

MAJOR RESEARCH PROJECT ON

Brand Switching Analysis of CocaCola Drinks

Submitted in partial fulfillment of the requirements
for the award of the degree of

Master of Business Administration (MBA)

To

DELHI TECHNOLOGICAL UNIVERSITY

Submitted By:

Yashvi Kundra

2K19/UMBA/26

Ridima Gulati

2K19/UMBA/17

Abhishek K Menon

2K19/UMBA/01

Guided by:

Dr.Jagvinder Singh

Assistant Professor



UNIVERSITY SCHOOL OF MANAGEMENT
& ENTREPRENEURSHIP, DTU, EAST DELHI CAMPUS
Vivek Vihar Phase 2, Block E, Vivek Vihar, Delhi, 110095

MAY 2021

CERTIFICATE

This is to certify that the project report entitled "Brand Switching Analysis of CocaCola Drinks" which is submitted by Abhishek K. Menon (2K19/UMBA/01), Ridima Gulati (2K19/UMBA/17), and Yashvi Kundra (2K19/UMBA/26) in partial fulfillment for the award of Masters of Business Administration of USME, Delhi Technological University is a record of candidate's work carried out by them under my supervision. The matter embodied in this project is original and has not been submitted for the award of any other degree.

Signature of Guide

**Dr. Jagvinder Singh
(Assistant Professor)**

Signature of HOD (USME)

Prof. Amit Mookerjee

Seal of HOD

Date: 25/05/2021

Place: Delhi

DECLARATION

We hereby declare that this submission is our work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person, not material which no substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the context.

We were in regular contact with my project guide and mentor and have discussed the contents of the Project.

We further declare that the work reported is not being submitted to any other University for the award of any other Degree, Diploma, and Fellowship program.

Abhishek K. Menon (2K19/UMBA/01)

Ridima Gulati (2K19/UMBA/17)

Date: 25/05/2021

Place: Delhi

Yashvi Kundra (2K19/UMBA/25)

ACKNOWLEDGMENT

It gives us immense pleasure to present the report of my project titled “**Brand Switching Analysis of CocaCola Drinks**”.

This work would not have been possible without the assistance and guidance of many people. We would like to take this opportunity to thank every one of them. The work presented in the dissertation is the outcome of the guidance and inspiration of my guide Dr. Jagvinder Singh, Assistant Professor, and Shubham Singhania, Delhi Technological University, Vivek Vihar, Delhi-110095. Their continuous encouragement during difficult times and expert advice have made this research see the light of the day.

We would especially like to thank Mr. Anurag Chaturvedi, MBA Coordinator, Delhi Technological University, Rohini who provided his valuable inputs from the inception of this work to its culmination.

We additionally accept this open door to communicate our adoration and earnest on account of our relatives and companions who gave us the important inspiration and unshakable help, particularly during the last phases of our work for its ideal fruition.

Abhishek K. Menon (2K19/UMBA/01)

Ridima Gulati (2K19/UMBA/17)

Yashvi Kundra (2K19/UMBA/26)

EXECUTIVE SUMMARY

With the increasing globalization and increasing competition, consumers have a vast number of options to select from. Thus consumers are quickly switching from one brand to another. With a wide variety of brands of soft drinks available in the market, there is a high degree of brand switching. Brand switching in this sector is the outcome of many factors like taste, quality, price, marketing strategy, brand awareness, and loyalty.

This research paper focuses on understanding consumer behavior, the factors affecting the customer's repurchase decision concerning Coca-Cola. It also investigates the brand loyalty among the customers of Coca-Cola and how it affects customers switching to other brands. The research also studies how the advertisement strategies affect brand image and loyalty among the customers.

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1. INTRODUCTION

The beverage industry is also known as the \$ 55 billion beverage drink industry worldwide. It consists of two main sections.

(i) Liquor Industry

This includes alcoholic beverages like distilled spirits, wine, cider and brewed drinks.

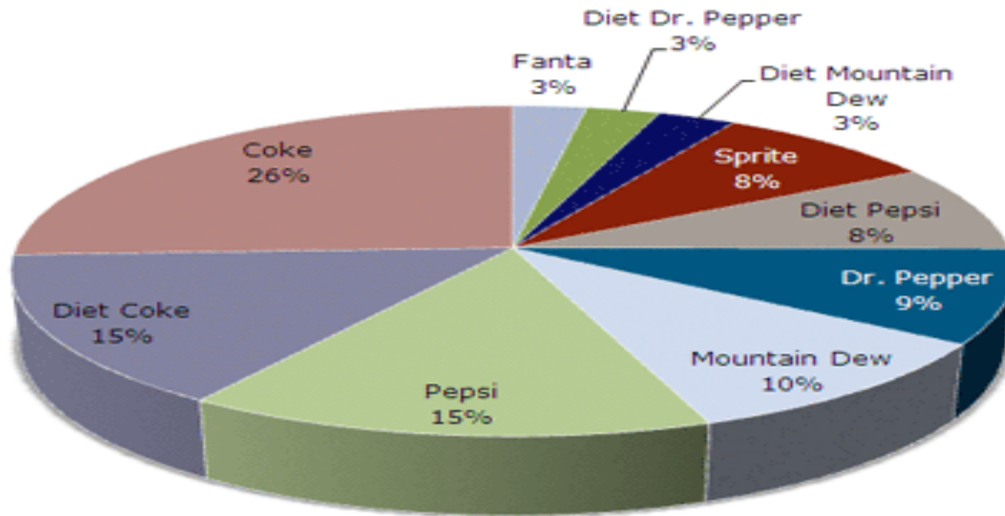
(ii) Non-Alcohol Beverage Industry

These include soft drinks, bottled and canned fruit drinks, coffee/ tea industry. The two largest organizations own a non-alcoholic beverage/liquor. These are Coca-Cola and Pepsi.

Recently the BRIC Nations (Brazil, Russia, India, and China), worked as the best players in the world market and received a lot of attention. Beverage companies have made significant use of new plants to produce and develop distribution networks in these countries. While there is the potential for significant debt growth, cash flows are well predictable and are often more than enough to cover annual interest rates (and profits) and maturity.

The center of the drink business is a carbonated refreshment class. Noticeable parts in the space are Coca-Cola and Pepsi who are most of the South Asian business sectors and which are well known. These organizations live on huge racks in stores and other classification items like dairy items, meat, or items. Organizations are filling quickly in the homegrown and global business sectors as they enter and foster new business sectors for existing items and add items from the closest refreshment store to the store, in ongoing stages.

