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Comparative Analysis of Advertisement Strategies used by Coca-Cola and Pepsi: A Literature Review Study

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Abstract

This research conducts an extensive literature assessment of the advertising methods of prominent soft drink brands Coca-Cola and Pepsi in the fiercely competitive beverage market. Utilizing several years of empirical investigations, this study delves into the efficacy, implications, and subtleties of advertising campaigns concerning customer perceptions, brand value, market worth, and sales outcomes. Analysis is done on several advertising strategy components, such as product launches, trademark advertising, celebrity endorsements, and international marketing techniques. This study sheds light on the critical elements influencing brand choice, purchasing intentions, and market dynamics by elucidating the complicated relationship between advertising and consumer behaviors through a systematic synthesis of findings. The Theory of Advertising Effectiveness conceptual framework, which supports analyzing how advertising messages connect with consumers and affect their decision-making processes, is fundamental to this investigation. To achieve sustained brand success in the ever-changing soft drink market, marketers, researchers, and industry stakeholders can benefit from this study's actionable insights, which can aid in strategic decision-making and create more effective advertising campaigns.

Introduction

History of Coca-Cola

Over a century of innovation, cultural relevance, and international expansion characterize the intriguing story of Coca-Cola's history. Concocted by pharmacist John S. Pemberton in Atlanta, Georgia, in 1886, Coca-Cola was first advertised as a medicinal tonic due to its supposed healing capabilities. However, Asa Griggs Candler saw its business potential and bought the recipe in 1892 to found the Coca-Cola Company. The company's distinctive contour bottle and recognizable script emblem helped establish its name in the early 20th century. Coca-Cola became a symbol of American consumer culture thanks to its innovative marketing strategies, demonstrated by its iconic advertising campaigns. Coca-Cola has faced criticism over its ingredients and marketing strategies as it has evolved to meet the needs of shifting consumer preferences and international markets.

Variants such as Diet Coke and Coca-Cola Zero have also been introduced. Despite difficulties, Coca-Cola continues to be a well-recognized and enduring emblem of happiness and refreshment in civilizations worldwide.

History of Pepsi

The intriguing history of Pepsi's beginnings begins in the late 1800s, when Caleb Bradham, a pharmacist in New Bern, North Carolina, invented a cool fizzy drink in 1893. It was first marketed as "Brad's Drink," but in 1898, the digestive enzyme pepsin and kola nuts employed in its recipe led to a rebranding as Pepsi-Cola. The official founding of the Pepsi-Cola Company in 1902 signaled the start of Pepsi's rise to prominence as a fierce rival in the beverage sector. Pepsi has successfully navigated several difficulties and changes, such as ownership changes and targeted marketing campaigns. Notably, the 1970s saw the launch of the Pepsi Challenge, a blind taste test campaign that upended Coca-Cola's hegemony and transformed the brand's image. Pepsi's varied product line, which includes Pepsi Max, Pepsi Twist, and other variants that meet changing consumer tastes, demonstrates the company's dedication to innovation. Despite controversies and market swings, Pepsi has remained a worldwide beverage behemoth, influencing popular culture and establishing an enduring legacy in the soft drink industry.

Conceptual Theory

In the ever-changing marketing world, advertising techniques are the foundation for consumer engagement and brand promotion. These methods cover various techniques to captivate audiences, shape perceptions, and influence customer behavior. In the modern, hyperconnected world, where customers are constantly exposed to commercials across multiple media platforms, successful advertising strategies are more important than ever for businesses looking to stand out from the competition and make a lasting impact.

The Theory of Advertising Effectiveness's conceptual basis, which supports examining how advertising messages connect with consumers, affect their decision-making, and ultimately affect brand success, is essential to this investigation. This research attempts to clarify the broad strategies, tactics, and trends used by Coca-Cola and Pepsi to draw in customers, promote brand loyalty, and preserve competitive advantage in an ever-changing market by combining the results of various studies.

