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Effect of Advertisement on Elasticity of demand with reference to chocolates

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Certificate

This is to certify that the research paper titled 'Effect of Advertisement on Elasticity of demand with reference to chocolates' was completed by Sinchana Kalmath, Class 11, under the guidance of Ms Manvi Gupta as part of the Young Scholar Research Mentorship Programme of the Indian School of Business and Finance (ISBF). The work is original to the best of our knowledge and prepared for educational purposes.



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Acknowledgement and Declaration

Acknowledgement

I would like to thank Miss Manvi Gupta for guiding me throughout this work. I am also grateful to my teachers and classmates for their support and encouragement while completing this paper.”

Declaration

“I, Sinchana Kalmath, hereby declare that this paper is my original work and has not been copied from any source. All references used have been acknowledged.”

Effect of Advertisement on Elasticity of demand with reference to chocolates

1) Introduction

Demand plays a crucial role in Economics. It is one of the two forces that make market economies work. Businesses closely study demand to manage inventory, set prices and improve profitability. In many ways, demand can shape Industries and economies. No supplier can survive without someone who chooses to buy their products. Demand creates market opportunities for industries to grow and improve profits. For example, there were no hatchbacks in the list of the top 5 cars sold in India. In contrast, 4 out of 5 of these cars were SUVs. Honda City sales are in the red with a growth of -45%. Such changes in demand affect what producers choose to supply. (Autopunditz, September 2025)

Such phenomena also affect chocolate, as chocolate buying is affected by emotion and habit as much as price.

Bengaluru, a metropolitan city in South India, serves as an ideal base to study how advertising and consumer perception affects demand and price sensitivity in the chocolate market. It has a large consumer base and Gen Z population.

2) Literature review

The **11th grade Economics syllabus** includes the concept of **Price Elasticity of Demand**, which is discussed in detail in the textbook by **T.R. Jain and V.K. Ohri (2025–26)**. The text explains the various types of price elasticity and why some goods respond differently to price changes. For instance, **addictive substances** are considered *perfectly inelastic*, meaning their demand remains unaffected by price fluctuations. By contrast, **luxury goods** such as business-class travel and premium cars tend to be *highly elastic*, where even small price changes can cause significant variations in quantity demanded. The textbook also highlights **advertising** as an important factor influencing elasticity.

Further academic literature supports this idea. The paper by **Srinivasan, Vanhuele, Pauwels, and Ataman (2024)** demonstrates that **advertising can reduce consumers' price sensitivity**,

particularly benefiting **premium brands**. Another article by **Ben Nicholas (2024)** finds that effective advertising strengthens **brand loyalty**, which in turn **reduces price elasticity**.

Industry research further contextualises these concepts. The **Asia–Pacific Chocolate Report and Forecast 2025–2034** notes that the chocolate market was valued at **USD 18.79 billion in 2024**, with India alone projected to grow at a **CAGR of 7.5% between 2025 and 2034**.

Additionally, innovations such as **cocoa cultivation using bioreactors** are enabling large-scale, sustainable production. These developments indicate that the chocolate market is both **large and expanding**.

However, price dynamics complicate the situation. According to the **JP Morgan Report (2024–25)**, rising cocoa prices have increased production costs, leading to a decline in chocolate volumes sold. Since firms operate in a **price-sensitive market**, they are unable to fully pass these increasing costs on to consumers. As a result, many companies have chosen to **reduce cocoa content** in their products instead of raising prices. This suggests that while the market is growing, **supply-side pressures** rather than demand are driving cost escalations.

Given that **increasing demand can generate economies of scale**, it becomes important to identify the determinants of chocolate demand. A study by **Brown, Bakke, and Hopfer (2020)** finds that the most important attributes consumers associate with premium chocolate are **trust** and **joy**, based on focus groups and projective mapping techniques.

Research at the regional level provides additional insights. **Chawla and Sondhi (2016)** find that younger consumers are more **value-seeking** than older ones, while **taste** and **brand** are the most influential factors in chocolate choice. They also note that the **primary motivation for purchasing chocolates is gifting**.

