



How does Apple employ pricing strategies and the decoy effect?

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Abstract

This paper aims to explain how one of the leading electronic companies: Apple, uses behavioral economics in order to nudge consumers into spending more on its products through mainly, pricing strategies and the decoy effect. It is fascinating to see how firms use cognitive mechanisms to control consumer decision making, while presenting a free choice to them and how behavioral economics has become one of the major considerations for businesses when making decisions.

1. Introduction to Behavioral Economics

Most economics theories assume rational behavior of consumers, wherein consumers are assumed to demonstrate a certain behavior when making decisions.

Rational behavior indicates that consumers use all information available to make their decisions, leaving no room for information failure. This is a case where consumers have perfect information about, and have considered all the different products/services available in the market, marginal utility, price etc. This results in consumers often maximizing their satisfaction.

Behavioral economics is the implication of psychology into economics that attempts to explain the decisions and choices individuals make in practice. It helps to explore why people sometimes make irrational decisions, and why and how their behavior does not follow the predictions of economic models. [1]

In the 18th century Adam Smith, put forward the idea of “Invisible hand” which relates to an invisible factor that helps demand and supply reach market equilibrium automatically. This is said to take place when individuals make their own self interested decisions. In the process, he noticed certain behavior of consumers, relating to overconfidence, more fear for losses than they are eager to gain, more attracted towards short term benefits than long term etc led to initial stages of the development of behavioral economics theories.

In the 1970’s and 80’s, Israeli psychologists, Amos Tversky and Daniel Kahneman aimed to identify different consistent biases in the way people make decisions. They explained the “availability heuristic” where people often rely on easily recalled information, rather than actual data when evaluating the likelihood of a particular outcome. The psychologists also contradicted the “expected utility theory” ,which states that individuals will always choose the outcome which gives maximum utility, based on objective probability of outcomes, with the “prospect theory”, where individuals may choose a decision which does not necessarily maximize utility because they place other subjective considerations above utility and evaluate the gains and losses from it. [2]

Richard Thaler collaborated and built on the works of Teversky and Kahneman in the

1980’s, who received the Sveriges Riksbank Prize in Economic Sciences in memory of Alfred for his research identifying the factors that influence individuals’ economic decision making in 2017. He also received the title of “Father of economics”. After many observations, he explained the theory of “sunk cost fallacy” where individuals are reluctant to give up on plans that they have personally invested money/time/effort in, even if it means more risk. Thaler popularized the concept of “nudge” in his 2008 book: Nudge: Improving Decisions about Health, Wealth, and Happiness. A “nudge” takes advantage of human psychology and other concepts in behavioral economics.[3]

The Nudge theory is based on the idea that by using choice architecture (shaping the environment), one can influence the likelihood that a consumer prefers one option over the other. A factor of this theory is to maintain freedom of choice for consumers and have some control of the decisions that they make. [4]

2. Overview of Apple's pricing strategies

About Apple:

Apple is a multinational company renowned for its innovative products and services.

Apple was founded as Apple Computer Company on April 1st 1976, by Steve Jobs, Steve Wozniak and Ronald Wayne. The company designs, manufactures and markets smartphones, personal computers, tablets, wearables, accessories and sells a range of related services. Apple has been one of the most valuable companies in the world, ever since 2010.

Apple's brand image is presented as that of a younger, more ambitious and more creative compared to its competitors, such as Microsoft and other tech giants at the time. Moreover, its effective communication with its customers contributes to its brand, by conveying its goals, and what they are aiming for. This way they have always shown to be sleek, cutting edge and creative. Though Apple has expanded its product range as well as services to multiple fields, it maintains the reputation for its quality as well as its image by using premium pricing everywhere. Today it is one of the most easily recalled brands, as a result of continually reminding consumers of who they are and what they do. [5]

Apple's pricing strategies:

Apple uses product differentiation in order to make its products more unique and attractive to customers and increase its market demand. This combined with the brand image that it has established, helped the company stay ahead of its competitors. Apple has the power to control prices due to its product differentiation, brand loyalty, innovative advertising, which also enables it to use premium pricing. [6] This is a method of pricing that deals with setting high prices for developing the perception in the consumer's mind that the product must have a very high quality. Apple uses the policy of Minimum Advertised Price (MAP) where there is a minimum price at which retailers or resellers may advertise their products. [7] This way Apple ensures a minimum price at which its products are sold and maintains a premium price in the market, even through its distribution channels. This method aligns with Tim Cooks saying in an interview with Bloomberg Businessweek, "We never had an objective to sell a low-cost phone" The following are the cognitive mechanisms behind Apple's strategy of premium pricing.