Importance of the Study

The significance of this research is in its thorough analysis of the advertising tactics used by prominent competitors in the competitive soft drink market, such as Pepsi and Coca-Cola. This study provides essential insights into the efficacy, implications, and subtleties of advertising campaigns on consumer attitudes, brand equity, market value, and sales performance by combining a broad range of empirical data. This study advances our knowledge of the intricate interactions between advertising and consumer behavior by thoroughly investigating various advertising strategies, such as product launches, trademark advertising, celebrity endorsements, and international marketing strategies.

Review of Literature

Tirtha P. Dhar, Jean-Paul Chavas, Ronald W. Cotterill, and Brian W. Gould (2002) examined an econometric analysis of brand-level strategic pricing between Coca-Cola and Pepsi Inc. The regression method was used here. The convenience sampling technique was used here, where the 2 million dollar sales data were collected from the US supermarket. The study talked about the

imperfect competition among carbonated soft drink markets. They also pointed out the flexible demand specification. This study concluded that the pricing game is more complex in the market.

Andrea Fosfuri and Macro S. Giarratana (2005) published an article about new product introductions, Trademark Advertising, and Market Value: An econometric analysis of Pepsi vs Coca-Cola competition. Sample and estimation techniques were with a sample of 60 observations for each firm, so in total, there were 120. Variables like product, price, taste, flavor, and packing were used. This article provided evidence of how rival efforts impacted a company's financial market value. There was a negative impact on the firm's economic market value in the Rival effect of new product introduction but a positive impact on the financial market value of a company by Rival advertisement. This study concluded that ads were more adaptable and innovation was bolder.

Adeolu B. Ayanwale, Taiwo Alimi, and Matthew A. Ayanbimipe (2005) explored the influence of advertising on consumer brand preference. The convenience sampling technique was used here in this study with a sample size 300. Regression was used as the statistical tool. The variables used in the study were consumers' perceptions and television advertisement influences. This study looked into how much customers' perceptions of Coke and Pepsi-Cola are influenced by advertisements seen on television. The study discovered that, in contrast to predictions, TV advertisements had little effect on consumers' perceptions. This study concluded that taste, packaging, social impact, and cost were more important considerations. Customers continued to like both companies even when TV advertisements had no effect.

Eva-Lena Andersson, Evelina Arvidsson, and Cecilie Lindström (2006) examined Coca-Cola or Pepsi; that is the question – A study about different factors affecting consumer preferences. The Quota sampling technique was used here with 100 responders, where 50 were in the two age groups (18–25 and 26–35). The statistical tool used was the chi-square test. The variables used were advertising, consumer preference, and celebrity endorsement. Companies used sponsorships and local language preferences to expand into global markets and adapt to local customer preferences. This article concluded that using local market language and sponsorship-related advertisement campaigns less influenced consumer preference.

Uzma Amin Mir (2009) explored the impact of consumer perception towards advertising on brand attitude- A study of PepsiCo India Pvt Ltd. Convenience sampling was used to collect data from 320 respondents. The data collected was primary data by sending a questionnaire. The statistical tools used here were ANOVA, correlation, and regression. The variables used here were independent variables (age, gender, entertainment, brand reinforcement) and dependent variables (brand attitude). This study stated the components of advertisement and brand attitudes. It was summarized that age, gender, and other factors did not influence advertisement components with brand attitudes. This study concluded that the correlation between advertisement components and brand attitudes could have been more substantial. Therefore, they should start prioritizing more advertising because Pepsi had a positive image among consumers.

Mojtaba Saeidinia and Mehrdad Salehi (2012) examined the operation strategies of Coca-Cola vs Pepsi companies to attract their customers. A Combination of Quota sampling and convenience sampling was used here. The variables like event type, moderate variables, and brand image were used here. There are 150 respondents in the sample, 50 of whom were selected from the three age categories (18, 19–34, and 35). The study included three distinct age-based target groups in Sweden; as a result, it did not examine the total customer population and did not allow for generalization. This article concluded that to reach a competitive advantage in local markets; international companies should use various marketing strategies to attract the target customers.

