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COURSE : STP 056

STRATEGIC PLANNING

175ML SMALL COCA-COLA BOTTLE - DEMAND ANALYSIS

ATLANTIC INTERNATIONAL UNIVERSITY
DOCTORATE IN BUSINESS ADMINISTRATION

Executive Summary

The report analyzes about the product Coca-Cola. First the report makes the outset with executive summary, table of contains, list of figures and the list of tables.

Then the report contains with the introduction on soft drinks, Coca-Cola and Coca-Cola in Sri Lanka.

- The structure of the assignment is as follows;
 - I. Introduction to the product
 - II. Theoretical Background
 - III. Data Presentation
 - IV. Data Analysis and Results
 - V. References

As assigned the group's selected product is the 175ml Coca-Cola bottle. Then the market structure of the product is analyzed. The theoretical background related to the demand, law of demand, demand curve, demand equation and the elasticity is analyzed.

Finally, the data collection is represented with the results. The report concludes with the, appendices and the references.

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1. Introduction

1.1 Introduction – Soft Drinks

At present using soft drinks is a normal thing in people’s life not only in Sri Lanka but also in the world.

A soft drink is a beverage that regularly contains carbonated water, a sugar, and a characteristic or counterfeit seasoning. The sugar might be sugar, high-fructose corn syrup, organic product juice, sugar substitutes (on account of diet beverages), or a blend of these. Soft drinks may likewise contain caffeine, colorings, additives, and different fixings. (Landi, Heather, 2012).

Soft drinks are designated "delicate" rather than "hard beverages" (mixed drinks). Limited quantities of liquor might be available in a soft drinks, yet the liquor content should be under 0.5% of the absolute volume if the beverage is to be viewed as non-heavy drinker. Fruit juice, tea, and other such non-mixed refreshments are in fact soft drinks by this definition yet are not by and large alluded to accordingly.

The origins of soft drinks lie in the development of fruit-flavored drinks. In Tudor England 'water imperial' was widely drunk; it was a sweetened drink with lemon flavor and containing cream of tartar. 'Manays Cryste' was a sweetened cordial flavored with rosewater, violets or cinnamon. (Longo-Silva, G. et al., 2015).



Figure 1: Soft Drinks

1.2 Introduction – Coca-Cola

Coca-Cola is the most famous and greatest selling soft drink ever, just as quite possibly the most conspicuous brands in the world.

Made in 1886 in Atlanta, Georgia, by Dr. John S. Pemberton, Coca-Cola was first offered as a wellspring refreshment at Jacob's Pharmacy by blending Coca-Cola syrup in with carbonated water. (Townsend, S. & Bick, Geoff, 2016).



Figure 2: Coca-Cola Logo

The Coca-Cola Company has, once in a while, presented other cola drinks under the Coke brand name. The most well-known of these is Diet Coke, with others including Caffeine-Free Coca-Cola, Diet Coke Caffeine-Free, Coca-Cola Cherry, Coca-Cola Zero, Coca-Cola Vanilla, and exceptional forms with lemon, lime, or espresso. In 2013, Coke items could be found in more than 200 nations around the world, with buyers bringing down more than 1.8 billion organization refreshment servings every day. (Zegler, Jennifer, 2011).



Figure 3: Coca-Cola Product History

1.2.1 Coca-Cola in Sri Lanka

Coca-Cola's excursion in Sri Lanka started 59 years in April 1961, when shoppers tasted their first super cold taste of Coca-Cola from a 300-milliliter glass bottle. Today in Sri Lanka, Coca-Cola has gotten extraordinary compared to other cherished refreshments in the soft drinks market. Following the presentation of Trademark Coca-Cola, other worldwide brands were added to the organization portfolio including Coca-Cola Light, Sprite, Fanta, and the Minute Maid scope of juices which furnish shoppers across the island with an assortment of hydrating and nutritious drink choices. (FSMW, 2018).

Locally, Coca-Cola's most noteworthy brand strength is that it has persistently drawn in with purchasers through an energizing exhibit of missions and initiations. In Sri Lanka, the organization has associated with purchasers by turning into a piece of Avurudu and Christmas celebrations, just as by supporting grassroots cricket through the Coca-Cola Cricket Pathways camps and sorting out performances like 'Coke Ekka Rock Wenna'. Coca-Cola was as of late granted, for the eighth sequential time - The Youth Beverage Brand of the Year at the SLIM Nielsen People's Choice Awards. (States News Service, 2014).

1.3 Selected Product

The selected product for the micro economics group assignment is;

- The 175 ml coca-cola bottle
- Price – Rs. 40



Figure 4: 175ml Coca-Cola Bottle

1.3.1 Reason for selecting the product

- It is identified that 175 ml coca-cola bottle has a comparative advantage in demand compared to other soft drinks
- The brand name is widened around the world
- Quality of the product
- Taste of the drink

1.4 Market Structures

1.4.1 Introduction

Market structure alludes to the nature and level of rivalry on the lookout for products and ventures. The structures of market both for products market and administration (factor) market are controlled by the idea of rivalry winning in a specific market. (Shaik, K. & SpringerLink, 2014).

On the basis of competition, a market can be classified in the following ways:

1. Perfect Competition
2. Monopoly
4. Oligopoly
5. Monopolistic Competition

Table 1: Features of the Market Structures

Features	(Market Forms)			
	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
1. No. of Firms	Large	One	Varied but not too many	A few
2. Nature of Product	Homogeneous	One type	Product Differentiation	Homogeneous or Differentiated
3. Entry of Firms	Free	No entry	Free	Restricted
4. Degree of Monopoly Power	Zero	Full	Limited	Limited due to product differentiation
5. Price Policy of Firm	Price-taker	Price-maker	Price-maker	Price-maker
6. Market Knowledge	Complete	Incomplete	Incomplete	Incomplete
7. Elasticity of Demand	Perfectly elastic	Less elastic	Less elastic	Less elastic
8. AR and MR	Equal	Different	Different	Different
9. Selling Cost	No	Small	Large	Small

1.4.2 Market Structure of the Selected Product

In Sri Lanka, a great many customers have been revived and the brand appreciates a tradition of having won the hearts of buyers. It is the biggest soft drinks brand in Sri Lanka today.