Apple's pricing strategies align with the following theories.

- Veblen effect:

The Veblen effect refers to the perceived value exceeding the actual use of a product. Apple positions its products as luxury items. These products are veblen goods that are bought more for their status symbol rather than their actual use. These items are associated with exclusivity and status due to the brand image built over time. Apple appeals more towards people who wish to showcase their status in society, because of maintaining high prices for its products.

In 2016 Apple released the new iPhone X with features of face recognition, OLED display etc. This enabled the company to charge a starting price of \$999 which is significantly higher than that of the previous model, iPhone 8 which was charged a price of \$699 for the same storage capacity (64 GB). This way Apple can implement minor changes and still charge products at a significantly higher price for consumers. [8] • Loss Aversion:

Loss Aversion is the human tendency to feel losses much more than the gain and benefit. Over the period, Apple has built an ecosystem with its electronics, where iPhones, iPods, iPads, watches, Mac and other accessories are compatible and work with each other. As a result of Apple charging premium prices, a consumer is hence unlikely to switch to another product due to the perceived loss of high investment into products.

Apple products such as Apple watch are compatible and can be controlled when linked to an app on an iPhone, which cannot be installed on other platforms like android. Introducing exclusive software for Apple helped it create an ecosystem of electronics. This encourages consumers to buy more of Apple's accessories despite their high prices, as they are viewed more as necessities for usage.

- Reference pricing:

This is a method of pricing where a certain price is perceived as a reference price for consumers, which seems like a better deal when compared to prices individually or of other products. It refers to how much consumers expect to pay for a good/product in relation to another previously advertised price.

Apple introduced the services, iCloud+, tv+, Apple music, Apple arcade. These prices are individually set at \$0.99, \$6.99, \$10.99, \$4.99 respectively and are what consumers expect to pay. Apple then released a bundle, AppleOne, that provides subscriptions to all the listed services at a lower price of just \$16.95, which would have cost the consumers \$23.95 if bought individually. Though the bundle provides a significant discount, it is still profitable for Apple and is perceived as a good deal by consumers only because Apple has set premium prices as references when selling these services individually. [9]

3. Introduction to the Decoy effect

The decoy effect was studied in the early 80s, where John Payne, Joel Huber and Christopher Puto described this phenomenon and experimented it on snack choices at movie theaters. Also known as the “asymmetric dominance effect”, this effect describes how, when we are choosing between two alternatives, the addition of a third, less attractive option (the decoy) can influence our perception of the original two choices. [10] Decoys are completely inferior to one option (the target) and are partially inferior to another/ competitor (competing with the target). The decoy is priced in such a way, not for it to sell, but to make one of the options seem like a better deal, hence making it more attractive to consumers. Research was conducted where a movie theater had popcorn sizes, small and large, for \$3 and \$7 respectively. The researchers added a medium size for \$6.5, as a decoy. This made the large size seem more attractive, which increased the sales of large popcorn, hence indicating the presence of the decoy effect. The following is the cognitive mechanism behind the decoy effect. [11]

- Prospect theory and Reference Points:

The prospect theory suggests that individuals make decisions based on evaluating the perceived gains and losses of a decision. The decoy effect leverages this theory by presenting a third option, designed to make one of the other options more attractive. This decoy acts as a reference point in order to alter consumer preference based on the perceived relative value when comparing the decoy with the other options. [12]

Apple strategically employs this effect when presenting usually three options for iPhones: regular, pro, pro max. One or more of these are used as a decoy in order to make another model seem more attractive.

4. Implication of the Decoy effect in Apple’s case

Apple uses product line differentiation in order to employ the decoy effect and nudge consumers to spend more. The current iPhone series is priced at \$799, \$899, \$999 and \$1099. Though the prices seem reasonable for their models, each one of them leading up to the iPhone pro max at \$1099 has similar properties to that of a decoy.