Soft Drink Brands Market Share



The size of the Indian food and refreshment industry is assessed at \$ 65.6 billion, which incorporates \$ 25.6 billion in esteem added items. As indicated by an examination by the Great Indian Bazaar, the complete market for soda pops is assessed at in excess of 285 million boxes a year or \$ 1 billion. Notwithstanding, the market for this industry has an extraordinary season where its utilization shifts from 25 million crates each month during top periods to 15 million in the rest period). The biggest commitment comes from the metropolitan market and the rustic regions contribute just 25%.

The Indian refreshment beverage market has developed throughout the long term and is presently the third-biggest promoting after the US and China. The greatest parts in India are Coca-Cola and Pepsi and have a consolidated portion of about [95%].

1.1. Consumer Conduct

Customer conduct is an investigation of people, gatherings, or associations in choosing, buying, utilizing, and discarding labor and products to fulfill the requirements and wants. Shopper conduct surveys what practices customers are showing as well as clarifies the explanations behind that conduct.

Generally, retailers are keen on customer conduct to comprehend segment changes and accepted practices, convictions, and practices that influence how purchasers connect with the market. Less significantly, purchaser conduct centers around close-to-home conduct and the explanations behind this conduct. In this way, ideas got from mental and social are reflected unmistakably in buyer conduct writing.

1.2.Important Explanations

Product Brand: This is the name, brand, image, or configuration used to recognize an item and recognize it from another item, administration, or business.

Item Reliability: This alludes to the shopper's conduct of more than once buying a specific brand item over a period.

Brand Product Image: This is an emblematic development made to people and contains all the data and assumptions identified with the item or administration.

Worldwide Product: This is a product that mirrors a similar arrangement of costs around the world. It rises above its beginnings and makes solid and enduring associations with clients in all nations and societies.

Product Brand Equity: Product equity is the additional value given to products and services. This value can be attributed to how the consumer thinks, feels, and reacts to the product and prices, market share, and the chances that the products ordered the firm. Product equity is an intangible asset with intellectual value and costs in the firm.

Product Brand Switching

Product Switching is a circumstance where a brand product loses a reliable client to a contender. At the end of the day, the purchaser is changing their purchasing propensities, purposely deciding to purchase another item rather than their typical choice.

1.3.Coca-Cola Company



The Coca-Cola Company is an American refreshment organization established by John Stith in 1886. The organization offers around 500 and has promoted its items to over 200 nations. Coca-Cola, or Coke, created by The Coca-Cola Company was initially advertised as a moderation drink and was proposed as a powerful medication, by John Stith and Pemberton in the late nineteenth century. Bought by the businessman Asa Griggs Candler, his advertising technique drove Coca-Cola to its strength in the worldwide soda market in the twentieth century.

~4,100 PRODUCTS WORLDWIDE

#1 WORLDWIDE IN VALUE

- SPARKLING SOFT DRINKS
- JUICE, DAIRY & PLANT
- WATER, ENHANCED WATER & SPORTS DRINKS
- READY-TO-DRINK TEA & COFFEE

Our portfolio includes these billion-dollar brands



OUR SYSTEM

- ~250 BOTTLING PARTNERS
~900 PLANTS
- 27MM RETAIL CUSTOMER OUTLETS
- INVESTED \$110B+ TOGETHER WITH GLOBAL BOTTLING PARTNERS SINCE 2010

Notwithstanding Coca-Cola's items, the organization's portfolio incorporates a portion of the world's most significant refreshments, for example, AdeS-based drinks, Ayataka green tea, Dasani water, Del Valle juices and ulcers, Fanta, Georgian espresso, Gold Peas teas and espressos, Tea, honest smoothies and water, Minute Maid juice, Powerade sports drinks, Simply squeeze, SmartWater, Sprite, Vitaminwater and ZICO coconut water.

Coca-Cola India is one of the main drink organizations, offering a scope of sound, superior grade, invigorating refreshment items to customers. Since its reemergence in 1993, Coca-Cola has kept on building up an unrivaled refreshment portfolio, dazzling purchasers with its refreshment items, for example, Coca-Cola, Coca-Cola Zero, Diet Coke, Thums Up, Fanta, Fanta Green Mango, Limca, Sprite, Sprite Zero, VIO Flavored Milk, Maaza, Minute Maid Juice rundown, Georgia and Georgia Gold hot and cold tea and espresso rundown, Kinley and Bonaqua drinking water blended, Kinley Club Soda and an OIL caffeinated drink. The organization includes a solid dispersion organization of very 2.6 million stores. Its assortments are one of the first famous and smash-hit drinks on the planet.

The Coca-Cola program in India had netted \$ 2 billion by 2011 since it reemerged in India. It likewise plans to take a position another \$ 5 billion inside the coming years. the corporate straightforwardly utilizes very 25,000 individuals including those inside acknowledged India. The program has made circuitous work for very 1,50,000 individuals in related businesses through its acquirement, supply, and dissemination framework.

Its Roadmap starts with machines, which announces its motivation as a company and goes about as a kind against its activities and choices.

- Refreshing the world...
- Promoting snapshots of expectation and bliss...
- Establish worth and have an effect...

Coca-Cola is the main Indian refreshment market player with a 60 percent share inside the chilly refreshment class, a day and a half hold some natural product drinks, and 33 percent hold some consolidated water.

Coca-Cola franchise leadership

Coca-Cola bottle accomplices are an essential fixing in its prosperity. Coca-Cola likewise plans of action for explicit business sectors so they are regularly more available.

1.4.Pepsi Company



PepsiCo, Inc. is American worldwide food, bite, and refreshment business situated in NY. PepsiCo teams up with the gathering, advertising, and circulation of grain-based food varieties, drinks, and different items. it had been inbuilt in 1965 with the consolidation of Pepsi-Cola Company and Frito-Lay, Inc. From that point forward it's extended to a decent scope of food and refreshments, the most significant of which remember the obtaining of Tropicana Products for 1998 and Quaker Oats Company in 2001, with the expansion of the brand Gatorade to its portfolio.

As of January 26, 2012, 22 of PepsiCo's items created deals of every \$ 1 billion, and subsequently, the organization's items were disseminated in extra than 200 nations, prompting yearly income of \$ 43.3 billion. As far as income, PepsiCo is that the world's second-biggest food and refreshment business, behind Nestlé. the main contest for Pepsi refreshment items was Coca-Cola.

In 1920 the corporate created very \$ 70 billion, which was driven by a movable food and refreshment portfolio that included Frito-Lay, Gatorade, Pepsi-Cola, Quaker, Tropicana, and SodaStream. PepsiCo's item portfolio incorporates a decent kind of delightful food and

refreshments, including 23 items delivering very \$ 1 billion each inside the assessed yearly deals.