The consistent enthusiasm to contact the lives of its shoppers has made Coca-Cola quite possibly the most favored brands in Sri Lanka and the world. Coca-Cola is appreciative for the proceeded with help of its purchasers and accomplices, and anticipates a lot more long stretches of invigorating the world with snapshots of hopefulness and energy.

Coca-Cola has likewise contacted a huge number of lives through an assortment of network and maintainability activities in the regions of ladies' strengthening, water, disinfection and reusing. (News Bites, 2016).

Market structure for 175 ml coca-cola bottle;

- **Oligopoly Market**

Oligopoly is a market structure in which few firms have the vast larger part of piece of the pie. An oligopoly is like a restraining infrastructure, then again, actually as opposed to one firm, at least two firms rule the market. There is no exact furthest breaking point to the quantity of firms in an oligopoly, however the number should be low enough that the activities of one firm essentially effect and impact the others.

The soft drinks business can be viewed as an oligopoly for a few reasons. Initial, three firms control by far most of the market share, which incorporate Coca-Cola, Elephant house sodas and Pepsi. There are more modest firms on the lookout, yet their piece of the pie in the business is miniscule by correlation with these three predominant firms. Little organizations for the most part do not have the monetary funding to dispatch brand for a huge scope.

Next, the obstructions to passage in the business are high. Delivering soft drinks for a wide market would require a huge interest underway hardware, brand material, and promoting. The significant expense working in this industry keeps numerous organizations from entering the serious field.

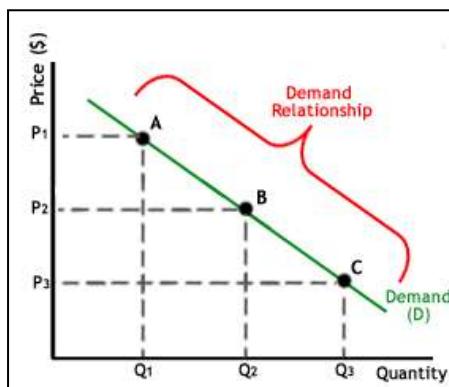
Last, these organizations take part in non-value item separation. Infrequently can be seen that one organization endeavor to undermine the other organization on cost. All things considered; these organizations utilize inventive ads to contend. Oligopolistic Market is Interdepend, Advertising, Group Behavioral, Competition and Price Regedit. (Shi Hong-Yan, et Al., 2010).

2. Theoretical Background

2.1 Law of Demand

The law of demand proposes the converse connection among cost and amount in the psyche of purchasers. The law of demand is spoken to graphically by a down-slanting interest bend. The law of interest is clarified by the lessening peripheral utility, the pay impact, the replacement impact and with the assistance of lack of concern bends investigation. (Carden, A., 2012).

2.2 Demand Curve



It is the graphical representation of the relationship between the quantity demanded of a good and the price of the good. It is a downward sloping curve.

Figure 5: Graph that shows the Law of Demand

Table 2: Demand Curve Example

The demand curve shown here is drawn according to the following data:

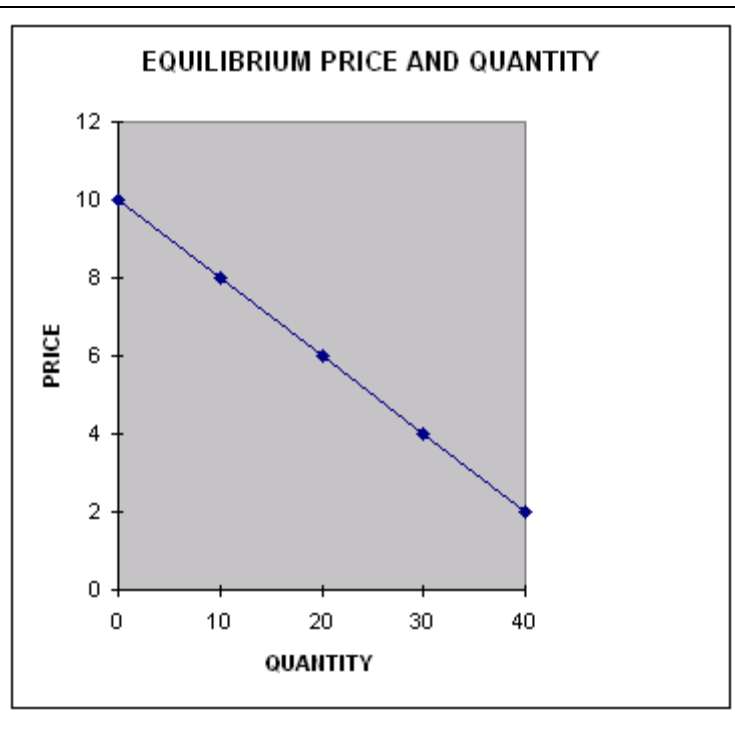
Price (P) – Rs.

02 04 06 08 10

Quantity demanded (Qd) - Units

40 30 20 10 00

Price and quantity demanded are negatively related.



