IMPROVISING DOWNTREND PRODUCT USING CONJOINT ANALYSIS: A SPECIAL ANALYSIS ON MIRINDA OF PEPSICO.

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ABSTRACT

In the present scenario, soft drinks market has two major leaders Coco - Cola and PepsiCo having a market share of 55% and 35% respectively. As Stated by BCG matrix, few products in these leading companies are in decline stage. The literature review of Exploratory Research is used for analyzing the position of Mirinda in Boston Consulting Group Matrix. Mirinda is observed in dogs under BCG matrix but the production has not yet closed. By looking in to the situation, there arises a hope in knowing the preferences of the customers for accepting this product in a large scale. This paved a path to the major objective of the study for knowing the customer's opinion on the add-on features to the existing Mirinda to uplift its position to Question Marks by that it can further be encouraged to be in stars. The features suggested by the discussion with professors resulted in features like Shape of the bottle, Flavour, Soda level and Sugar level those can enrich the quality of the product. The study has conducted Conjoint Analysis in meeting the objective. Initially, 16 cards or profiles are developed to have the ranking from the customers. These profiles are served to 163 customers of 283 population those are MBA graduates using stratified random sampling. The

collected data is analyzed using Conjoint Analysis for extracting the maximum utility of the customers on the profiles surveyed. The results state that the curvy shaped bottle with orange flavor having moderate soda with moderate Sugar levels is identified as the favorable combination with the total utility of 1.341. Even, it can further be stated that the flavor is the most significant feature with highest importance value of 61.135. The study can further be extended to other features and other target market uncovered by the research.

Key words: Conjoint analysis, Stratified random sampling, Mirinda

1. Introduction

 Soft drink industry has non – fizzy and fizzy drinks, juices, smoothies, functional drinks. A fizzy and non fizzy drink generally does not contain alcohol, but can have up to 0.5% alcohol content. It is made up of carbonated water base with added flavors and sweeteners. Around 400,000 tons of raw materials would be required to reuse the subsist goods of bottles, so the producers have shifted their strategy by substantially use of PET bottles. Industry uses quality bottles and drinking packs to keep the products preserve for a long period.

 In India, two major soft drink companies has around 85% of market share directly or through franchisees, of which Coke has a share of 55% and PepsiCo has a share of 35%. Fruit juices in Indian market, ''Maaza'' are the top product of Coco –Cola Company and acquired Parle Agro's 'Frooti'.

Mirinda is a brand of soft drink originally made and produced in Spain in 1959 and acquired by PepsiCo with global distribution. It came into availability in United States in late 2003 in bilingual packaging, and right off the bat sold at a diminished value, probably to wind up a contender against Coke's Fanta image. Its name may originate from Esperanto, signifying "splendid". Mirinda has been gained by PepsiCo since 1970 and is basically popularized outside the United States. Since 2005, Mirinda flavors have been to a great extent sold under the name of Tropicana Twister Soda mark in the United States aside from in Guam, where Pepsi started offering it under the acclaim of Mirinda mark in 2007 (supplanting Chamorro Punch Orange). PepsiCo additionally endeavored to offer Mirinda in Brazil in late 1996, however the brand was ended in the year 1998 after less deals, keeping the neighborhood mark "Sukita" under generation. In Italy, it is sold under the brand Slam. It including orange,

citrus, grapefruit, apple, strawberry, pineapple, pomegranate, banana, passion fruit, lemon, hibiscus, guarana, tangerine, pear, Watermelon and grape enhances and in addition tamarind. It is bit of a soda pop territory frequently alluded to as the fizzy and non fizzy, enhance portion, containing carbonated and non-carbonated natural product seasoned refreshments. The orange kind of Mirinda currently speaks to the greater part of offers overall after a noteworthy disjoin of the brand towards that flavor in the mid 1990s.It competeswithcoke's Fanta, Britvic's Tango and Dr.Pepper's Orange Crush and neighborhood brands like Sunkist mark, with flavor brands confined to singular nations. As the vast majority of soda pops offered, Mirinda is accessible in numerous plans of flavor, carbonation and sweetener relying upon the essence of individual markets.

2. Literature Review:

Product passes through four phases in its life: the introductory, growth, maturity and decline stages. This model has been used, subsequently by different authors (Berenson (1967)[1], Cox (1967) [2], Cunningham (1969) [3], Starting in the 1970's, though, researchers started to criticize the model pointing out its limitations and offering some modifications Dahlla et al. (1976) [4].The study deals with two major concepts those are the part of this paper. They are Mirinda Brand of PepsiCo and an analyzing tool named Conjoint Analysis.