3) Research Gap and Importance

The global chocolate market is growing rapidly, but at the same time, cocoa prices have been rising. Reports by JP Morgan and other market researchers show that while demand for chocolates remains strong, producers are facing higher production costs. Because chocolates are

a **price-sensitive product**, companies cannot easily increase prices. Instead, many brands have reduced the amount of cocoa in their products to control costs.

However, there is little school-level research that studies **how demand can help the industry manage rising costs**. If demand increases, firms can produce on a larger scale, which may reduce their **average cost of production** - this is called **economies of scale**. Understanding this relationship between demand and production cost is important because it shows how both consumers and producers can benefit in the long run.

Further, various studies on the effects of advertisements on Price elasticity of Demand show how advertisements can help reduce price sensitivity. This can allow the burden of increased cost to be passed on to the consumer without drastically affecting demand.

Conducting a comprehensive analysis of the above will provide a roadmap to improve the industry.

4) Methodology

Questionnaires containing questions on general consumption behaviour and chocolate consumption were circulated via Google Forms to individuals between the ages of 13 and 19. These questions were included to account for various control variables, such as health issues and access to disposable income, which might otherwise unduly affect the outcome.

The experimental questionnaire also contained an advertisement for a bar of milk chocolate, which was intended to be the factor that varied between the two groups. A subsequent question was used to determine differences in consumers' willingness to pay. The study aims to collect 35 responses in each group.

A minimum of 30 respondents per group has been targeted to ensure the reliability and validity of the results. With sample sizes of 30 or more, the sample mean tends to approximate a normal distribution, thereby reducing the influence of random variation and outliers. This allows for a more meaningful comparison between the control and experimental groups, particularly when analysing differences in willingness to pay. Additionally, a sample size of 30+ strikes a balance

between statistical robustness and practical feasibility, making the findings more dependable without imposing excessive data collection constraints.

5) Data Analysis and Conclusion

Control Group

The majority of respondents in the control group were aged between 15 and 18 years, with more than 50% being female. Budget constraints are unlikely to have significantly influenced the results, as most respondents did not report strong financial limitations. A majority of respondents stated that they are not impulsive buyers.

Most respondents reported that they do not read nutrition labels. Among those who do, the primary motivation is general health consciousness rather than specific dietary restrictions, suggesting that health concerns are unlikely to distort chocolate consumption patterns. Additionally, most respondents consume outside food more than three times a month and are not strictly limited to homemade food.

The majority of respondents like chocolates, have family members who also consume chocolates, and have easy access to them. Therefore, availability is unlikely to restrict chocolate consumption. Most respondents reported consuming chocolate approximately once a week.

Experimental Group

All respondents in the experimental group were teenagers, with more than 50% being female. Similar to the control group, budget constraints are unlikely to have significantly affected purchasing decisions. Most respondents also identified themselves as non-impulsive buyers.

A majority of respondents do not read nutrition labels before consuming chocolate. Among those who do, health consciousness rather than medical necessity appears to be the main reason, indicating that health factors are unlikely to meaningfully influence the results.

Unlike the control group, most respondents in the experimental group reported eating outside food only once or twice a month. This difference may affect consumption behaviour and therefore represents a potential limitation. However, similar to the control group, most respondents like chocolates, have easy access to them, and live in households where others also consume chocolates.

Most respondents in the experimental group reported consuming chocolate more than once a week. This higher frequency of consumption may influence their willingness to pay.

Final Analysis and Conclusion

In the control group, the majority of respondents were willing to pay only ₹20 for the chocolate. In contrast, in the experimental group, the majority were willing to pay up to ₹120. This indicates a significantly higher willingness to pay in the experimental group.

While some of this difference may be influenced by variations in chocolate consumption frequency and the frequency of eating outside food, these factors alone are insufficient to explain the magnitude of the change observed. Moreover, these factors may partially offset each other in their effects. Therefore, the most significant remaining factor influencing the increased willingness to pay is the advertisement.