2.2.1 Change in Demand

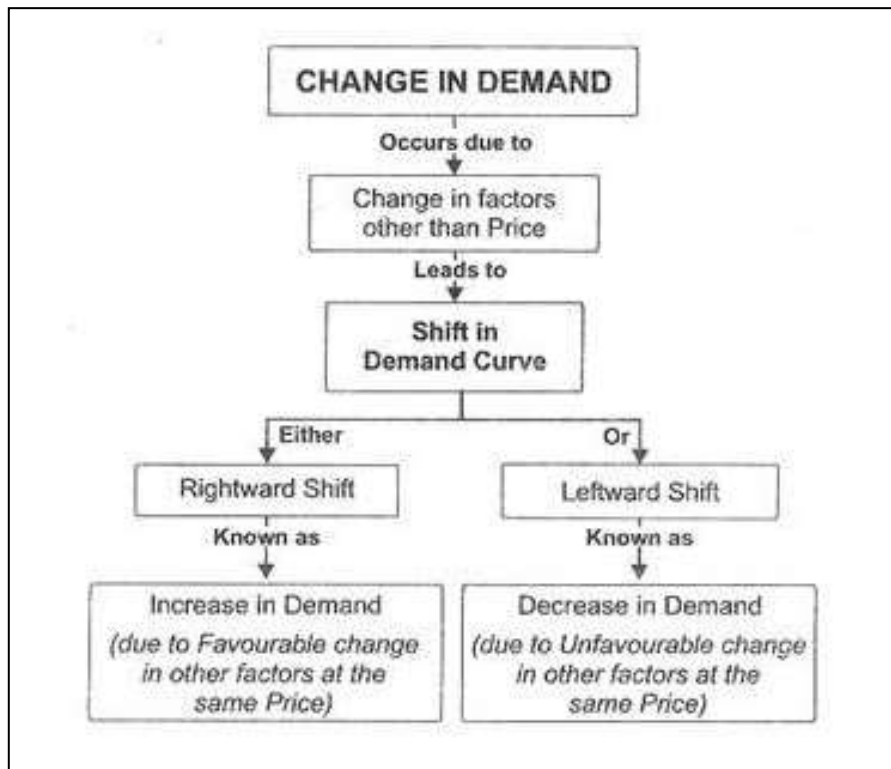


Figure 6: Change in Demand

2.3 Individual Demand Vs. Market Demand

Market demand is the summation of the entirety of the individual interest bends for a specific thing. The exchange from a person to a market demand plan is cultivated by adding singular amounts at different value levels. Total interest (AD) isn't equivalent to advertise request. Advertisement is a timetable that shows the different measure of genuine homegrown yield (GDP) which homegrown and unfamiliar purchasers will want to buy at every conceivable value level. (Hildenbrand, W. & Project Muse, 1994).