PepsiCo's vision ought to be an overall innovator in Food and Beverages by Winning and Winning with Purpose mirrors their craving to win reliably inside the market and put reason in each part of the business.

PepsiCo entered India in 1989 and has developed into quite possibly the main MNC food and refreshment organization in India. PepsiCo India's different portfolio incorporates notorious items as lay Pepsi, Kurkure, Tropicana 100%, Gatorade, and Quaker.

Pepsi is the third hottest carbonated beverage in India, with a market share of 15%, after Coca-Cola and Thumps Up.

PepsiCo Advanced Digital Strategy

PepsiCo is investing huge loads of energy into the advanced framework to develop its items. some of those plans incorporate (as detailed in PepsiCo's fiscal summaries).

- i. Frito-Lay North America utilizes Big Data to help guarantee purchasers can help track down their #1 snacks at neighborhood stores.
- ii. In India, PepsiCo to investigate the connection between shopper conduct and business results has tracked down a Digital Command Center.
- iii. In China, it's created online media to dispatch the most up to date Bring Happiness Home Chinese New Year crusade, which fuses a 20-minute video and has made very 1 billion perspectives

2. OBJECTIVES

1. To understand the impact of brand loyalty on brand switching behavior between Coca-Cola and Pepsi customers.
2. To explore the brand switching factors of Coca-Cola.
3. To examine the factors that influence customer satisfaction and purchase behavior of the customers.

3.LITERATURE REVIEW

1. Modeling Brand Switching in Consumers' Products

By: Awogbemi, Clement Adeyeye Oloda, Festus Smart Osama, Caleb Kehinde, National Mathematical Centre, Sheda –Kwali, Garki, Abuja, Nigeria

In this examination, the paper portrays the inspected significance of products ascribes to the paces of switching concerning three brands of soda pops. Markov Chain strategies were utilized to decide the item brand devotion of the soda pops' buyers and the future portions of the overall industry over the long haul. Continuation of the equilibrium vector created, it was found that the purchasers showed the most brand reliability towards Fanta. The engaged examination bunch region for the polls' dispersion was the college of Abuja, Mini Campus, Gwagwalada, Abuja. The graphic procedure utilizing the Markov Chain brand switching model was utilized for the investigation of the information produced.

2. Markovian Application to Brand Switching Behaviour: A Survey of Toothpaste

By: Godwin I. Umoh, Ph.D. Department of Management, University of Port Harcourt Hart O. Awa, Ph.D. Department of Marketing, University of Port Harcourt Prince T. Ebitu, Ph.D. Department of Marketing, University of Calabar

The paper clarifies the examination report on the conduct of switching between toothpaste brands by remembering brand dedication and utilizing the Markovian Model for estimations. 785 students' information of the colleges of Abuja, Lagos, and Port Harcourt were drawn intentionally.

This paper studied and investigated the arrangements of buying in five unique states (brands of toothpaste) with the likelihood of picking each state in turn contingent just upon quick past buy conduct. The likelihood dispersion demonstrated that Dabur & Close-up are the most probable favored brand; in this manner, as long as no different brands are picked, the likelihood of ensuing acquisition of close-up or Dabur increments. In any case, on that acknowledgment the

straightforward Markov measure needs satisfactory clarification to such decisions, for example, brand accessibility and mindfulness, quality as far as flavor and usefulness, bundling, asking value, brand name, and picture, and arrangements were examined to give knowledge into such buy conduct.

3. A Study On Brand Switching And Consumer Preferences Towards Soft Drinks

By: K. VenkateswaraRaju, DR. D. Prasannakumar.

The exploration was inspected to comprehend and discover the explanations behind Reducing the RED score of Coke Outlets in certain courses in the Vijayawada market, to examine the retailers' insights about the upsides and downsides of possessing a coca-cola outlet, to survey the effect of Advertisement in marking choices, to investigate the various ways of life of clients in the changing business sector situation. They gathered information from the web and Magazine and other auxiliary sources and furthermore gathered a portion of the essential information by means of online reviews with online surveys.

The information gathered from these sources was investigated utilizing different devices like rate examination, chi-square test, cross-table investigation strategy.

4. RESEARCH METHODOLOGY

Our study is mainly based on primary research. The information is collected by distributing a Google form questionnaire to collect information about customer satisfaction among Coca-Cola customers, their purchasing behavior, factors affecting their purchase decision, and understanding the effects of consumer marketing strategies.

4.1. Hypothesis

H0: There is no critical connection between consumer loyalty and client buy choice.

H1: There is no critical effect of promoting marketing strategies on a client's buying decision.

4.2. Switching Analysis of Product Brand

With every type of product in any market, there are always some consumers who stick to one product and some are the ones who move from one product to another. Therefore, every product's brand has a collection of loyal customers and those who are constantly changing between products.

This is always an opportunity that in subsequent purchases the consumer who bought the product initially can stick to it or switch to another.

Integrated product switching behavior displayed by large groups of customers from time to time can be explained as much as possible by probability. The possible probabilistic explanations are given by the transformation matrix, its elements that offer the potential for a variety of possible probabilistic changes.

If P_{ij} is the probability that the customer will switch from brand i to brand j from one period to next; the transition matrix is:

From

$$\begin{matrix} & \begin{matrix} A & B \end{matrix} \\ \begin{matrix} A \\ B \end{matrix} & \begin{pmatrix} P_{AA} & P_{AB} \\ P_{BA} & P_{BB} \end{pmatrix} \end{matrix}$$

P_{AA}/P_{BB} :- are the probabilities that customer will stick to brand A & brand B respectively

P_{AB} :- % of customers shifting from A to B

P_{BA} :- % of customers shifting from B to A

Here the addition of row elements will always be equal to 1

The customer may buy A or B . But the number of columns does not have to be equal to 1 as the company seeks to promote its sales which is the last / most relevant to its product and to attract competitors in its category. i.e. P_{AA} and P_{BA}

4.3. Markov Chain

Markov's chain is a Markov's system with a discrete-time and discrete open space. In other words, Markov's series is a discrete state sequence, each taken from a different state space (limited or not), and which follows Markov's property.

Statistically, we can say the Markov series as

$$X = (X_n)_{n \in \mathbb{N}} = (X_0, X_1, X_2, \dots)$$

where at all times the process takes its values by a different set of E such that

$$X_n \in E \quad \forall n \in \mathbb{N}$$

State Space

The state-space of a Markov chain, S , is that the arrangement of set values that each X_t can take.