The \$799 phone contains a battery of 3279mAh and a screen size of 6.1 inch, which is relatively small today, so the consumer decides to pick the iPhone plus at \$899 for the increased 4323mAh battery and the 6.7 inch screen size. The consumer would also notice that he/she could spend just \$100 dollars more for the iPhone 14 Pro, which offers features such as the telephoto camera, dynamic island cutout. However, the iPhone 14 pro includes a small 6.1 inch screen, a reduced battery of 3200mAh and an improved chipset: A16 Bionic, when compared to the iPhone 14 plus. [13]

As a result, the consumer would be willing to enjoy all the features and purchase the iPhone 14 pro max at just \$100 more. The consumer was initially willing to spend \$799, but is now considering spending \$300 more. This way, Apple strategically uses decoys to make the pricier option look more attractive to consumers and explains why Apple’s iPhone 14 Pro Max is the most popular model of the iPhone 14, which also accounted for a massive 77% of the total iPhone sales in the US during Q4, 2022.

5. Primary research to test the Decoy effect

In order to test this theory and see it function, here is primary research:

Aim - To investigate the decoy effect by presenting diverse scenarios and appropriate prices to respondents, involving the unreleased iPhone 15 concept.

Method - The survey was carried out using Google Forms, prompting respondents to choose a specific action: either considering purchasing the next model or sticking with the original one.

Sample - iPhone users who earned their living to purchase their phone.

Sample size ~30

Survey for the experiment:

The upcoming iPhone 15 is anticipated to launch soon this year. Compared to the iPhone 14, this brand new model offers an improved user experience with a new titanium case featuring rounded edges and advanced sensor technology for better photo quality in challenging lighting conditions at the same price (\$799). Additionally, it comes with a USB C charging cable and an increased battery life of 3877 mAH. Assume that you are willing to purchase this product.

(Note that you haven’t purchased the iPhone 15 yet and are still exploring other iPhone 15 models. Consider your priorities and fill out the survey. Your responses will be anonymous.)

Scenario 1:

You now have the option to spend an additional \$100 for the highest battery capacity available in this model, along with a larger screen size that is 0.6 inches bigger than the standard iPhone 15 model. Consider

- the iPhone 15 Plus
- Stick to the iPhone 15

Scenario 2:

You now have the option to spend \$200 to experience the latest processor A17 Bionic chip. This model also features the highest refresh rate of 120hz along with double the storage size (256 GB). This model comes with an additional 12 MP telephoto camera with a 3x optical zoom. Consider

- iPhone 15 Pro
- Stick to iPhone 15 Plus
- Stick to iPhone 15

Scenario 3:

However, the previous model would be at the cost of a lower display size and the lowest battery life among the iPhone 15s. Solve this issue by spending \$100 more for an even improvised camera that now offers a 6x optical zoom, with a significantly improved battery, a larger screen, the latest A17 bionic processor and enjoy all the possible features of this new iPhone. Consider

- iPhone 15 Pro Max
- Stick to iPhone 15 Pro
- Stick to iPhone 15 Plus
- Stick to iPhone 15

Analysis of the experiment:*When the iPhone 15 Plus was presented:*

Among the options of the iPhone 15 and the iPhone 15 Plus, the iPhone 15 had a significantly higher preference at 62.9%, leading by 25.1%. This indicates that the features of the iPhone 15 Plus, such as a larger screen size and higher battery capacity, did not appeal to consumers enough to justify the \$100 price increase.