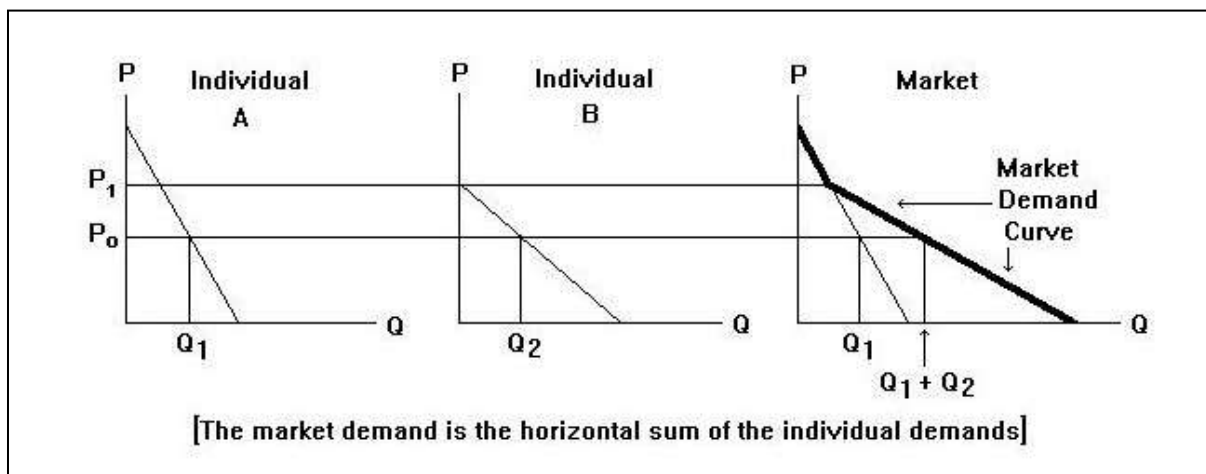


Figure 7: Individual Demand and Market Demand

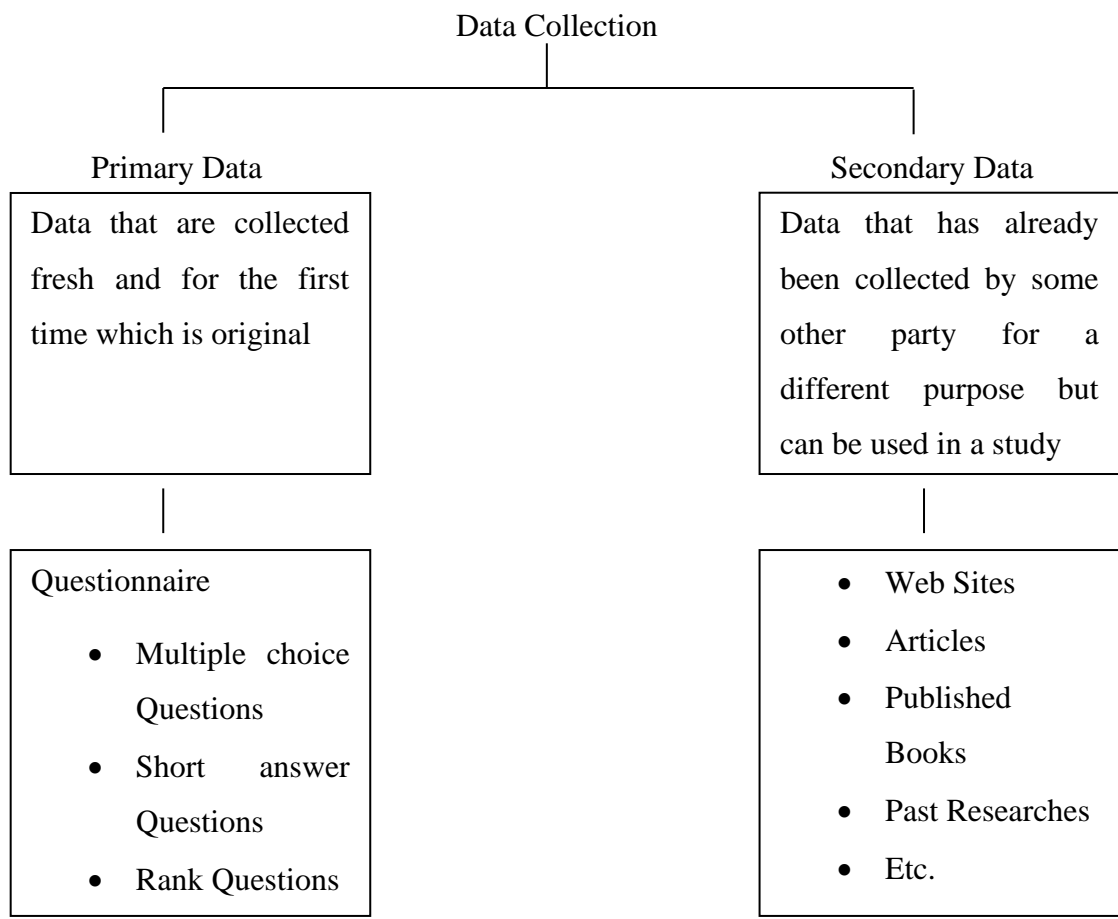
3. Data Collection

For the data collection, the group considered the research method as a survey and conducted a successful survey. The research instrument is a structured questionnaire. The group used the percentage analysis as the analytical tool for the data presentation

Percentage Analysis Calculation

Percentage analysis is the method to represent raw streams of data as a percentage (a part in 100 - percent) for better understanding of collected data.

$$\text{Percentage Analysis} = \frac{\text{Number of responses for the relevant area}}{\text{Total number of responses}} * 100$$



3.1 Population

For the selected product, the targeted population is all the people in Sri Lanka

3.2 Sample

- Represents the population and is having the same characterizing as the population
- The Sampling Technique is the Stratified Random Sampling which is a Probability Technique
- The Sample Size is limited to 140 people
- The Sample Area is limited for the Colombo District

3.3 Data Presentation

The collected data is presented in one or two methods of the following ways,

- Table
- Pie Chart

3.3.1 Consumption of Coca-Cola

This data is collected form the question number five (5) in the survey questioner.

Table 3: Consumption of Coca-Cola

Response	Number of Responders
Yes	140
No	20
Total	160

Hereafter the total number of recipients is identified as 140 people because according to this data there are 20 people from 160 responders who are not consuming Coke

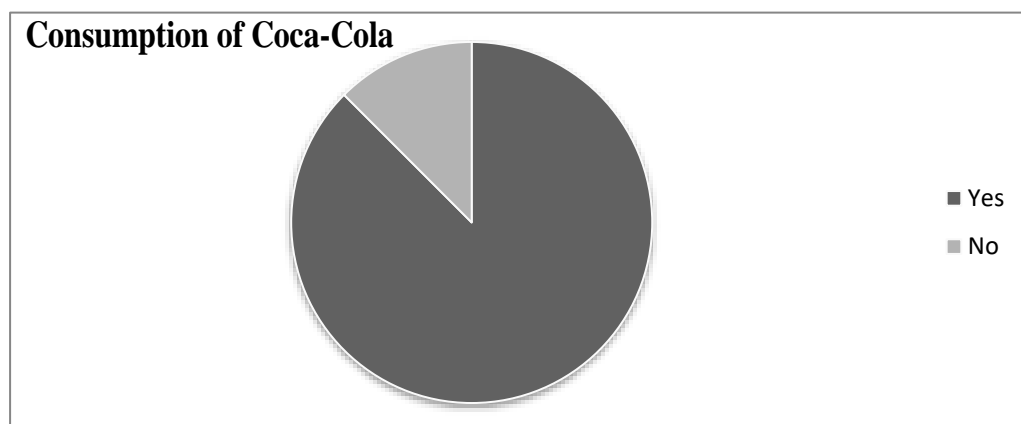


Figure 8: Consumption of Coca-Cola

3.3.2 Age Distribution

This data is collected from the first question number one (1) in the survey questioner.

Table 4: Age Distribution

Age	Number of Responders
16-20	70
21-25	64
26-30	04
Above 30	02
Total	140

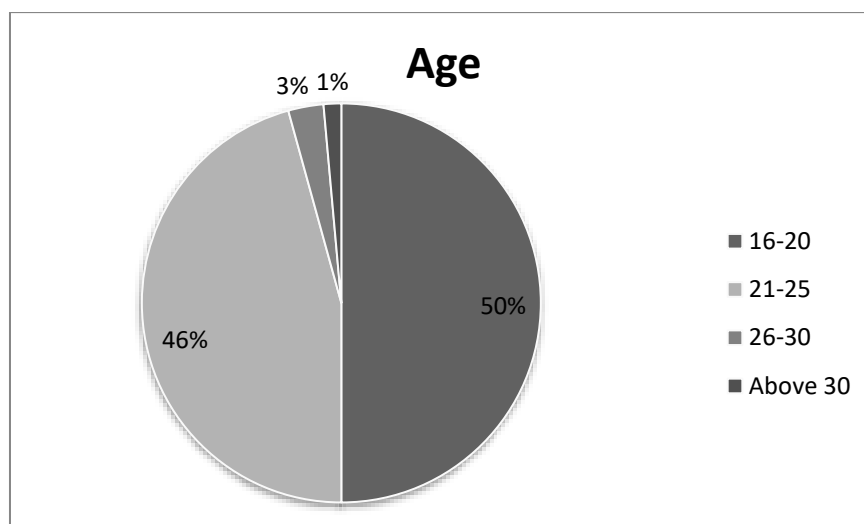


Figure 9: Age Distribution

3.3.3 Gender Distribution

This data is collected from the first question number two (2) in the survey questioner.