2.1 Mirinda– One of the declining products of PepsiCo:

Mirinda is one of the product which is in declining stage of PepsiCo Company. Mirinda is an orange flavored drink which is acquired by PepsiCo Company. Mirinda, the orange flavored fizzy drink from PepsiCo and raised the country's youth voice and told story of exam pressure they undergo through parents. This year, with the second volume of its 'Release the Pressure' campaign, the brand is making the youth voice louder and bringing to the spear head the issue of constant comparison by parents.

Mirinda provoke conversations around the case shown a concern through a short film, created by award-winning director "Shoojit Sircar". Propelled by centered gathering talks directed the nation over with understudies, the movie would like to be a mirror for society and intends to point out understudies who are in trouble.

2.2 Conjoint Analysis

'Conjoint analysis' is a survey-based tool which is used in market research that helps determine how people value different attributes (feature, function, benefits) that make up an individual product or service. It extrapolates the respondent's preference for a quantitative measurement.. It is useful in quantitative measurement and it is a survey based statistical technique.

Conjoint analysis can be divided into three phases.

1. Data: A preliminary survey helps to know how the product is broken down in customers mind. Generally the information obtained at this level is represented inform of questionnaire by the analysis.

2. Analysis: After the information gathered from the field questionnaire from customers statistical analysis of data takes place through which we get results based on the ranking representation should be clear because managers need to have better understanding. Information can be represented by graph tools.

3. Action: The results that are obtained by conjoint analysis should be used and they help the business to stimulate the demand for products by using these changes in product or source design there will be effect in demand. These models are helpful in decision making.

It is generally unpredictable as it requires a comprehension of how to utilize and make qualities and levels, what flavor to utilize, how to make the item profiles, making inclination of taste to item and afterward how to investigate the information and fabricate the market display. It is conceivable to use "off-the-rack programming" which give direction and help and commit errors simple and to create the poor outlines.

3. Objectives of Study

1. To explore the reasons for the downfall of Mirinda.
2. To extract the new variants combination expecting by the users of Soft drinks.

4. Methodology

The main objective of the study is to reveal what attributes helps to re launch the product in market. The study method used is exploratory research and stratified random sample.

4.1   Research Design

To gain the insights and familiarity of later investigations and to predict outcome from the preliminary investigations, we use the "Exploratory research design" intended to develop the

final result. By using this design, the study has explored few characteristics those could be the part of new Mirinda. The obtained features are Shape of the bottle, Flavor, Soda level and Sugar level.

4.2 Sampling Design

The sampling design helps in deriving the sample elements from the sampling frame by using a sampling procedure. In the present case, the sampling design elements considered are as follows;

i.   Population: 283 post graduates

ii.   Sampling Frame: 283 post graduates

iii.   Sample Size: 163

$N_{0=}384.16$ (When the population is infinite with confidence level of 95% and a 5% level of significance with 50% proportion)

New Sample Size$=(N*N_0)/(N-1+N_0) = (283*384.16)/(283-1+384.16)=163$

iv.   Sampling procedure: As the data is segregated based on the age, two stratums are formed. From the two types of stratified random sampling, proportionate stratified random sampling technique used for analysis as shown below;

Target age groups (2 Stratums)	Count of age group members	Population Proportion	Sample Proportion	Sample Size
19 – 21	130	45.93%	45.93%	75
22 – 25	153	54.06%	54.06%	88
Total	283	100%	100%	163

Table No:1

A sample of 283 customers is taken into consideration for conducting a survey in KL Business school (comprising of MBA 1 year students and MBA 2 year students). A sample of 163 is finalized by using proportionate stratified random sampling technique. The analysis of data was conducted in accordance to the research objectives.

4.3 Data collection

Data is collected from 163 randomly chosen customers with the help of a schedule under personal interview method.

4.4 Data Analysis

Initially, when the four characteristics are obtained from the exploratory research, these are processed by using an Orthogonal Design of Conjoint Analysis using Statistical Packages for the Social Sciences(SPSS) package. The resulted outcome is with 16 cards or profiles those were circulated among the randomly chosen 163 respondents for ranking them from 1 to 16. After gathering the data, it is saved in a file named with data file and save the 16 cards information in a plan file. Using syntax of SPSS, the CONJOINT analysis is accomplished to obtain the overall utility of the 163 respondents.