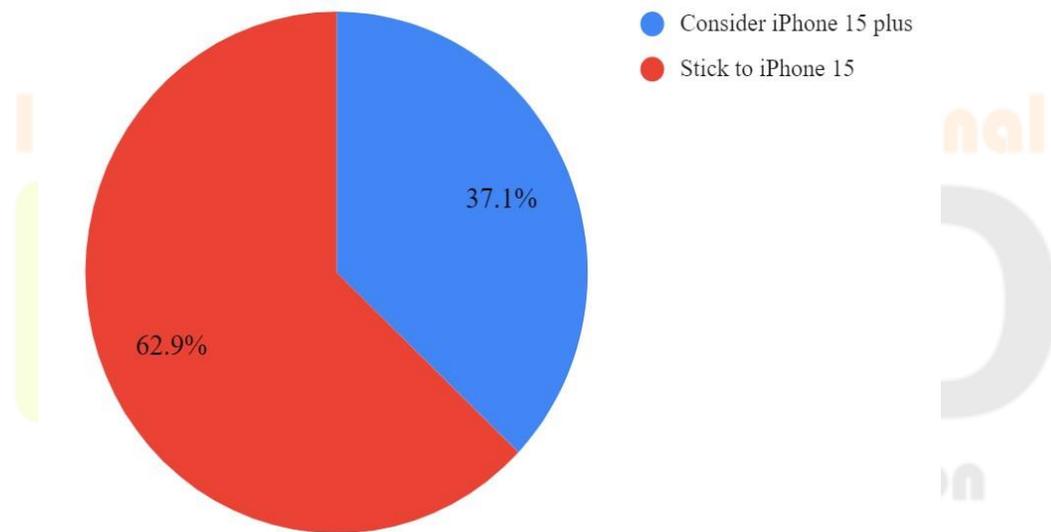


Figure 1: Customer preference with the introduction of the iPhone 15 Plus

When the iPhone 15 Pro was presented:

Among the options of the iPhone 15, iPhone 15 Plus, and iPhone 15 Pro, the majority of customers preferred the iPhone 15 Pro. It led with a 51.4% preference, surpassing the iPhone 15 by 11.4%. The significant increase in preference from the iPhone 15 to the iPhone 15 Pro, rather than to the iPhone 15 Plus, indicates that the features of the Pro model, including the latest processor, highest refresh rate, double storage size, and an additional camera, are highly attractive to customers despite the \$300 price increase from the iPhone 15.

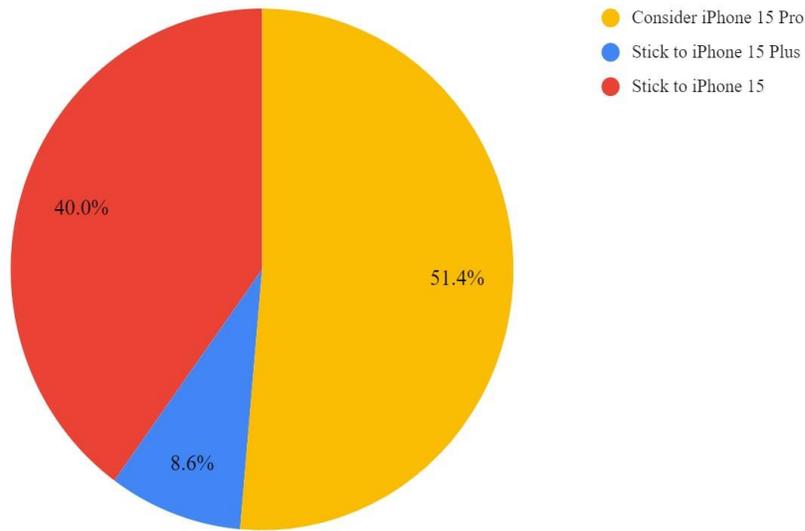


Figure 2: Customer preference with the introduction of the iPhone 15 Pro

When the iPhone 15 Pro Max was presented:

Among the options of the iPhone 15, iPhone 15 Plus, iPhone 15 Pro, and iPhone 15 Pro Max, the highest preference is for the iPhone 15 Pro Max at 34.3%, leading by 5.8% from the iPhone 15. This indicates that a majority of the respondents are willing to experience all the features of the iPhone 15 Pro Max, including an improved camera, the latest processor, improved battery life, larger screen size, and increased refresh rate, despite the price of \$1199.