Table 5: Gender Distribution

Gender	Number of Responders
Male	82
Female	58
Total	140

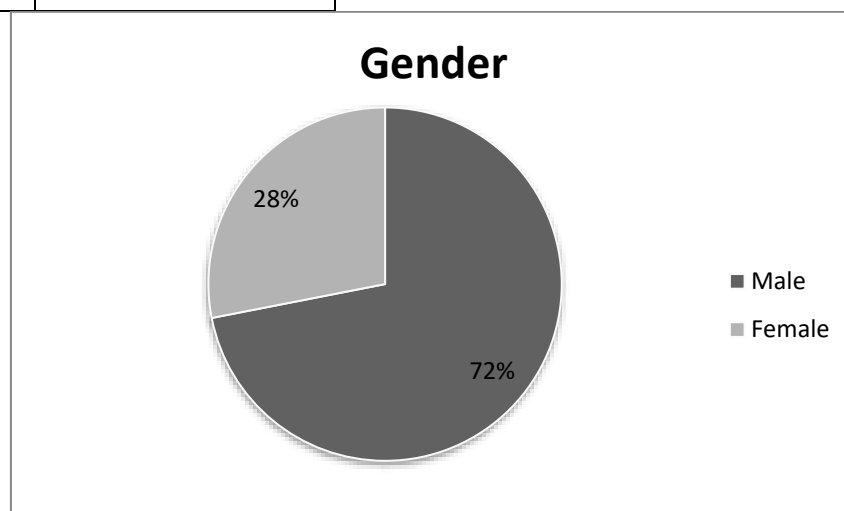


Figure 10: Gender Distribution

3.3.4 Occupation Distribution

This data is collected from the first question number three (3) in the survey questioner.

Table 6: Occupation Distribution

Occupation	Number of Responders
Studying	110
Working	30
Total	140

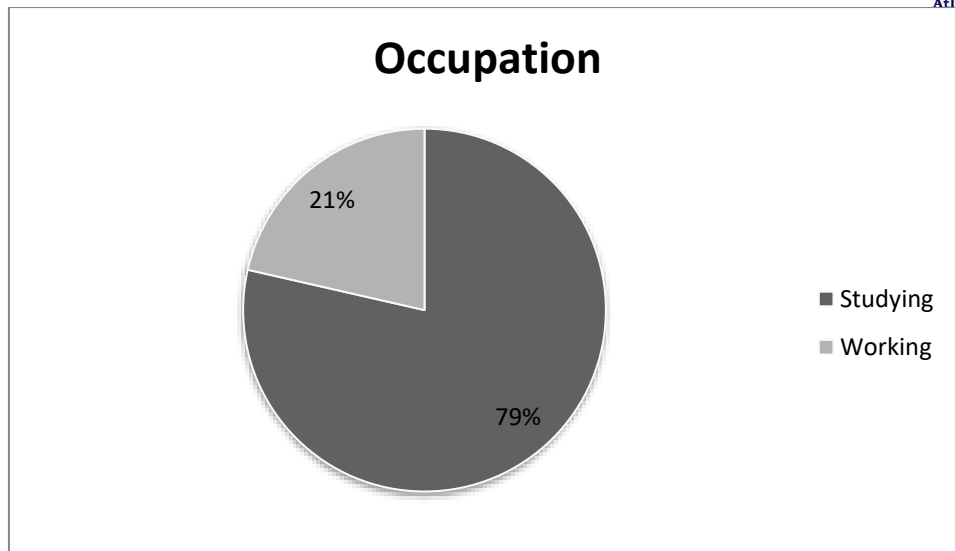


Figure 11: Occupational Distribution

3.3.5 Income Distribution

This data is collected from the first question number four (4) in the survey questioner.

Table 7: Income Distribution

Income Level	Number of Responders
0-20,000	110
20,000-50,000	17
Above 50,000	13
Total	140

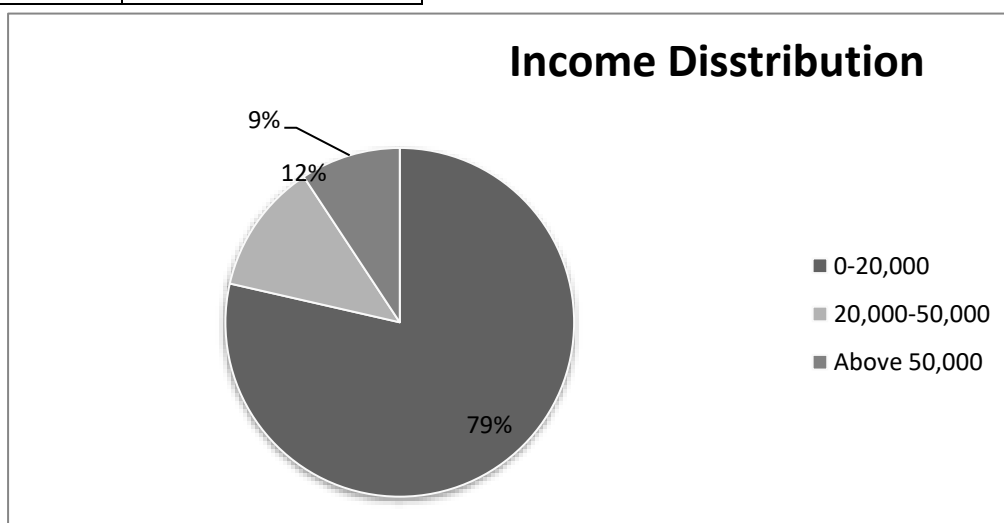


Figure 12: Income Distribution

3.3.6 Influence on Purchase (Satisfaction)

This data is collected from the first question number seven (7) in the survey questioner.