For instance, $S = [1-10]$. Allow S to have size N (perhaps limitless).

Trajectory

A Trajectory of a Markov chain might be a specific arrangement of qualities for X_0, X_1, X_2, \dots

For instance, on the off chance that $X_0 = 1, X_1 = 3$, and $X_2 = 8$, the direction till time $t = 2$ is 1, 3, 8. To comprehend it in a simpler manner, whenever asked the trajectory s_0, s_1, s_2, \dots , which implies that $X_0 = s_0, X_1 = s_1, X_2 = s_2, \dots$ 'Trajectory' is only a 'path'.

4.4. State Transition Matrix

The transition probabilities are regularly recorded in a grid. The network is known as the state probability matrix or the change likelihood lattice and is indicated by P normally. The states are accepted as $1, 2, \dots, r$, at that point the state transition probability framework is given by

$$P = \begin{pmatrix} p_{11} & p_{12} & \dots & p_{1r} \\ p_{21} & p_{22} & \dots & p_{2r} \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot \\ p_{r1} & p_{r2} & \dots & p_{rr} \end{pmatrix} \quad \rightarrow \text{rows all additions sums upto to 1}$$

The transition matrix is usually denoted with the symbol $P = (p_{ij})$.

It is important to note that $p_{ij} \geq 0$, and for all i , we have

$$\sum_{k=1}^r p_{ik} = \sum_{k=1}^r P(X_{m+1}=k | X_m=i) = 1$$

This is on the grounds that, given that we are in state i , the following state should be one of the potential states. Along these lines, when we whole over every one of the potential upsides of k , we ought to get one. That is, the rows of any state transition matrix should aggregate to one.

Mathematical Notation for t -step transitions from state i to j is given by P_t

$$\mathbf{P}(\mathbf{X}_t = \mathbf{j} \mid \mathbf{X}_0 = \mathbf{i}) = \mathbf{P}(\mathbf{X}_{n+t} = \mathbf{j} \mid \mathbf{X}_n = \mathbf{i}) = (\mathbf{P}^t)_{ij}$$

5. DATA ANALYSIS AND RESULTS

5.1. Survey Findings, Analysis, and Interpretation

Objective

The survey carried out explains the manner in which brand loyalty affects the brand switching behavior of Coca-Cola and Pepsi customers, to explore the brand switching factors of Coca-Cola, and to examine the factors that influence customer satisfaction and purchase behavior of the customers.

Mode of the Survey

The mode of the survey was done via a google form.

Distribution of the Survey

The survey was distributed via Facebook posts, Facebook stories, Instagram stories, WhatsApp, Twitter, LinkedIn app and web, and all other social media platforms.

Overview of the Responses

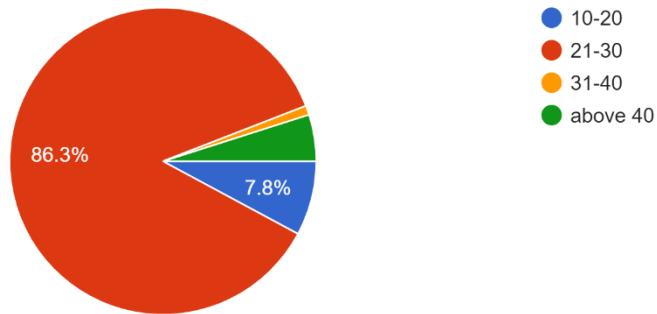
The number of responses received from the google survey was about 102 in number, where respondents' preferences are more inclined to Coca-Cola drinks rather than Pepsi.

DEMOGRAPHIC DETAILS

• Age Profile

According to the survey & what all ages have given responses, the age had been categorized into 4 groups: 10-20 years old with no. of respondents of about 8, 21-30 years old with no. of respondents of about 88, 30-40 years old with no. of respondents being 01 & above 40 years old with no. of respondents of about 5.

Age group
102 responses



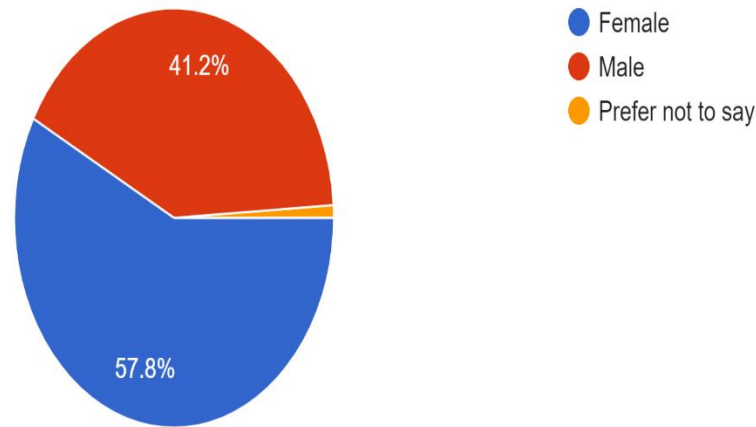
As you can see from the above pie chart that 86.3% of respondents belong to the age group 21-30 years old.

- **Gender Profile**

The willing participants of the survey were also broadly classified into gender as well. The no. of male respondents was about 42 and the no. of female participants was about 59 and the rest 1% prefer not to reveal their gender. The pie chart below depicts 57.8% of respondents being female, whereas 41.2% of respondents being male.

Gender

102 responses



- **By Location**

Although this survey was distributed pan India, 80% of willing participants are from the Delhi-NCR region, rest are from the rest of India.

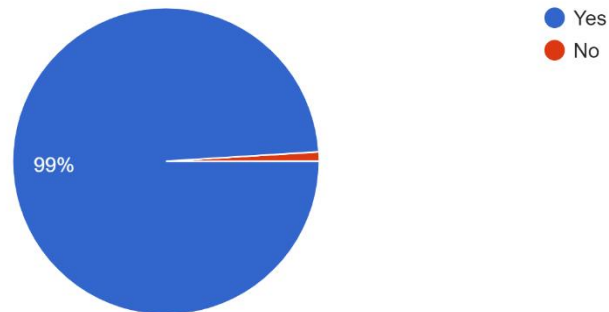
5.2. SURVEY RESPONSES

- **Consumption of Cola Drinks**

As per the respondents' response, 99% i.e. 101 respondents agree to drink Cola drinks whereas 1 says no to consuming Cola drinks. This is to ascertain the respondents' consumption to further ask the questions ahead of the Survey.

Have you consumed cola soft drink?