Davina Madhavi Chinnapan-Sathana, Vanisha Oogarah-Hanumanb, and Rooma Roshnee

Ramsaran-Fowdar (2012) examined and analyzed the impact of advertising in the soft drink market of Mauritius: The Case Study of Coca-Cola. Quota sampling, which accounted for geographic variations, was the sampling method employed. There were 150 responders in the sample. The primary data source was an undisguised, structured questionnaire used to collect the data. The Chi-Square test was the statistical instrument utilized in the analysis. The study highlighted the critical impact that advertising played in influencing customers' purchasing decisions in Mauritius' soft drink market. It acknowledged Coca-Cola's supremacy in the market; it also made clear that Coca-Cola needed to correct false impressions held by Mauritians and change its approach in response to shifting market conditions. The study concluded by highlighting Pepsi's competitiveness and emphasizing Coca-Cola's need to keep revising its approach.

Adeyanju Apejoye (2013) examined the influence of celebrity endorsement of advertisements on students' purchase intention. A combination of simple random sampling and systematic sampling was the sampling technique employed. There were 120 regular students from four departments in the sample, 60 of whom were in the experimental group and 60 in the control group. T-test was the statistical tool used here to analyze the data. This study used two commercials, one with football player Osaze Odenwingie and the other without a celebrity, to test the effect of celebrity endorsements on students' purchase ideas for Pepsi-Cola. It was discovered that the desire to buy was greatly influenced by celebrity endorsement, indicating the efficacy of this type of advertisement. The study concluded how crucial it was to pick celebrity endorsers effectively to avoid any lousy name or "vampire effect" from degrading the brand value and the product.

Ramesh Babu Kakumanu (2013) published an article on advertisements of soft drinks brands – Impact on Telangana soft drink Consumers' preferences. The study employed a structured questionnaire for collecting the data. A straightforward randomized sampling technique was used to choose samples from Telangana state's soft drink customers. There was a 573-person sample. Methods like Chi-Square, Lambda, Goodman, and Kruskal tau, Uncertainty Coefficient, and Cramer's V were employed to assess the degree of connection and correlation between the variables. This study highlighted how demographics greatly impacted how consumers reacted to the commercials, where age had a significant effect. This study concluded by giving insights into how consumers' perceptions of the brand change because of effective advertisement.

Tariq M.I., Humayon A.A., Bhutta M.H., and Danish R. (2014) published an article on the impact of effective advertisement on brand equity and brand switching behavior study of the food and beverages industry in an emerging market. A simple random selection technique was employed to choose 260 people as the sample. Data were gathered using self-administered surveys and interviews. There were 224 completed surveys, with an 88 percent response rate, of which 206 could be used. This study explored consumers' perceptions of the effect on brand equity and brand switch characteristics. It highlighted a positive correlation between brand equity and effective advertisements, meaning that a brand's total equity was positively impacted by well-executed advertising. Furthermore, there was a negative correlation between brand-switching behavior and effective advertising, indicating that consumers were less likely to transfer brands when they saw successful advertising.

Dauda Abdullahi (2015) examined the effects of advertising on the sales revenue and profitability of selected food and beverage firms in Nigeria. This study adopted the function of data collection, and the study sample consisted of 15 firms. All the data were collected by a secondary method using the annual reports from 2000 to 2012. This study stated that there was a significant relationship with probability because the advertisement did not impact the sales income, but there was a growth in likelihood. This concluded that the advertisement's productiveness differed in sales income and probability.

Ong Choon Hee (2018) explored the influence of advertising media on Consumer Purchasing Behavior in Malaysia's food and beverage industry. Convenience sampling was chosen for this research. The questionnaires were distributed via Google form and received 397 responses. Both dependent variables, like consumer purchasing behavior, and independent variables, like advertising media and purchasing, were used. This study propounded that homogeneous usage of social media and broadcast channels could increase consumer purchase behavior. This concluded that the social media advertising method was a significant element in affecting consumer purchase behavior.