Satisfaction	Number of Responders
0% -24%	22
25% -49%	32
50% -74%	36
75% -100%	50
Total	140

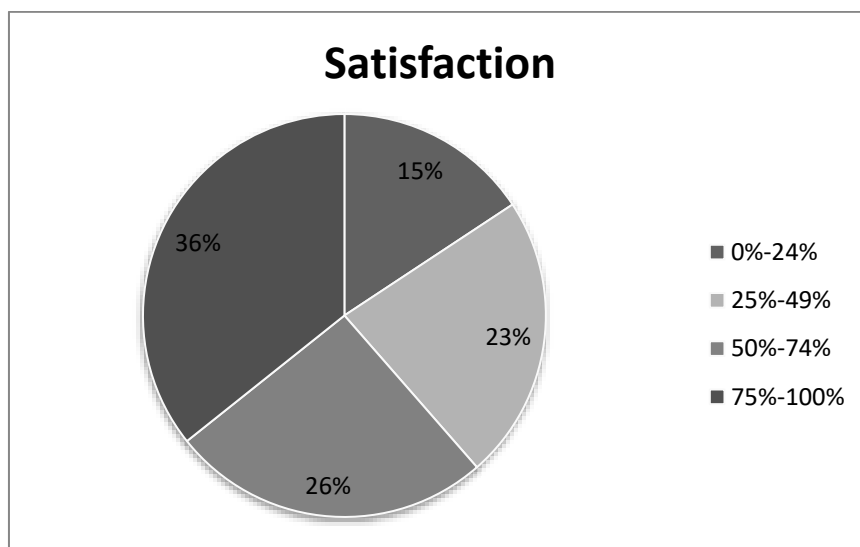


Figure 13: Satisfaction Level of Coca-Cola

3.3.7 Reason for the Choice Distribution

This data is collected from the first question number eight (8) in the survey questioner.

Table 8: Reason for the Choice Distribution

Choices	Number of Responders
Quality	16
Taste	104
Brand Name	18
Price	02
Total	140

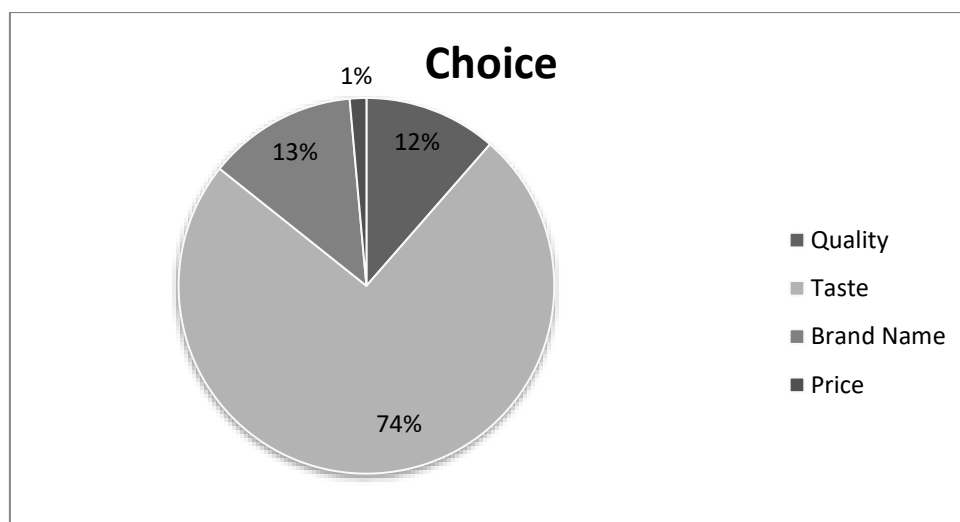


Figure 14: Choice Distribution

4. Data Analysis and Results

4.1 Data Analysis

From the conducted survey with 260 people and the presented data the group ended up with the following data analysis;

- From the total sample of 160 people, 20 people do not like to purchase Coca-Cola. That is 12.5% from the sample
- Majority of the sample's age is distributed among 16-20 years of age. That is 50% of the sample
- Minimum age distribution is the people above 30, that is 1% from the total sample
- Majority is Male in the sample. That is 72%
- 79%, that is majority of the sample are still studying
- Majority of the sample's income level is 0-20,000. That is 79%
- Only 9% of the sample is having above 50,000 income level
- Only 36% of the sample is satisfied with the product up to 75%- 100%
- Majority- 74%- of the sample consume the product because of the taste
- Only 1% is consuming the product because of the price



Figure 15: Coca-Cola Logo

4.2 Results

4.2.1 Demand Curve

Following are the steps to construct the Demand Curve;