102 responses

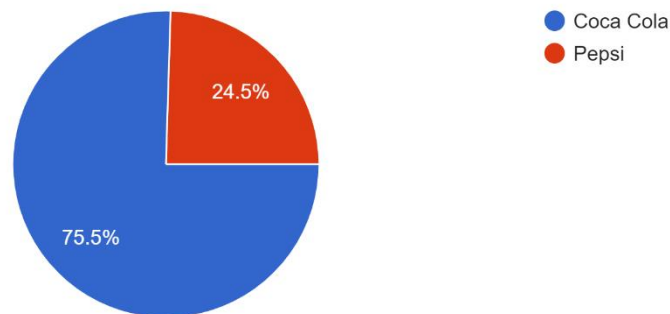


- **Preference for Cola Drinks**

Given the obvious choice of two brands, One is Coca-Cola (the brand we are focusing on) and the other being Pepsi (the closest competitor we want to focus on for comparison), 77 respondents prefer Coca-Cola drink whereas 25 respondents prefer Pepsi. This is to understand the buying brand preference for Cola drinks shares in the market by the consumers.

Which Cola drink do you generally prefer?

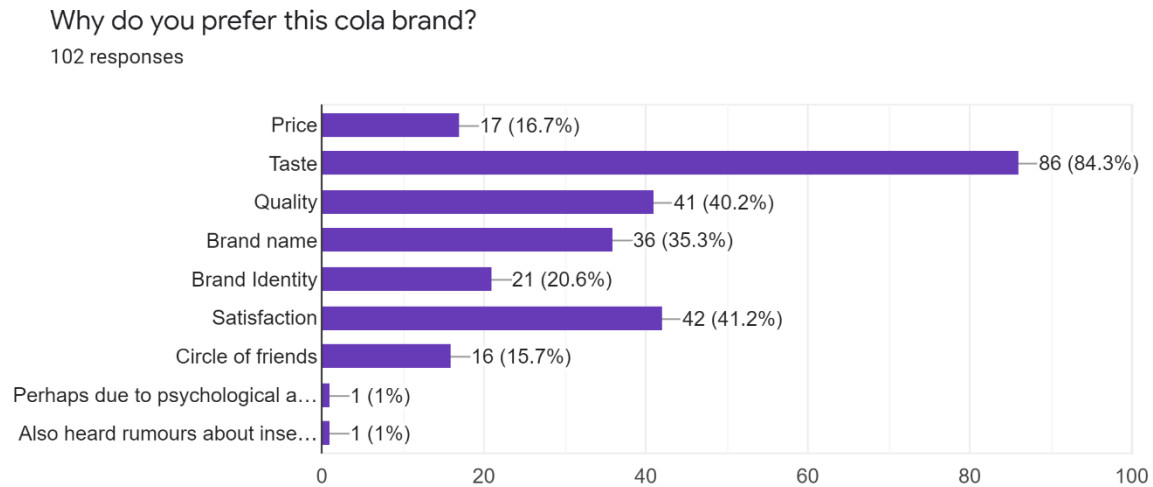
102 responses



- **Ascertaining the Choice of Brand**

Question asked to the respondents to know “Why” they chose the particular brand given in the option to get the clear picture of which product stands out and for what reason.

Out

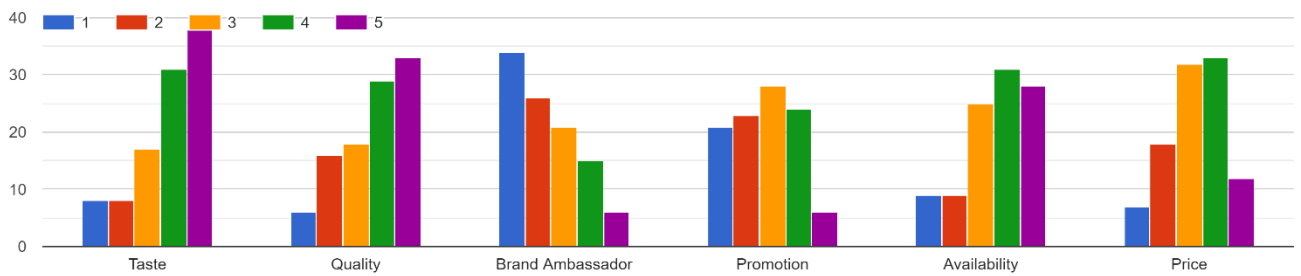


Out of all the given above factors presented in the pie chart, Taste is the obvious preference mode of selecting their particular brand with 86 (84.3%) respondents, next to Satisfaction (42 (41.2%) respondents) and Quality (41 (40.2%) respondents) being the next factors that amount to decision making in the Cola brand preference.

- **Rating the factors considered in choosing/buying the Cola brand**

Rating the factors to see the consumers’ choosing factor in buying the preferred Cola drink. The Rating is categorized from 1 to 5 with 1 being the least important and 5 being the most important.

Rate the factors from 1 to 5, (5 being the most important and 1 least important) when you buy Coca Cola?



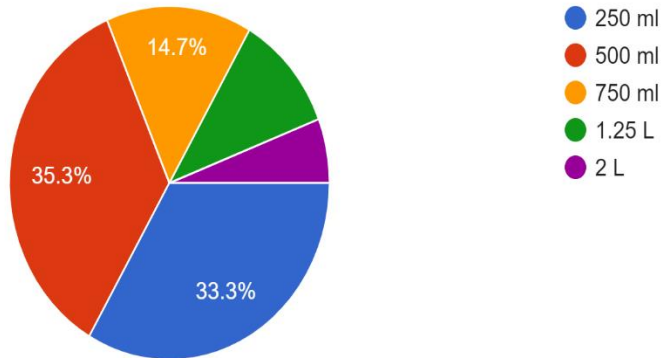
From the above bar graph, by analyzing the highest no. of respondents of the rate of that particular factor, we can see that 38 respondents rated 5 for Taste, 33 respondents rated 5 for Quality, 34 respondents have rated 1 for Brand Ambassador, 28 respondents rated 3 for Promotion, 31 respondents have rated four for the Availability of product, and 33 respondents gave the rating four for Price.

- **Size Packaging of the preferred Cola Brand**

The packaging size determines the buying and preference capacity of the chosen particular brand to understand the consumer's perception of their likeness towards the brand and with packaging size.

Which size of package of the brand you prefer?