Rukmani Singaram, Athul Ramasubramani, Aaditya Mehta, and Pari Arora (2018) published an article about Coca-Cola: A Study on the Marketing Strategies for Millennials Focusing on India. This research examined how Coca-Cola's advertisement strategies focused on the influence of millennials. 100 samples were chosen from various millennium category groups. The study employed probability sampling, and within this, it had been modified the stratified sampling technique, which made use of proportional sampling used to mean as a sampling distribution technique. It stated that social media advertising during festive seasons impacted consumers. The young generation of customers was the reason for the company's good running. This article concluded that instead of focusing more on the younger generation, the company should have developed products for health-oriented customers to benefit the company.

Gbam and Barnabas (2019) published an article on the influence of advertisements on the sales of Coca-Cola soft drinks in the Abuja Municipal Area Council. The sampling technique used in the study was census sampling. The sample size was 105, the same as the population size. A structured questionnaire that the researcher created serves as the data source. The mean was the statistical instrument employed in the analysis. This article highlighted the value of advertising in raising consumer awareness among manufacturers of different goods. This study concluded that although advertising was a powerful instrument for promoting sales, leveraging its advantages in the competitive soft drink market required resolving issues and taking a consumer-centric strategy.

Ochonogor, C. I. & Nwachukwu, F. G. (2019) examined transnational Advertising of Coca-Cola and the adoption of pop culture among youths in the South-South Region of Nigeria. The study used the survey design method to examine 384 participants selected from six states. The study used focus groups and a series of questionnaires to collect data, which was then analyzed using quantitative and qualitative analytical techniques. It was shown that young people were highly connected to these advertisements and took up the foreign cultures portrayed in the advertisements. The change in the young generation's attire, vocabulary, dancing styles, and activities they did on public platforms were examples of this. This study concluded by stating how advertising can affect regional culture and whether advertisements should follow regional culture.

Busheto Belayneh and Gudata Abara (2019) published an article on the assessment of marketing mix strategies of the Hawassa Millennium Pepsi-Cola Plant. A purposive sampling technique was used here with 35 respondents. Both primary and secondary data were collected; preliminary data was obtained by conducting a personal interview, and secondary data was collected from published documents, journals, and articles. The variables used in the study were marketing mix, price promotion, and place. The study stated that the Hawassa Millennium used a competitive pricing strategy and indirect channels to sell its goods. The study concluded that the company made effective use of the marketing mix strategy, which made it successful in achieving its goal.

A Wofadeju Peter Olayinka and Odorume Akpobo (2020) examined the impact of advertisements on sales promotion. In this study, a survey method was used. Copies of the survey were distributed to 150 patrons of Nigerian Breweries, Iganmu, Lagos State, and 128 accurately completed and returned the questionnaires. So, 150 was the sample size. This study demonstrated how setting up a strategic advertisement practice would address low customer demand and purchasing decisions

and eventually help boost the business. This study concluded that the importance of choosing the right media outlets and advertising format depending on the demographic being targeted and goals was emphasized in the article.

Francesco Galvano and Sara Crescimone (2020) explored analyzing the effects of the pandemic on advertising strategies in the Coca-Cola case study. The sample size of the study is 5 participants. The data and necessary details were collected for the participants. They used an accurate eye program technique to track the eye movement of the participants. This study gave cognizance about how Coca-Cola's communication strategies adapted according to the pandemic situations. This article concluded that the company had a customer-centric approach, rational actions following the problem, and future-oriented decisions.

Avani Jindal and Himanshi Gupta (2022) explored the impact of advertisements on consumer preference. Random sampling was the sampling technique employed in the study to increase the feasibility and generalizability of the findings. The data collected were primary. There were 60 students in the sample size, ranging in age from 12 to 17. This study explored how advertising the young customers' choices of the two soft drinks, Fanta and Mirinda. Through a blind taste test, it was found that there was a strong preference favoring the more widely advertised Fanta, even though Mirinda's flavor was probably more significant, by comparing the results to participants' overall brand choices. This study concluded that because of the influence of advertising over consumer decisions, it could conceal flaws in products.