Price (x)	Quantity Demand (y)
30	259
35	202
40	185
45	108
50	72

The demand curve can be illustrated as follows from the above data

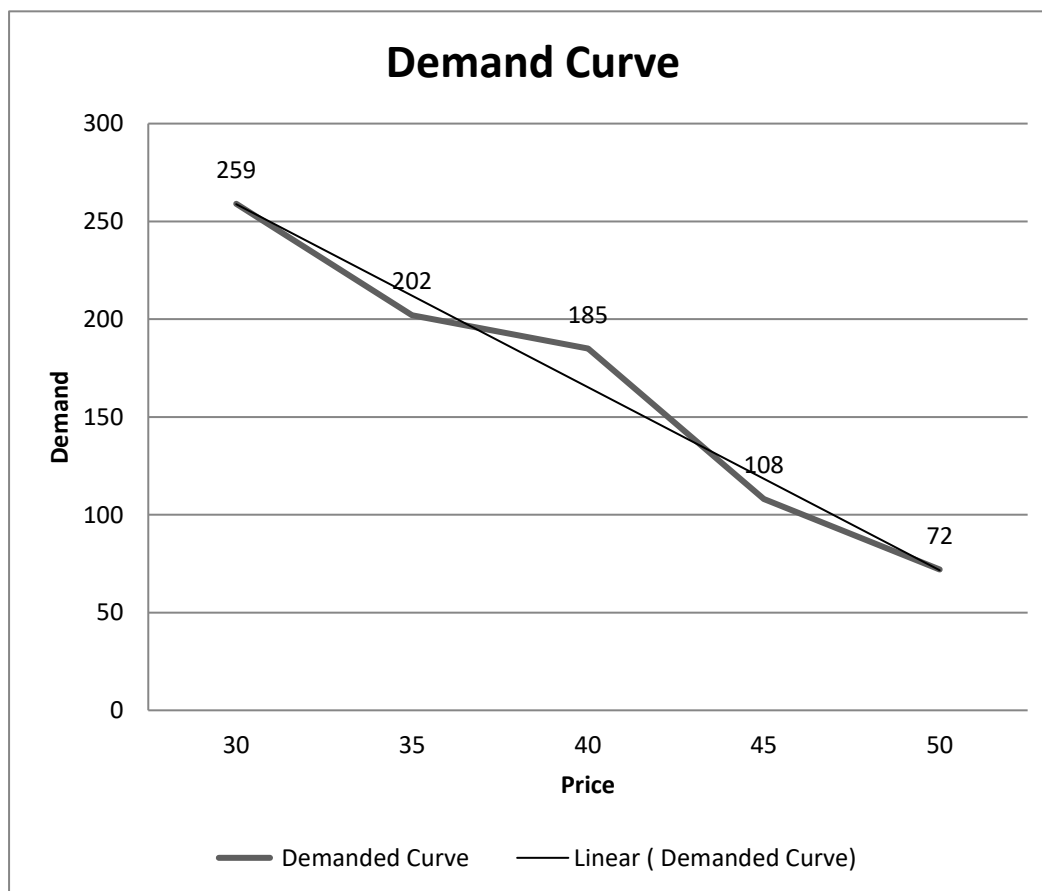


Figure 16: Demand Curve

4.2.2 Demand Equation

Following are the steps to construct the Demand Equation;

Price (X)	Quantity Demanded (Y)	XY	X ²
35	202	7,070	1,225
40	185	7,400	1,600
45	108	4,860	2,025
$\Sigma X = 120$	$\Sigma Y = 495$	$\Sigma XY = 19,330$	$\Sigma X^2 = 4,850$

Table 9: Generating the Demand Equation

$$\begin{aligned}
 b &= \frac{n \sum xy - \sum y \sum x}{n \sum x^2 - (\sum x)^2} \\
 &= \frac{3(19,330) - 495 * 120}{3(4,850) - (120)^2} \\
 &= \frac{57,990 - 59,400}{14,550 - 14,400} \\
 &= \frac{-1410}{150} \\
 &= -9.4
 \end{aligned}$$

$$\begin{aligned}
 a &= \frac{\sum y - b \sum x}{n} \\
 &= \frac{495 - (-9.4) * 120}{3} \\
 &= \frac{495 - (-1,128)}{3} \\
 &= \frac{1623}{3} \\
 &= 541
 \end{aligned}$$

Demand Equation;

$Q_d = a - bp$ $Q_d = 541 - 9.4p$

4.2.3 Price Elasticity of Demand

$$\text{Price Elasticity of Demand} = \frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Price}}$$

$$(E_p)$$

$$= \frac{\% \Delta Q_d}{\% \Delta P}$$

$$= \frac{(Q_{d2} - Q_{d1}) * 100\%}{[(Q_{d2} - Q_{d1}) / 2]} \frac{(\cancel{P_2} - P_1) * 100}{[(P_2 + P_1) / 2]}$$

$$= \frac{(Q_{d2} - Q_{d1}) * (P_1 + P_2)}{(Q_{d1} - Q_{d2}) (P_2 + P_1)}$$

$$= \frac{\Delta Q_d (P_1 + P_2)}{\Delta P (Q_{d1} + Q_{d2})}$$

The results can be obtained as follows;

$$P_1 = 40$$

$$P_2 = 45$$

$$Q_{d1} = 185$$

$$Q_{d2} = 108$$

$$EP = \frac{(185 - 108) (40 + 45)}{(45 - 40) (185 + 108)}$$

$$= \frac{(77) (85)}{(5) (293)}$$

$$= \frac{6545}{1465}$$

$$= 4.467$$

When the price demand elasticity is greater than one, the product has an elastic demand. The group can conclude the Coca-Cola's **demand is elastic**.

5. Appendices

QUESTIONNAIRE

175ML SMALL COCA-COLA BOTTLE SURVEY

(How the Demand Changes according to the Price)

STRATEGIC PLANNING COURSE - DOCTORATE IN BUSINESS ADMINISTRATION
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1. Age

- 16-20
- 21-25
- 26-30
- Above 30

2. Gender

- Male
- Female

3. Occupation

- Student
- Working

4. Income

- Rs. 0-20,000
- Rs. 20,000-50,000
- Above Rs. 50,000

5. Do you normally consume Coca-Cola products?

- Yes
- No

6. A 175ml small Coca-Cola Bottle is Rs.40/= in the market. How often do you currently consume it per week?

.....