102 responses



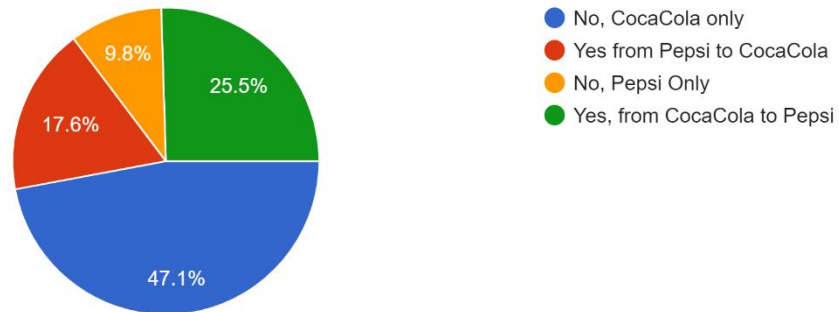
From the above pie chart, 36 respondents prefer 500 ml size of the Cola drink, 33 respondents prefer 250 ml size of the Cola drink, 15 respondents prefer 750 ml size of the Cola drink, 11 respondents prefer 1.25L size of the cola drink and the rest 6 prefer the 2L size of the Cola drink.

- **Brand Loyalty and Switching**

This is to ascertain whether the consumers are loyal and stick to their brand or do they change to other brands whenever the chance is given or required to understand the consumer's mentality on cola brands.

Do you often change the brand you are consuming?

102 responses



From the above pie chart, 48 respondents are loyal to Coca-Cola only, 18 respondents switch from Pepsi to Coca-Cola, 26 respondents switch from Coca-Cola to Pepsi, and only the rest 10 respondents remain loyal and stick to Pepsi.

- **Reasons behind the switching of Cola brands**

There are many factors of switching to different brands. Here we have made some common reasons for switching between two Cola brands like Price of the product not matching, Availability, Brand fatigue, Lack of Customer service, Taste, Not enough understanding of the customer, and given the option of others for other reason to be denoted.

What do you think is the reason for switching in between the brands?

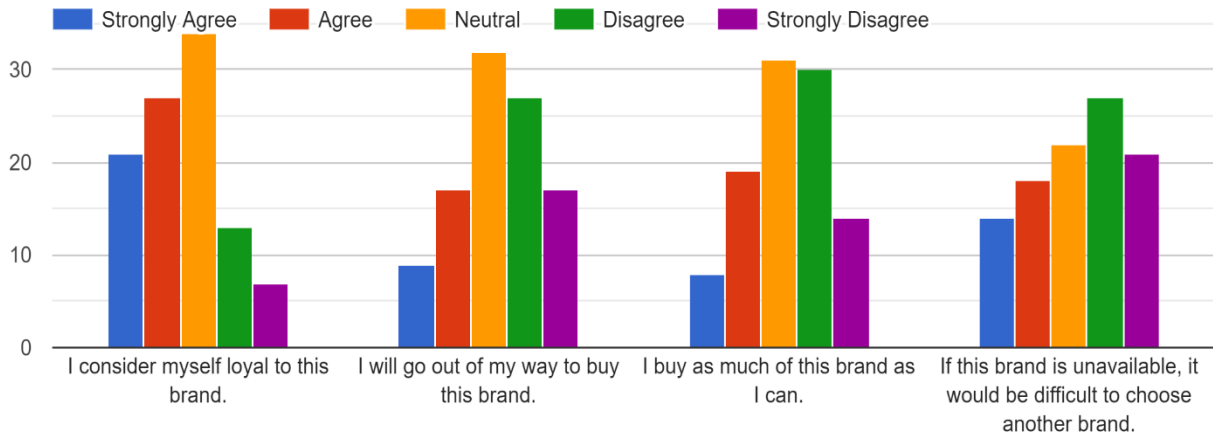
94 responses



- **Agree or Disagree rating with the statements made on Cola Brands**

Rating Strong Agree to Strongly Disagree of Statements that are given to consumers like “I consider myself loyal to this brand.”, “I will consider going out of my way to buy the brand.”, “I buy as much of this brand as I can.” and “If this brand is unavailable, it would be difficult to choose another brand” is done to check and prove the levels of brand loyalty and brand switching between the two cola brands given.

Mark if you agree or disagree with the statements below.

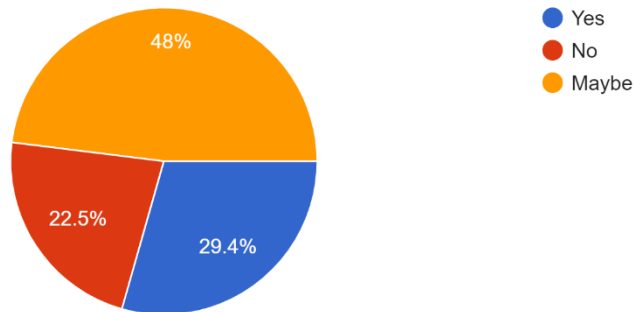


Looking at the highest respondents on the ratings of agreeing/disagree in each statement, the first 3 statements are getting neutral at most whereas the statement “If this brand is unavailable, it would be difficult to choose another brand” is being disagreed by most of the respondents with 27 highest respondents in no.

- **Brand purchase on the price increase**

To check the loyalty of the consumers to the brand, increasing the price may give an edge on the thinking of the consumer market and where the brand stands in the loyalty points and to check the pricing stand as well in the market.

Will you continue to buy the same brand that you are currently consuming if its price increases?
102 responses

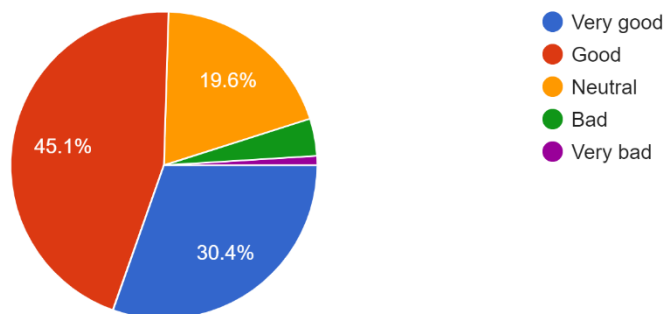


29.4 % agree to buy the preferred Cola drink with the price increased whereas 22.5% won't buy the Cola drink they consume if the price of the brand increases. The remaining 48% of respondents are unsure.

- **View and buying influence from the advertisement of Coca-Cola**

The view on the advertisement leads to determining whether to purchase that brand product or not. The review of the advertisement can affect the market sales share of the brand (Coca-Cola here).

