pricing strategies. Compared with other areas of business ethics, pricing ethics has historically received relatively limited attention (Elegido, 2014). However, growing public concern regarding increasingly sophisticated pricing practices has stimulated greater academic interest in issues of fairness, transparency and consumer trust. Nunan and Di Domenico (2022) argue that discussions surrounding pricing ethics extend beyond the fairness of individual prices to broader questions concerning market efficiency, consumer autonomy and value creation. While allowing firms the freedom to set prices promotes competition and product differentiation, greater pricing flexibility also creates opportunities for practices that consumers may perceive as manipulative or unfair. Consequently, understanding consumer attitudes towards pricing strategies has become increasingly important for both researchers and practitioners.

These ethical considerations are particularly relevant within the context of the present study. Although previous research has primarily focused on whether pricing strategies successfully influence purchasing decisions, considerably less attention has been devoted to understanding how consumers evaluate the fairness and acceptability of such strategies. Examining ethical perceptions alongside purchasing behaviour provides a more comprehensive understanding of consumer responses by recognising that effective marketing strategies may not necessarily be viewed positively by those they influence.

4. Survey Design

To investigate the influence of the decoy effect and its ethical acceptability, an online survey was conducted. An online survey provides an efficient means of collecting behavioral data from a diverse sample while ensuring that all participants are exposed to identical experimental conditions. The survey was designed to examine whether the introduction of an asymmetrically dominated option increases preference for the dominating alternative. It also measured participants' confidence in their choices, assessed whether awareness of the pricing strategy influences its effectiveness, and examined perceptions of the ethical acceptability of the decoy effect.

The survey was designed and administered using Google forms. The questionnaire comprised three sections, each serving a distinct purpose. To facilitate comparisons across demographic groups, the survey was distributed to participants from different age groups, including individuals aged 21 years or younger

and those over the age of 21. In the first section, participants were asked to report their age group and gender. Collecting these demographic characteristics enabled an examination of whether purchasing decisions differed across age groups and between males and females. The target sample consisted of at least 40 participants from each age group and 40 participants from each gender category to ensure balanced representation across the demographic groups.

Following the demographic questions, participants were presented with a hypothetical streaming streaming service scenario offering three subscription plans: Basic, which provided movie streaming only; Standard, which offered HD streaming for movies only; and Premium, which included HD streaming for movies and series together with offline downloads. The Standard plan, despite offering fewer features, was priced very close to the Premium plan and therefore served as the decoy. Participants were not yet aware of being subject to this pricing strategy. At this stage, participants were unaware that the pricing structure had been intentionally designed to incorporate the decoy effect. All prices were presented in Indian Rupees (INR), as the target population primarily consisted of individuals residing in India. Using a familiar currency ensured that participants evaluated the pricing options within a realistic economic context, thereby minimizing potential bias arising from currency conversion or unfamiliar monetary values.

After selecting their preferred subscription plan, participants were asked to rate their confidence in their decision using a seven-point Likert scale, where 1 indicated the lowest level of confidence and 7 indicated the highest. Measuring decision confidence provided additional insight into the effectiveness of the decoy by examining whether participants felt certain about their choices despite being exposed to a pricing strategy intended to influence their preferences.

The same sequence of questions was subsequently repeated under two alternative pricing scenarios. In the first, the Premium plan was offered at a discounted price, bringing it even closer to the price of the Standard plan. This manipulation was intended to examine whether a greater proportion of participants would choose the Premium option while continuing to believe that their decision was made independently of any pricing strategy. In the second scenario, the price of the Premium plan was increased above its original level to investigate participants' price sensitivity and determine whether the decoy effect remained effective when the price difference between the Premium and Standard plans widened.

Overall, this section of the questionnaire was designed to evaluate the effectiveness of the decoy effect under different pricing conditions. It also enabled comparisons of purchasing decisions and decision confidence across age groups and between males and females, providing further insight into how demographic characteristics may influence susceptibility to the decoy effect.

The second section of the questionnaire was designed to examine whether the decoy effect remained effective after participants became aware of the pricing strategy to which they had previously been exposed. Specifically, this section investigated whether educating participants about the decoy effect encouraged more deliberate decision-making and reduced their susceptibility to contextual influences.