Elizabeth Motika Daniel and Dr. N. Viswanadham (2022) examined the impact of soft drink advertisements on consumers' buying behavior. This review included both illustrative and inferential measurements in its quantitative assessment methodology. For this study, a sample of 99 respondents was selected. Open-ended and closed-ended structured questionnaires were given to Pepsi drinkers. ANOVA and the variance statistical tool analyzed the data. This study found that Pepsi used computerized advertisements, print promotions, and outdoor advertisements. Computerized advertisements and print promotions noticeably affected advertising, but outdoor advertisements significantly affected consumer buying. This study concluded the significance of cross-promotion and stated the importance of consistency among multiple advertisement mediums.

Research Gap

The research gap in this analysis is a comparative analysis of the beverage industry. The majority of research has concentrated on the distinct effects caused by advertising. The connection between advertising and other marketing mix components, like price, product design, and distribution, has received little or no attention. This results in a fragmented understanding of consumer decision-making and ignores how different influences shape their decisions. Customers' purchase is based on the product, price, and other marketing mix. By missing the interconnectedness of the marketing mix in some advertisement strategies, the research may have missed out on the customer preference in purchasing the product.

Problem Identification

In this research, the problem is that it explored more particular areas, such as age groups, celebrity endorsements, or local influences. Comparative analysis is missing to combine these results into a cohesive framework. Because of this, it imposes restrictions regarding the performance of advertising tactics in the soft drink sector, and carbonated soft drinks are complex. The narrowed research of the changing advertising environment is another issue found. Detailed research on new channels like social media is missing for the modifications in customer behavior.

Methodology

This research report includes a detailed analysis of the literature from 2002 to 2022 gathered from reliable academic databases such as ScienceDirect, ResearchGate, and Google Scholar. A systematic search strategy including pertinent keywords like “Coca-Cola,” “Pepsi,” “soft drink advertising,” and similar topics was used to compile the literature. The selection criteria for the review were established based on the studies’ applicability to the subject of the competitive beverage industry’s leading soft drink brands’ advertising strategies, particularly Coca-Cola and Pepsi. Qualitative and quantitative studies—such as empirical research, case studies, and theoretical analyses- were considered to give a thorough overview of the subject.

Discussion

The study emphasizes how big soft drink companies like Coca-Cola and Pepsi use dual advertising methods. Positively, advertising raises a brand’s profitability, market share, and visibility. Long-term brand success is fueled by creative strategies like digital marketing and international campaigns, which raise customer involvement and brand loyalty. However, there are drawbacks to advertising as well, such as the possibility of oversaturation, customer tiredness, and mismatching with preferences. Advertising that uses overbearing or culturally insensitive language risks offending consumers and damaging a brand’s reputation. Marketers can create more enduring and successful advertising campaigns that connect with customers and propel brand success in the cutthroat soft drink sector by acknowledging the advantages and disadvantages of advertising.

Conclusion

To sum up, advertising tactics present many chances for market expansion and brand building, but they also come with dangers and difficulties that must be handled cautiously. Marketers, researchers, and industry stakeholders can create more enduring and successful advertising campaigns that connect with consumers, build brand equity, and propel long-term brand success in the highly competitive soft drink sector by acknowledging the advantages and disadvantages of advertising.

Reference

1. Saeidinia, M., Salehi, M., Hashemi, S., Darabkhani, Y., & Ahanijan, B. (2012). Operation strategies for Coca-Cola vs Pepsi companies to attract their customers. *Contemporary Marketing Review*, 11.
2. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from http://ir.mtu.edu.ng/xmlui/bitstream/handle/123456789/721/Ose_MUTTALLAB%27S_PROJECT.pdf?sequence=1&isAllowed=y
3. Coca-Cola or Pepsi; that is the Question: A study about different factors affecting consumer preferences. (n.d.). ResearchGate. Retrieved February 13, 2024, from https://www.researchgate.net/publication/279438868_Coca-Cola_or_Pepsi_that_is_the_Question_A_study_about_different_factors_affecting_consumer_preferences
4. (PDF) Analyzing the impact of advertising in the soft drink market of Mauritius: The case study of Coca-Cola. (2015, June 19). ResearchGate. Retrieved February 13, 2024, from https://www.researchgate.net/publication/278684153_Analysing_the_impact_of_advertising_in_the_soft_drink_market_of_Mauritius_The_case_study_of_Coca-Cola
5. Davis, B. (n.d.). Hilltops and Marches: A Cultural and Semiotic Analysis of Pepsi and Coca-Cola Advertising Strategies. Retrieved February 13, 2024, from <https://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1822&context=honors>