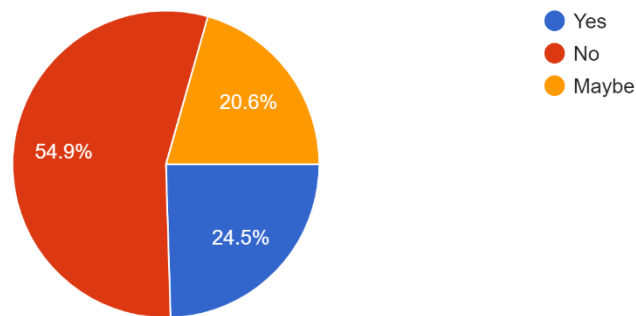
What is your view on the mass media advertisement of Coca cola?
102 responses



As per the pie chart above, Around 75.5% feel good and very good about the mass media advertisement of Coca-Cola, the rest 24.5% of the respondents feel either neutral or view badly in light towards the mass media advertisement of Coca-Cola.

Have you ever purchased a Coca Cola product after watching an advertisement?

102 responses



As per the pie chart above presented, 54.9% of respondents are believing that the purchasing decision is not affected by viewing the advertisement of Coca-Cola, whereas 24.5% of 102 respondents believe that advertisement can affect the purchasing decision of Coca-Cola as they purchased themselves, and the rest 20.6% of respondents are unsure of it.

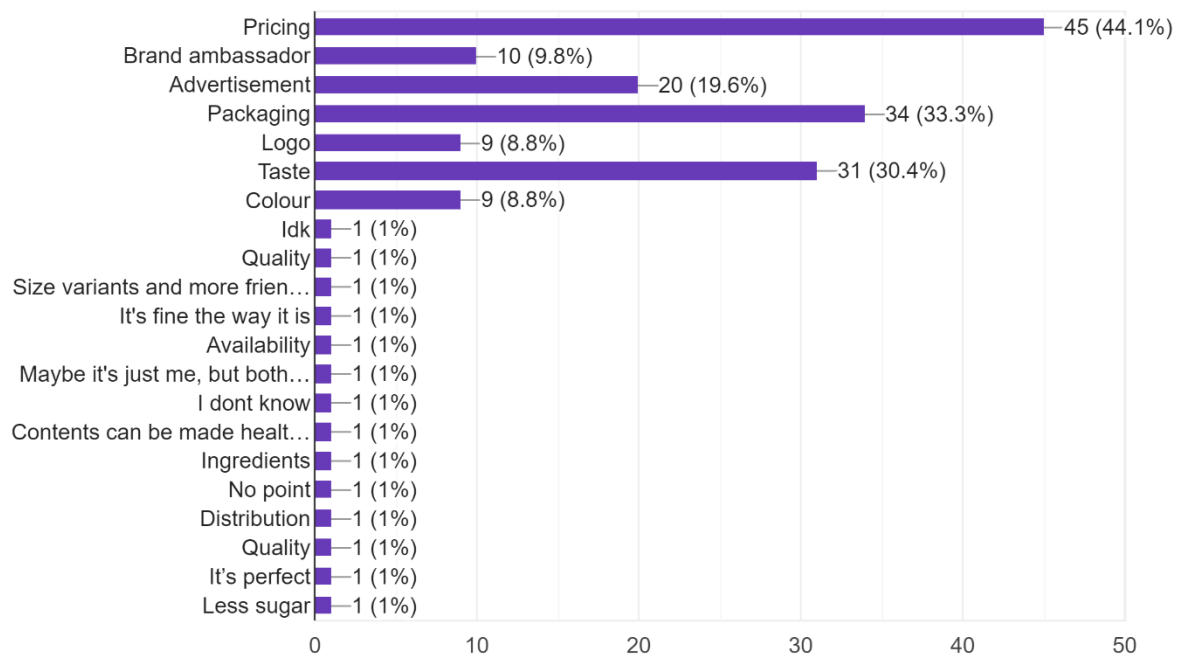
- **Scope of Improvement for Coca-Cola as per Consumer's insight**

Scope of improvement is always needed for any brand to grow their market share as well as the trust with their current customers and to get more consumers as the improvement factors are met.

The Pricing factor of the Coca-Cola brand got 45 respondents for the factor to improve, Brand Ambassador got 10 respondents, Advertisements factor got 20 respondents, Packaging factor got 34 respondents, 9 respondents for Logo factor, 31 respondents for the Taste factor, 9 respondents for Color, and rest factors have 1 respondent each as per the pie chart below.

Where do you think Coca cola can improve itself?

102 responses



5.3.Brand Switching Analysis (Findings)

Brand Preference

Brands	No. Of Consumers	Percentage
CocaCola Only	48	47.1%
Pepsi Only	10	9.8%
CocaCola to Pepsi	26	25.5%
Pepsi to Coca Cola	18	17.6%
Total	102	

Brand Insistence and Switching Rates

Brands	No. of consumers	Percentage	Probability
CocaCola (C)			
Brand insistence	48	65	0.65
Switching to Pepsi	26	35	0.35
Total	74		
Pepsi (P)			
Brand insistence	10	36	0.36
Switching to CocaCola	18	64	0.64
Total	28		

The transition matrix is as below.

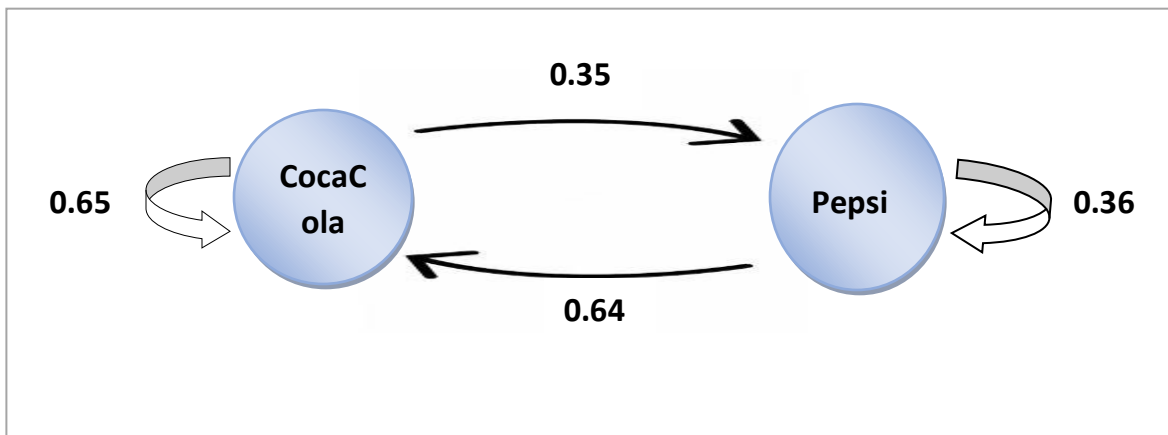
$$P_{ij} = \begin{matrix} & \begin{matrix} \text{CocaCola} & \text{Pepsi} \end{matrix} \\ \begin{matrix} \text{CocaCola} \\ \text{Pepsi} \end{matrix} & \begin{pmatrix} 0.65 & 0.35 \\ 0.64 & 0.36 \end{pmatrix} \end{matrix}$$

Cocacola

This matrix explains that 65% of consumers will stick to Coca-Cola and 64% will shift from Pepsi to Coca-Cola. Similarly, 35% of those consuming Pepsi will stick to it, also, 36% of consumers will shift from Coca-Cola to Pepsi.