The section began with a brief explanation of the decoy effect. Participants were informed that, in the previous scenarios, one option had been intentionally designed to make another option appear more attractive. They were told that this marketing strategy, known as the decoy effect, influences consumers' preferences by introducing an asymmetrically dominated alternative. Participants were also informed that the prices in the previous scenarios had been modified through discounts and markups to examine how such pricing strategies influence consumer decision-making.

Following this explanation, participants were presented with a new hypothetical scenario involving three fast-food meal options. The Small meal included a burger and fries, the Medium meal (the decoy) included a burger, fries, and a drink, while the Large meal included burgers, fries, a drink, and nuggets. As in the previous section, participants completed three versions of the scenario (i.e., a control condition, a discount condition, and a markup condition) and, after each choice, rated their confidence using the same seven-point scale.

This section was designed to examine whether awareness of the decoy effect altered participants' purchasing decisions and their confidence in those decisions. It also enabled comparisons across demographic groups, including age groups and gender, to determine whether awareness influenced some groups more than others. Finally, the analysis assessed whether informing participants about the decoy effect significantly changed the proportion of participants selecting the target option.

The third and final section of the questionnaire examined participants' ethical perceptions of the pricing strategies presented in the experiment. Participants were asked to indicate their level of agreement with a series of statements using a seven-point Likert scale, where 1 indicated strong disagreement and 7 indicated strong agreement.

The statements assessed several dimensions of ethical perception, including whether the pricing strategies were fair, whether participants felt manipulated by them, whether they would trust a company that employed such strategies, whether companies should disclose their use of these strategies, and whether personalised pricing and decoy pricing were ethically acceptable.

This section was designed to provide insight into consumers' ethical evaluations of these pricing practices. In particular, it examined the extent to which consumers consider it acceptable for firms to use consumer data and pricing algorithms to tailor prices and influence purchasing decisions, as well as their views on the ethical acceptability of the decoy effect as a marketing strategy.

The questionnaire was designed to measure the effectiveness of the decoy effect under different pricing conditions, including control, discount, and markup conditions. It also enabled an examination of how awareness of the decoy effect influenced decision-making across participants from different age groups and genders. The scenarios were designed to be realistic and familiar to participants, thereby enhancing the ecological validity of the study and encouraging responses that more closely reflected real-world purchasing behavior.

To preserve the integrity of the experimental design, all questions were marked as mandatory, preventing participants from skipping questions or accessing later sections before completing the preceding ones. This ensured that information about the decoy effect was revealed only at the intended stage of the questionnaire, thereby minimizing the risk of contamination across the experimental conditions.

Prior to data collection, the questionnaire was pilot tested to identify and correct any technical issues, ambiguities, or potential sources of bias. The wording of all questions was kept clear and concise, using straightforward language to facilitate comprehension. In addition, every participant received the same questionnaire and identical instructions, ensuring consistency in the administration of the survey.

5. Results and Discussion

This section presents the findings of the survey and examines the extent to which the results support the presence of the decoy effect under different pricing conditions.

The first part of the questionnaire examined participants' purchasing decisions in the streaming service scenario under three pricing conditions: a control condition, a discount condition, and a markup condi-

tion. In the control condition, the Premium subscription (the target option) was selected by 44 participants (~ 48%), making it the most frequently chosen alternative. The Basic subscription was selected by 14 participants (~ 15%), while the Standard subscription (the decoy) was chosen by 33 participants (~ 36%). These findings are consistent with the presence of the decoy effect, as the target option attracted the largest share of participants.

In the discount condition, preference for the Premium subscription increased further. A total of 60 participants (~ 66%) selected the target option, compared with 13 participants (~ 14%) choosing the Basic subscription and 18 participants (~ 20%) selecting the Standard subscription. Relative to the control condition, the number of participants selecting the target option increased substantially, while the popularity of the decoy declined. These findings suggest that reducing the price difference between the target and the decoy strengthened the attractiveness of the Premium subscription.

A different pattern emerged in the markup condition. The Standard subscription (the decoy) became the most frequently selected option, attracting 40 participants (~ 44%), while the Premium subscription was selected by 29 participants (~ 32%) and the Basic subscription by 22 participants (~ 24%). Increasing the price of the target option therefore reduced its attractiveness, indicating that price sensitivity moderated the effectiveness of the decoy effect.