6. Influence of Celebrity Endorsement of Advertisement on Students' Purchase Intention. (2013, March 25). Hilaris Publishing SRL. Retrieved February 13, 2024, from <https://www.hilarispublisher.com/open-access/influence-of-celebrity-endorsement-of-advertisement-on-students-purchase-intention-2165-7912.1000152.pdf>
7. Gupta, S., & Chopra, C. (2022, August 23). International Journal of Social Science and Economic Research. International Journal of Social Science and Economic Research. Retrieved February 13, 2024, from https://ijsser.org/2022files/ijsser_07__173.pdf
8. Effect Of Advertising On The Sales Revenue And Profitability Of Selected Food And Beverages Firms In Nigeria. (n.d.). Academia.edu. Retrieved February 13, 2024, from https://www.academia.edu/29539178/Effect_of_advertising_on_the_sales_revenue_and_profitability_of_selected_food_and_beverages_firms_in_nigeria
9. (PDF) The Influence of Advertising Media on Consumer Purchasing Behavior in Malaysia's Food and Beverage Industry. (2018, April 3). ResearchGate. Retrieved February 13, 2024, from https://www.researchgate.net/publication/324235124_The_Influence_of_Advertising_Media_towards_Consumer_Purchasing_Behavior_in_the_Food_and_Beverage_Industry_in_Malaysia
10. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from https://www.researchgate.net/publication/228583141_New_Product_Introductions_Trademarked_Advertising_and_Market_Value_An_Econometric_Analysis_of_Coca-Cola_vs_Pepsi_Competition
11. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from https://www.researchgate.net/publication/228583141_New_Product_Introductions_Trademarked_Advertising_and_Market_Value_An_Econometric_Analysis_of_Coca-Cola_vs_Pepsi_Competition
12. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from https://www.researchgate.net/publication/228583141_New_Product_Introductions_Trademarked_Advertising_and_Market_Value_An_Econometric_Analysis_of_Coca-Cola_vs_Pepsi_Competition
13. Gupta, S. (n.d.). Coke and Pepsi: From Global to Indian Advertising. The Case Centre. Retrieved February 13, 2024, from <https://www.thecasecentre.org/products/view?id=146387>
14. MehtaMehta, A., & Galande, S. (2019, February 7). (PDF) Coca-Cola: A study on the marketing strategies for millenniums focusing on India. ResearchGate. Retrieved February 13, 2024, from https://www.researchgate.net/publication/330924745_Coca_Cola_A_study_on_the_marketing_strategies_for_millenniums_focusing_on_India
15. Impact of Soft Drinks Advertisement on Consumers' Buying Behavior. (2022, April 27). AI Publications. Retrieved February 13, 2024, from https://aipublications.com/uploads/issue_files/12IJEBM-APR20223-Impactof.pdf
16. Advertisements of Soft Drinks Brands – Impact on Telangana Soft Drink Consumers Preferences. (n.d.). Academia.edu. Retrieved February 13, 2024, from https://www.academia.edu/34106222/Advertisements_of_Soft_Drinks_Brands_Impact_on_Telangana_Soft_Drink_Consumers_Preferences
17. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from <https://deanbs.uok.edu.in/Files/6d8be055-fc07-4110-8b8a-48477e9b960a/Journal/b85029c9-8bac-4149-ab1c-35be77d06fe5.pdf>
18. Assessment of Marketing Mix Strategies of the Hawassa Millennium Pepsi-Cola Plant. (n.d.). Academia.edu. Retrieved February 13, 2024, from https://www.academia.edu/38955004/Assessment_of_Marketing_Mix_Strategies_of_the_Hawassa_Millennium_Pepsi_Cola_Plant
19. (2017, November 9). YouTube: Home. Retrieved February 13, 2024, from https://www.researchgate.net/publication/370204845_Impact_of_advertising_on_sales_performance_impact_of_advertising_on_sales_performance