7. How Are You Satisfied with this Product?

- 0% - 24%
- 25% - 49%
- 50% - 74%
- 75% - 100%

8. What is the Reason for your Choice?

- Quality
- Taste
- Brand Name
- Price

9. If the Price of the Product Increase or Decrease as Follows, How Many Units Do You Buy For a Month?

Price(Rs.)	Quantity
30	
35	
40	
45	
50	

10. If your Income Increases by Rs. 1000, How many products will you consume?

.....

11. If your Income Decreases by Rs. 1000, How many products will you consume?

.....

~ Thank You ~

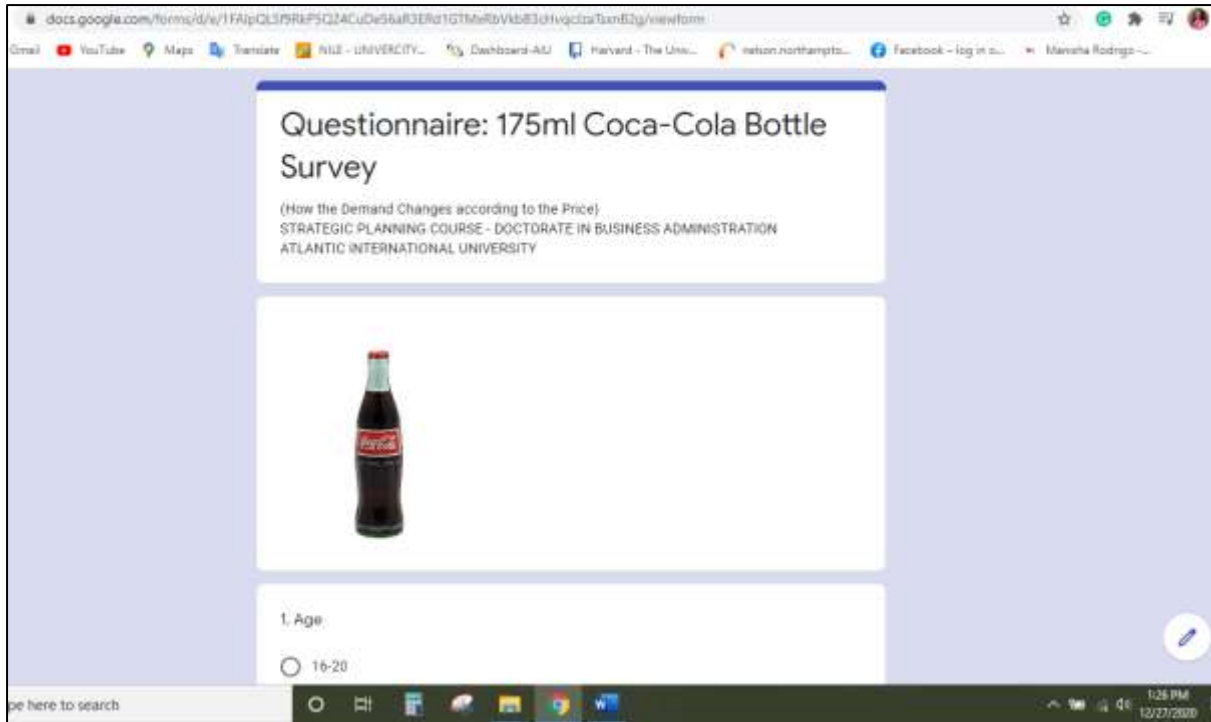


Figure 18: Screenshot of the Google Form Survey Questioner

Questionnaire: 175ml Coca-Cola Bottle Survey (Responses)

Timestamp	1. Age	2. Gender	3. Occupation	4. Income	5. A 175ml small Coca-Cola	6. How Are You Satisfied	7. What is the Reason for	8. If the Price of the Pro	9. If you
	21-25	Male	Student	Rs 0-20,000		5 75% - 100%	Taste	07.07.07.07	
	21-25	Female	Student	Rs 0-20,000		1 75% - 100%	Taste	1.1.1.1.0	
	16-20	Female	Student	Rs 0-20,000		1 50% - 74%	Taste	1.1.1.1	
	16-20	Female	Student		Once a month	50% - 74%	Taste	5.4.3.2.1	
	21-25	Male	Student	Rs 0-20,000	200	50% - 74%	Taste	Xxxx.xxxx.xxxx.xxxx	S&B 4
	21-25	Female	Student	Rs 0-20,000	2	25% - 49%	Taste		4
	21-25	Male	Working	Above Rs. 50,000	10-15	50% - 74%	Taste	10.10.10.10.10	10-15
	26-30	Female	Student	Rs 0-20,000		4 75% - 100%	Taste		
	21-25	Male	Student	Rs 0-20,000		3 75% - 100%	Taste		
	21-25	Male	Student	Rs 0-20,000		10 75% - 100%	Taste	7.7.7.7.7	
	21-25	Male	Student	Rs 0-20,000		75% - 100%	Taste		
	16-20	Male	Student	Rs 0-20,000		0 75% - 100%	Brand Name	1.1.1.1.1	
	21-25	Male	Student	Rs 0-20,000	Never	0% - 24%	Quality	00.00.00.00.00	
	21-25	Male	Working	Rs 0-20,000		75% - 100%	Taste		
	21-25	Male	Student	Above Rs. 50,000	2 or 3 times	0% - 24%	Quality	Xx	X
	21-25	Female	Student			2 25% - 49%	Taste	30-10	
	21-25	Male	Student	Rs 0-20,000		8 50% - 74%	Quality	10.7.5.3.1	
	21-25	Male	Student	Rs 0-20,000	4 times	50% - 74%	Quality	4.5.4.3.1	
	21-25	Female	Student	Rs 200		50% - 74%	Taste	1-3.2-2.3-2.4-2.5-2	less th

Figure 17: Report Generated from the Survey Responses

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