Decision confidence remained relatively high across all three pricing conditions. Overall, purchasing decisions and confidence ratings were broadly similar across both age groups and gender. Minor differences were nevertheless observed, with participants aged over 21 years and male participants reporting slightly higher confidence in their decisions than younger participants and female participants. On average, their confidence scores were close to six on the seven-point Likert scale, compared with approximately five for the remaining groups.

The second part of the questionnaire examined whether awareness of the decoy effect altered participants' purchasing decisions. Before completing this part, participants were informed that the pricing structures presented in the previous scenarios had been intentionally designed to influence consumer choices and were provided with a brief explanation of the decoy effect.

In the control condition, the target option attracted considerably fewer selections than in the streaming service scenario. The Basic meal was selected by 36 participants (~ 39%), while the Medium meal (the decoy) was chosen by 37 participants (~ 40%). Only 18 participants (~ 20%) selected the Large meal (the target option). These findings suggest that informing participants about the pricing strategy reduced the attractiveness of the target alternative.

A similar pattern was observed in the discount condition. Despite the lower price of the target option, the Basic and Medium meals each attracted 32 participants (~ 35%), while the Large meal was selected by 27 participants (~ 30%). Participants remained relatively confident in their decisions, with average confidence scores of approximately 6.2 on the seven-point Likert scale.

The markup condition produced comparable results. The Medium meal (the decoy) was again the most frequently selected option, attracting 41 participants (~ 45%), followed by the Basic meal with 34 participants (~ 37%). Only 16 participants (~ 18%) selected the Large meal, representing the lowest proportion of target choices across all pricing conditions.

Confidence ratings remained relatively stable across both age groups and gender, with older participants and male participants reporting slightly higher confidence than younger participants and female participants.

Overall, the findings from the second part of the questionnaire suggest that awareness of the decoy effect reduced participants' susceptibility to the pricing strategy. Unlike the first part of the questionnaire, neither discounts nor markups produced a substantial increase in the selection of the target option, indicating that informing participants about the pricing strategy weakened the influence of the decoy effect.

The final part of the questionnaire examined participants' ethical perceptions of the pricing strategies presented throughout the experiment. Responses across all statements were close to the midpoint of the seven-point Likert scale, averaging approximately four, indicating generally neutral attitudes towards the pricing practices. Participants neither strongly agreed nor strongly disagreed that the pricing strategies were fair, manipulative, trustworthy, or ethically acceptable. Similarly, opinions regarding the disclosure of such pricing strategies and the use of personalised pricing remained broadly neutral. Overall, these findings suggest that participants' ethical evaluations of decoy pricing were mixed and that the perceived acceptability of these pricing strategies may depend on the context in which they are implemented and the degree of transparency provided by firms.

6. Implications

According to the findings of this study, the decoy effect as a pricing strategy could be used by businesses to not only create an illusion of a better deal and influence consumer choice, but also increase the uptake of a particular product. When paired with a discount, the decoy effect can strengthen the preference for the target product, while when paired with a markup, it could weaken or even reverse the intended effect by driving consumers away from purchasing the target product. Therefore, many factors must be considered when using a decoy to its full potential. For instance, understanding the interaction between algorithmic personalised pricing and behavioural biases is imperative before applying the decoy effect to maximise its potential and encourage more customers to purchase the product a firm intends to promote. However, the findings also suggest that businesses cannot assume that the decoy effect will consistently produce the desired outcome, as factors such as consumer awareness may alter its effectiveness. With growing advancements in technology and AI, algorithms can analyse data on past purchasing patterns and consumer preferences. Through this information, firms can not only influence consumer choice but potentially shape it through customised advertisements and pricing. This makes it increasingly important for businesses to consider brand reputation and consumer trust. While using pricing strategies such as the decoy effect could improve sales, it is important for firms to maintain a level of transparency and respect consumer privacy.