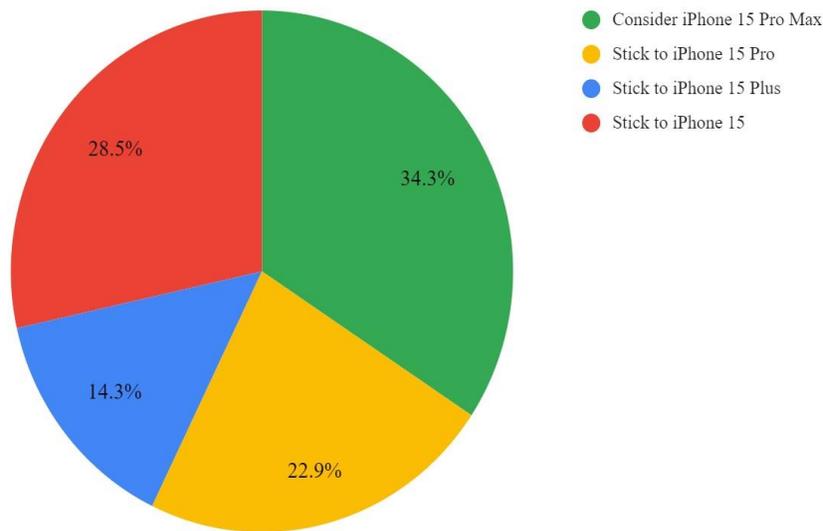


Figure 3: Customer preference with the introduction of the iPhone 15 Pro Max

Findings and conclusion of the experiment:

It is intriguing to observe that among the respondents, 20% of them exhibited clear signs of the decoy effect working effectively. They were attracted by the improved features offered at a specific increased price, ultimately leading them to choose the desired product Apple aims to sell: the iPhone 15 Pro Max. Additionally, the decoy effect partially functioned for some consumers who purchased either the iPhone 15 Pro or the iPhone 15 Pro Max without following every step towards the improved model. This accounted for 57.2% of the final sales, potentially generating significant revenue for Apple.

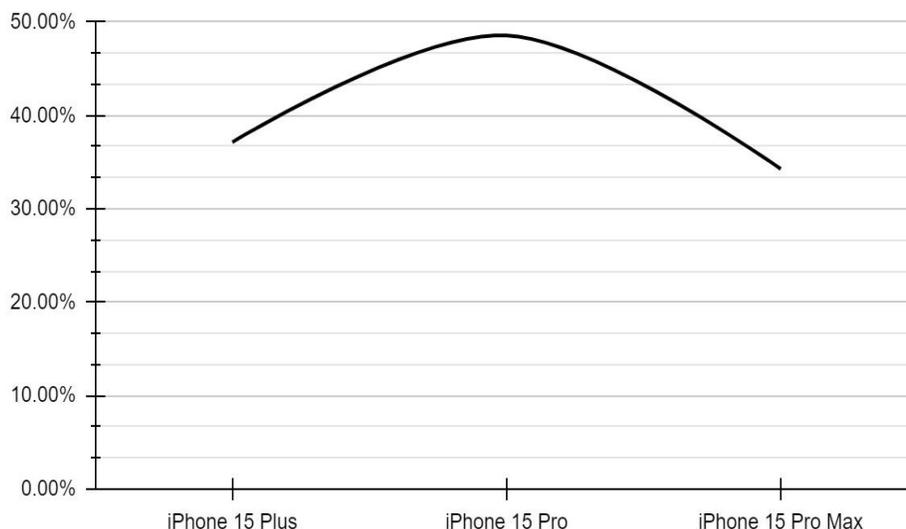


Figure 4: Change in customer preference with the introduction of a new iPhone 15 model

This graph presents an alternative approach to interpreting the survey results. It illustrates the percentage of individuals who shifted their preference to a different iPhone model after its introduction. The curve begins with the introduction of the iPhone 15 Plus, where 37.14% of consumers maintained their preference for the standard iPhone 15. As the iPhone 15 Pro was introduced, the percentage of customers switching to it increased to 48.57%. This positive upward trend in customers transitioning to the iPhone 15 Pro is evident in the graph. However, when the iPhone 15 Pro Max was introduced, the percentage of customers switching to it only increased by 34.28%, which was lower compared to the iPhone 15 Pro. This shift is depicted as a decline in the rate of consumer preference increase.

The graph lends support to the notion that the decoy effect was most impactful when the iPhone 15 Pro was introduced but less so when the iPhone Pro Max came into play. This raises questions about Apple's ability to make its Pro Max model significantly more appealing than the previously introduced iPhone 15 Pro.