5. Results and Discussion

5.1 Result Analysis of Objective 1:

Perception towards the Mirinda as fizzy drink which is a kids drink and popularity of non-fizzy orange drinks such as Rasna and Tang. "Adult males don't touch orange fizzy drinks because they're non macho, and weight conscious women avoid them because they are too sweet".

5.2 Result Analysis of Objective 2

The following are the results obtained from the conjoint Analysis performed by the study. The results are as follows;

5.2.1 Conjoint analysis for MBA 1 year sample of 75 interested customers from 130 customers:

To find the utility of the combinations of 75 sample customers:

		Utility Estimate
Shape	Normal	.042
	Curvy	**.479**
	Notebook	-.521
Flavor	Pineapple	-.710
	Apple	.246

	Orange	**.980**
	orange masala	-.516
Soda	**Moderate**	**.050**
Level	High	-.050
sugar	Moderate	-.016
level	**High**	**.016**
(Constant)		8.259

Importance Values	
Shape	35.443
Flavor	**59.916**
Soda	3.516
Sugar level	1.125
Averaged Importance Score	

Interpretation:

The final outcome states that the customers prefer to have a "curvy shaped bottle with orange flavor having moderate soda with high Sugar levels", as this combination has the highest utility of all i.e., 1.525. Highest Utility means customers satisfy more with this combination. The customers are more given importance to the flavor with the 59.916.

5.2.2 Conjoint analysis for MBA 2 year sample of 88 interested customers from 153 customers:

To find the utility of the combinations of 93 sample customers:

		Utility Estimate
Shape	Normal	-.331
	Curvy	**.224**
	NoteBook	.107
Flavor	Pineapple	-.475
	Apple	-.053

	Orange	**.943**
	orange masala	-.415
Soda	**Moderate**	**.076**
	High	-.076
Sugar	**Moderate**	**.098**
level	high	-.098
(Constant)		8.454

		Utility Estimate
	Normal	-.602
Shape	Curvy	.039
	NoteBook	**.562**
	pineapple	-.305
	Apple	-.270
Flavor	**Orange**	**.917**
	orange masala	-.342
Soda	**moderate**	**.095**
	High	-.095
Sugarlevel	**moderate**	**.180**
	high	-.180
(Constant)		8.596

Importance Values	
Shape	39.168
Flavor	**42.360**
Soda	6.383
Sugar level	12.089
Averaged Importance Score	

Interpretation:

The final outcome states that the customers prefer to have a notebook shaped bottle with orange flavor having moderate soda with moderate Sugar levels, as this combination has the highest utility of all i.e., 2.629. Highest Utility means customers satisfy more with this combination. The customers are more given importance to the flavor with the 42.360.

5.2.3 Conjoint analysis for MBA sample of 163 interested customers from 283 customers:

To find the utility of the combinations of 163 sample customers:

Importance Values	
Shape	23.922
Flavor	**61.135**
Soda	6.537
Sugar level	8.405
Averaged Importance Score	

Interpretation:

The final outcome states that the customers prefer to have a curvy shaped bottle with orange flavor having moderate soda with moderate Sugar levels, as this combination has the highest utility of all i.e., 1.341. Highest Utility means customers satisfy more with this combination. The customers are more given importance to the flavor with the 61.135.

6. Findings of the Study

The following are the major findings from the study. They are,

1. MBA I years prefers Curvy shaped bottle with Orange flavor having Moderate soda and High Sugar levels with correlation of 0.746.

2. MBA II years prefers Notebook shaped bottle with orange flavor having Moderate soda and Moderate Sugar levels with a correlation of 0.705.

3. Overall MBA students prefer Curvy shaped bottle with Orange flavor having Moderate soda and Moderate Sugar levels with 0.709.

7. Suggestions / Recommendations:

As overall MBA Students preference inclined towards Curvy shaped bottle with Orange flavor having Moderate soda and Moderate Sugar levels, it is suggested to test this combination for being in to Question Marks of BCG matrix.

8. Conclusion:

From the 16 combinations, which are given to the customers, the most preferred combination is "curvy shaped bottle with orange flavor having moderate soda level and moderate sugar levels, This combination got the highest utility i.e. 1.341.Highest utility means this combination is mostly preferred by the customers

We observed that among all the attributes (shape of the bottle, flavor, soda level, sugar level),the customers gave more importance to flavor with the 61.135. This means that the flavor is the important attribute among all other attributes. Changing the flavor may cause negative results

9. Future Scope of Research

We took four attributes (size of the bottle, flavor, sugar level, soda level) for our research; other attributes like color of LOGO, label, promotion style as naming a few can be taken for further research those which can influence the buying decision of consumer.

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