The results of this experiment also suggested that consumer preferences can be altered to the firm's advantage easily. However, consumers are not just passive victims of the decoy effect. After participants were educated about the pricing strategy a significant shift in responses was observed and confidence levels regarding the decision increased simultaneously. This observation could imply that awareness of the pricing strategy encouraged the participants to compare options based on actual needs instead of making decisions purely based on relative comparisons. In this situation knowledge acted as a counterweight to the cognitive bias but in a real life scenario that would depend on the strength of the decoy and on how deeply the bias was ingrained. Through the recorded results, it can also be confirmed that consumers would benefit from understanding common pricing techniques as that would prevent manipulation of preferences while still making the pricing look appealing. Furthermore, with the rise of AI and personalized pricing it becomes increasingly imperative to encourage more deliberate decision-making.

Previous research has tested and proven the strength of the decoy and its effectiveness time and again. Building on that research this study explores the limitations and conditions of the decoy effect. This study contributes to finding what factors affect its working such as generational gap, gender differences, etc. and when its influence changes for example in a situation where the consumer is aware about pricing strategies. It also observes how the decoy effect operates among different pricing conditions for instance when it is paired with discounts and markups. While existing research often examines the bias itself, the findings of this study provide evidence that knowledge of the bias may alter subsequent choices. The experiment further examined not only whether consumers are influenced, but also how they perceive the fairness of being influenced. This study could encourage future research combining elements of behavioural economics and consumer psychology with personalised pricing and AI.

Finally, the key ethical takeaway from this research is at what point does influencing consumer choice become manipulation. Persuasion has always been a useful skill for every business but the line must be drawn before that persuasion converts to manipulation. When a deliberately designed inferior option is combined with personalized pricing many would agree that falls into the category of manipulation as transparency is almost completely lost and the focus shifts from persuading to shaping consumer decisions. While a general decoy affects everyone similarly, personalization could potentially target specific individuals based on their behaviour. Furthermore, when AI gets involved the information gap between firms and consumers only widens. While the results of this section of the study were relatively neutral, it does not necessarily imply that consumers would accept all forms of personalised pricing. Transparency is an important factor required to maintain the trust of the client and it is important to distinguish between helping consumers choose, influencing their decisions and exploiting their information. Therefore, it is important to set boundaries around using behavioural data to exploit known biases.

7. Conclusion

This study investigated the effectiveness of the decoy effect under different pricing conditions and examined whether consumer awareness influenced purchasing decisions. The findings suggest that the decoy effect affected consumer behaviour, with discounts increasing preference for the target option and markups reducing its attractiveness. However, after participants were informed about the decoy effect, its influence became weaker, indicating that consumer awareness may reduce susceptibility to contextual pricing strategies. Purchasing decisions and confidence levels were broadly similar across age groups and gender, while participants expressed generally neutral views regarding the ethical acceptability of personalised and decoy pricing strategies.

The findings highlight the importance of pricing strategies in shaping consumer decision-making and suggest that increasing consumer awareness may help individuals make more informed purchasing decisions. Nevertheless, the study has several limitations. First, the survey was distributed using convenience sampling, which may limit the generalisability of the results, as the sample may not fully represent the broader population. Furthermore, the majority of respondents were based in India, while a smaller proportion were based in the Middle East. As all prices were presented in Indian Rupees (INR), participants from outside India may have interpreted the price values differently or may not have converted them into their local currency before making their selections. This may have introduced measurement error into their responses and limited the applicability of the findings across different cultural and economic contexts. Additionally, the purchasing scenarios were hypothetical and did not involve real financial consequences; therefore, participants' stated choices may not fully reflect their behaviour in actual purchasing

situations. Finally, the online survey format provided limited control over participants' environments, meaning that factors such as distractions, differences in attention, or time constraints may have influenced responses. These limitations were considered when interpreting the findings and highlight the need for future research using larger and more geographically diverse samples, a wider range of product categories, and experimental settings involving real or incentivised purchasing decisions.

Future research could build upon these findings by examining the decoy effect using larger and more diverse samples across different countries, age groups, and socioeconomic backgrounds. This would allow researchers to determine whether cultural and economic differences influence responses to decoy and personalised pricing. Most importantly, future studies could examine the interaction between the decoy effect and AI-driven personalised pricing in greater depth. Conducting real-world or incentivised purchasing experiments would also provide stronger evidence of whether the patterns observed in hypothetical survey scenarios translate into actual consumer behaviour. Finally, future research could investigate whether educating consumers about behavioural pricing strategies produces a lasting change in their decision-making or whether its effect diminishes over time.

8. References

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