In this context, the decoy product released by Apple, the iPhone 15 Plus, accounted for only 14.3% of total sales. Nonetheless, it effectively served its purpose by enhancing the perceived attractiveness and profitability of both the iPhone 15 Pro and Pro Max models to customers. Consequently, it can be concluded that Apple's decoy effect did not substantially improve consumer preferences when transitioning from the iPhone 15 Pro to the iPhone 15 Pro Max. However, when viewed cumulatively, the highest percentage of respondents expressed a preference for the iPhone 15 Pro Max model, indicating the success of the decoy effect. Furthermore, Apple's primary concern is likely the cumulative preference for its products, as it represents the final measure of consumer preference. Given that the iPhone 15 Pro Max enjoys the highest preference, it reinforces the presence of the decoy effect and underscores its profitability for Apple.

6. Evaluation

Over time, behavioral economics has become an integral factor that determines the pricing and marketing of many firms today. Implementing such theories improves consumers' perception about the product, making them seem more valuable, hence providing firms with a better brand image and higher sales. This saves big firms a lot of the finances that they invest into improving the quality of their products, introducing new features etc in order to gain a competitive advantage. Moreover, Apple's promising quality and brand helps them retain most of their consumers, using exchange offers. This saves them the effort of investing into intensive marketing to attract new consumers. Hence, with a mix of consumer behavior and product innovation, Apple has been the market leader of the electronics industry for a long period of time.

Today, the decoy effect can be observed in various goods and services. Starting from a bag of chips to the automobile industry, this strategy is widely and is handled by the marketing department of businesses. The uses of this strategy are vast in the field of the tertiary and secondary sectors, that represent the services and manufacturing sectors respectively. These sectors generally operate by selling goods and services and are termed as price makers. This ability to set a price is more common due to the nature of markets in these sectors being more of monopolistic competition, where there is high product differentiation which enables the producer/ seller to charge a particular price for it. However, the primary sector faces the challenge of not being able to leverage this theory since there is very little scope of presenting products differently to set a differentiated price. For example, agriculture is a major part of the primary sector. Most markets in this industry are perfectly competitive where products are homogenous. A bag of potatoes from farmer A is identical to the bag of potatoes from farmer B. Hence, an individual farmer (the producer) cannot set a particular price but can only accept the price determined by market forces. Due to lack of product differentiation, the decoy effect cannot be implemented largely in the primary sector but has a significant role in marketing of industries in the secondary and tertiary sector.

However such strategies may not have the same impact in the case of developing nations. Compared to developed nations, developing nations have a lower GDP, which refers to a lower income. This may prevent the veblen effect from being as effective since people with a lower income are more conservative about their money and would not intend to purchase high-end products to promote their social status. Developing nations may not have access to gain information about products in the market. For strategies such as reference pricing, consumers are assumed to have information about prices of products with/ without offers in order for it to seem profitable to them. This may not have a major impact on consumers of developing nations where there isn't as much access to technology, internet connectivity and media outlets to know of these prices in order to make an informed decision. As a result, prices may not appear to look cheaper, and consumers may end up not purchasing them.

Lack of information also prevents consumers from knowing of all the features of different iPhone models. Moreover, for products like the iPhone where there are minute but significant differences between models, consumers not being able to explore other models and features will prevent the decoy effect from having an impact on decision making. For example, information may spread through word of mouth where one person has purchased a particular iPhone. People around would not be willing to take the risk of purchasing a different model and so will go with a single person's opinion.

The governments of developed nations usually share common aims that they look forward to achieving. These include improving the provision of education and health care, improving the rate of unemployment, and utilizing the maximum resources available in order to improve production. On a macroeconomy level, governments aim to achieve these goals in order to foster economic growth and development in the economy. This is mostly in the form of raising production and living standards. Since changes in the microeconomy impact the macroeconomic situation, the government implements strategies that can influence the actions of firms and households.

In order to raise living standards, governments aim to improve the access and incentive to healthcare and education among households. This is usually done by implementing strategies such as direct provision of certain goods and services. One such example is establishing schools that expect a minimal fee for those who are in need. Such projects are funded mostly by the tax revenue collected by the government. In order to improve the effectiveness of such policies, governments can improve the standards of pre existing facilities like government schools. When standards of schools increase, there is likely to be higher fees involved, which gives scope for the decoy effect using pricing strategies. The upcoming school with higher standards can be set at a higher fee, that seems like a good deal for people when sending their kids to school.