State Transition Diagram

The transition diagram explains the transitions in the states for the above matrix. In the above diagram 2 states are present, Coca-Cola and Pepsi and the arrows show the transition probabilities from each state.



Assuming that this matrix is true in each case, a steady-state will thus be achieved about the market shares of Coca-Cola and Pepsi.

a) Let the initial market shares of both brands by 50%.

Period	CocaCola	Pepsi
1	50	50
2	$(50*0.65) + (50*0.64) = \mathbf{64.5}$	$(50*0.35) + (50*0.36) = \mathbf{35.5}$
3	$(64.5*0.65) + (35.5*0.64) = \mathbf{64.6}$	$(64.5*0.35) + (35.5*0.36) = \mathbf{35.4}$
4	$(64.6*0.65) + (35.4*0.64) = \mathbf{64.6}$	$(64.6*0.35) + (35.4*0.36) = \mathbf{35.4}$

A steady-state is achieved when the respective market shares of the selected brands, Coca-Cola and Pepsi are 64.6% and 35.4%.

b) Taking the market shares of Coca-Cola and Pepsi as 75.5% and 24.5% (as per the survey), we see that the steady-state is still achieved at 64.6% and 35.4%. This shows that the steady-state is independent of the initial market shares.

Period	CocaCola	Pepsi
1	75.5	24.5
2	$(75.5*0.65) + (24.5*0.64) = \mathbf{64.8}$	$(75.5*0.35) + (24.5*0.36) = \mathbf{35.2}$
3	$(64.8*0.65) + (35.2*0.64) = \mathbf{64.6}$	$(64.8*0.35) + (35.2*0.36) = \mathbf{35.4}$
4	$(64.6*0.65) + (35.4*0.64) = \mathbf{64.6}$	$(64.6*0.35) + (35.4*0.36) = \mathbf{35.4}$

∴ If we go by the above steady-state probability and with the transition probability matrix is given by:

$$\begin{matrix} A & B \\ \left(\begin{array}{cc} \alpha & 1-\alpha \\ 1-\beta & \beta \end{array} \right) \end{matrix}$$

And the initial shares are S and $(1 - S)$

then in the next stage, we will get

$$(S, (1 - S)) \begin{pmatrix} \alpha & 1 - \beta \\ 1 - \beta & \beta \end{pmatrix} = (S_1, (1 - S_1)) \text{ (say)}$$

Further in the second stage

$$\begin{aligned} (S, (1 - S)) \begin{pmatrix} \alpha & 1 - \alpha \\ 1 - \beta & \beta \end{pmatrix} &= (S, (1 - S)) \begin{pmatrix} \alpha & 1 - \alpha \\ 1 - \beta & \beta \end{pmatrix}^2 \\ &= (S_2, (1 - S_2)) \text{ (say)} \end{aligned}$$

Similarly, in the n^{th} stage transition, we will get

$$(S, (1 - S)) \begin{pmatrix} \alpha & 1 - \alpha \\ 1 - \beta & \beta \end{pmatrix}^n = (S_n, (1 - S_n))$$

Now for steady-state $n \rightarrow \infty$

∴ $\lim_{n \rightarrow \infty} (S, (1 - S)) \begin{pmatrix} \alpha & 1 - \alpha \\ 1 - \beta & \beta \end{pmatrix}^n \rightarrow$ steady state independent of initial market shares of the company

5.4. Assumptions:

1. The probability of purchase of a given brand depends upon the immediate previous purchase and not on the entire history i.e. it has a Markovian property (forget-fullness) i.e. it forgets what happened in the past.

In brand switching, it may not be true and may depend on the entire history.

2. The total market is constant. Every consumer makes purchases in every period. But this may not be true. To overcome this we introduce no purchase.

From\ To	A	B	No purchase
A	P_{AA}	P_{AB}	P_{A0}
B	P_{BA}	P_{BB}	P_{B0}
No purchase	P_{0A}	P_{0B}	P_{00}

The modification creates another problem because we're having Markovian property. Suppose in the immediate past, there is an event of no purchase, then what happens in the next will depend on the previous time, i.e no purchase whereas it should depend on which brand he purchased.

3. The model does not take into account the validation of quantity purchased by a consumer during a period.

From\ To	A	B
A	0.6	0.4
B	0.3	0.7

Markov model assumes in forgetting the past purchase and bases its purchasing behavior only on the most recent purchase, the satisfaction derived from it, and the attraction of other brands.

6. LIMITATIONS

- Because we do not have many years of experience in conducting analysis the scope of the project are compromised on certain levels as compared to the existing works by the expertise.
- Time constraints- This project has to be completed in 3 months which made it difficult for us to cover a detailed study on the Brand Switching analysis of Coca-Cola drinks
- Too many research studies on the topic-There are many research papers and contents available on this topic due to which it was difficult to follow and get the exact facts about the data because of too many open sources and less credible data to follow.

7. CONCLUSION

We have determined the market environment of soft drinks in the future using a transition matrix. It explains the brand switching pattern from one soft drink to another among the consumers. It is seen that most of the consumers preferred Coca-Cola over Pepsi due to factors such as taste, quality, satisfaction, brand name, and identity, etc. Most of the consumers chose Coca-Cola because of its taste. 23.4% of the consumers stated their reasons for brand switching as brand fatigue followed by taste (22.3%). Further availability of the product and lack of customer service also contributed to consumers switching to other brands.

The total demand for both the brands, CocaCola and Pepsi among the people surveyed was 48 and 10 respectively. Out of this, 47.1% of the respondents were those who would stick to consuming Coca-Cola, while 17.6% switched from Pepsi to Coca-Cola. 28 people preferred Pepsi with 36% sticking to Pepsi and 64% switching from CocaCola to Pepsi.

It is seen that when consumers are not able to attain satisfaction from one brand, they switch to the other, thus the product losing its market to its competitor. Ultimately, the revenue of the brand decreases. To retain their customers and minimize brand switching, producers need to focus on the demands of the customer and aim a maximum satisfaction. They should also invest in quality improvement and market research and development.

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