The advertisement likely enhanced the perceived value of the chocolate by creating a more concrete image in the minds of consumers or by increasing desire and temptation for the product. This suggests that advertising can play a substantial role in shaping consumer willingness to pay.

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Economics form A

Hi, I am Sinchana. I am conducting an economics study for educational purposes. All information will be kept private. Thankyou for participating.

* Indicates required question

1. What is your name? *

2. How old are you? *

Mark only one oval.

- ☐ 13-15
- ☐ 15-18
- ☐ 18-20
- ☐ 20+

3. What is your gender?

Mark only one oval.

- ☐ Male
- ☐ Female
- ☐ Rather not specify

4. How much pocket money do you receive per month?(in rupees) *

Mark only one oval.

- ☐ <100
- ☐ 100 to 200
- ☐ 200 to 300
- ☐ 300 to 400
- ☐ 400 to 500
- ☐ 500 +
- ☐ No specific amount

5. Would you say you are an impulsive buyer? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

6. Do you read the nutrition label before consuming a product? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

7. If yes please specify the reason

Mark only one oval.

- ☐ Health issues
- ☐ Generally health conscious

8. How often do you eat outside food? *

Mark only one oval.

- ☐ less than once a month
- ☐ 1-2 times a month
- ☐ 3-5 times a month
- ☐ 5+ times a month

9. Do you like chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

10. Do other people in your family also like chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

11. Does your local Kirana store sell chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

12. How much chocolate do you eat per week? *

Mark only one oval.

- ☐ not at all
- ☐ once
- ☐ more than once

13. How much are you willing to pay for 100g of milk chocolate? *

Mark only one oval.

- ☐ not more than 20
- ☐ not more than 40
- ☐ not more than 60
- ☐ not more than 80
- ☐ not more than 100
- ☐ not more than 120
- ☐ not more than 140
- ☐ more than 140

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Google Forms

Economics form b

Hi, I am Sinchana. I am conducting an economic study for educational purposes. All information will be kept private. Thankyou for participating.

** Indicates required question*

1. What is your name? *

2. How old are you? *

Mark only one oval.

☐ 13-15

☐ 15-18

☐ 18-20

3. What is your gender?

Mark only one oval.

☐ Male

☐ Female

☐ Rather not specify

4. How much pocket money do you receive per month?(in rupees) *

Mark only one oval.

- ☐ <100
- ☐ 100 to 200
- ☐ 200 to 300
- ☐ 300 to 400
- ☐ 400 to 500
- ☐ 500 +
- ☐ No specific amount

5. Would you say you are an impulsive buyer? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

6. Do you read the nutrition label before consuming a product? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

7. If yes please specify the reason

Mark only one oval.

- ☐ Health issues
- ☐ Generally health conscious

8. How often do you eat outside food? *

Mark only one oval.

- ☐ less than once a month
- ☐ 1-2 times a month
- ☐ 3-5 times a month
- ☐ 5+ times a month

9. Do you like chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

10. Do other people in your family also like chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

11. Does your local Kirana store sell chocolates? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

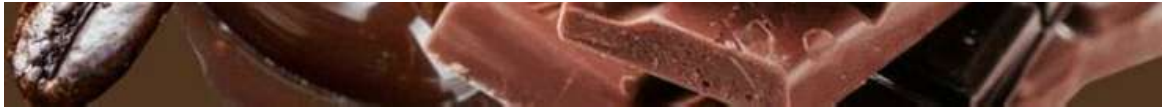
12. How much chocolate do eat you per week? *

Mark only one oval.

- ☐ not at all
- ☐ once
- ☐ more than once

13. How much are you willing to pay for 100g of milk chocolate shown in the below ad? (in * rupees)





Mark only one oval.

- ☐ not more than 20
- ☐ not more than 40
- ☐ not more than 60
- ☐ not more than 80
- ☐ not more than 100
- ☐ not more than 120
- ☐ not more than 140
- ☐ more than 140

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Google Forms