For example, the existing school would be demanding a fee of Rs 20,000 per annum. The new school can demand a fee of Rs 30,000 in return for improved education, opportunities and other amenities such as transport, food etc. Using appropriate methods, the government can communicate with parents, educating them of the improved benefits of spending extra for the new school. If the parents realize the benefit of such amenities and how they may save costs for them and if they are informed adequately of the merits of education, the decoy effect would make the new school seem more reasonable and increase the number of students who attend it. This way, using behavioral economics and provision of information, the government can influence the actions of households to align with the aims of the economy. In this case, the long run will see a more qualified workforce as the standards of education constantly improve. This would increase living standards and productivity in the economy which will result in growth and development.

7. Conclusion and reflection

In conclusion, the journey of the fascinating world of behavioral economics, with insights of numerous esteemed economists, has unveiled a continuous evolution of theories and strategies grounded in the complex workings of the human mind. Among these theories, the decoy effect, which we have delved into within this paper, stands as a pivotal element in shaping pricing strategies for goods and services in the marketplace.

This research endeavor has been a profound learning experience, providing us with a deeper understanding of the complex concepts that underlie behavioral economics. In particular, the application of these theories to a real-world case study involving Apple has offered invaluable insights into the practicality and significance of behavioral economics in shaping consumer behavior.

Through the collection of primary data via a small-scale experiment, we gained a firsthand perspective on the tangible effects of these strategies. This hands-on approach paved the way for these theories to function on a broader scale, reinforcing their relevance and impact in various business contexts.

Moreover, by gathering information from various secondary sources like online articles and insights shared by teachers and professors, I've accumulated a vast amount of knowledge to present a diverse perspective around these theories. This has deepened my understanding of the complex operations of the human mind and how they significantly impact the success of modern businesses. This research journey has not only expanded my knowledge of behavioral economics but has also deepened my appreciation for its practical applications, of decision-making and strategy formulation in the business world.

References

1. The history of behavioral economics: <https://www.investopedia.com/terms/b/behavioraleconomics.asp>
2. Expected utility theory: <https://www.economicshelp.org/blog/glossary/prospect-theory/#:~:text=Expected%20Utility%20theory%20assumes%20individuals,place%20other%20considerations%20above%20utility>

3. Richard Thaler at University of Chicago: <https://news.uchicago.edu/explainer/what-is-behavioral-economics#:~:text=In%20the%201980s%2C%20Richard%20Thaler,the%20field%20of%20behavioral%20economics>
4. Nudge theory: <https://www.imperial.ac.uk/nudgeomics/about/what-is-nudge-theory/>
5. Apple's brand identity: <https://www.propelmarketing.design/post/apple-the-importance-of-a-great-brand-identity>
6. Apple's pricing strategy: <https://marketrealist.com/2014/02/apples-premium-pricing-strategy-product-differentiation/>
7. Minimum advertised price: <http://www.johnasker.com/MAP.pdf>
8. Features of iPhone 8 and iPhone X: https://www.gsmarena.com/compare.php3?idPhone1=8858&idPhone2=8573&idPhone3=8573#diff-*,*,*
9. Apple employing reference pricing: <https://www.apple.com/apple-one/>
10. The decoy effect: <https://theconversation.com/the-decoy-effect-how-you-are-influenced-to-choose-without-really-knowing-it-111259>
11. The decoy effect experiment: <https://peepstrategy.com/what-is-decoy-effect/#:~:text=alliteration%2C%20and%20repetition.-,A%20History%20of%20the%20Decoy%20Effect,similarity%20heuristics%20and%20regularity%20conditions>
12. Prospect theory and reference points: <https://pubmed.ncbi.nlm.nih.gov/16855123/#:~:text=According%20to%20prospect%20theory%2C%20the,location%20of%20the%20reference%20point>
13. Features of iPhone 14, iPhone 14 Pro and iPhone 14 Pro Max: <https://www.gsmarena.com/compare.php3?idPhone1=11861&idPhone2=11862&idPhone3=11860>

