BUAN 6337 - MARKETING PREDICTIVE ANALYTICS

PROJECT REPORT

MARKETING STRATERGY FOR CLASSICO

GROUP 7

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OVERVIEW

This report is a summary of the analysis the sales data of different brands of spaghetti sauce across all the states of Unites States at Grocery Stores with demographics data of customers who bought them. For the purpose of this project we have considered the sales data only from grocery stores.

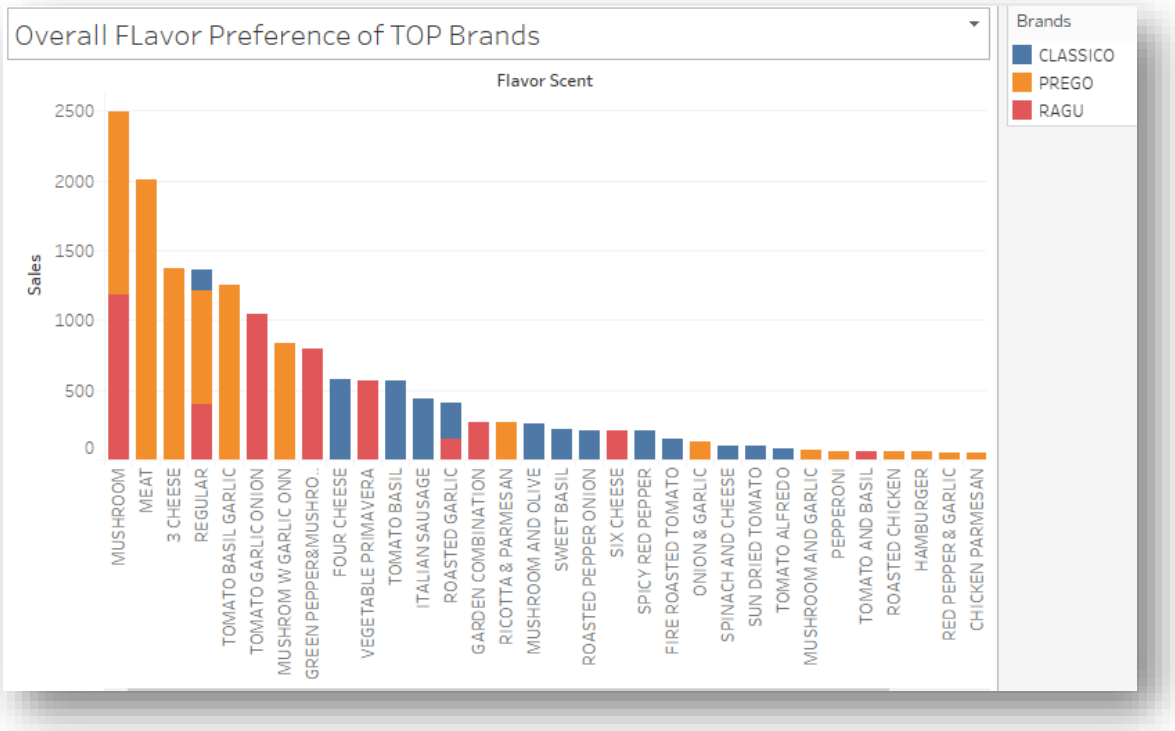
OBJECTIVE

Develop a marketing strategy to increase the market share of CLASSICO using predictive analytic techniques.

DESCRIPTIVE STATISTICS

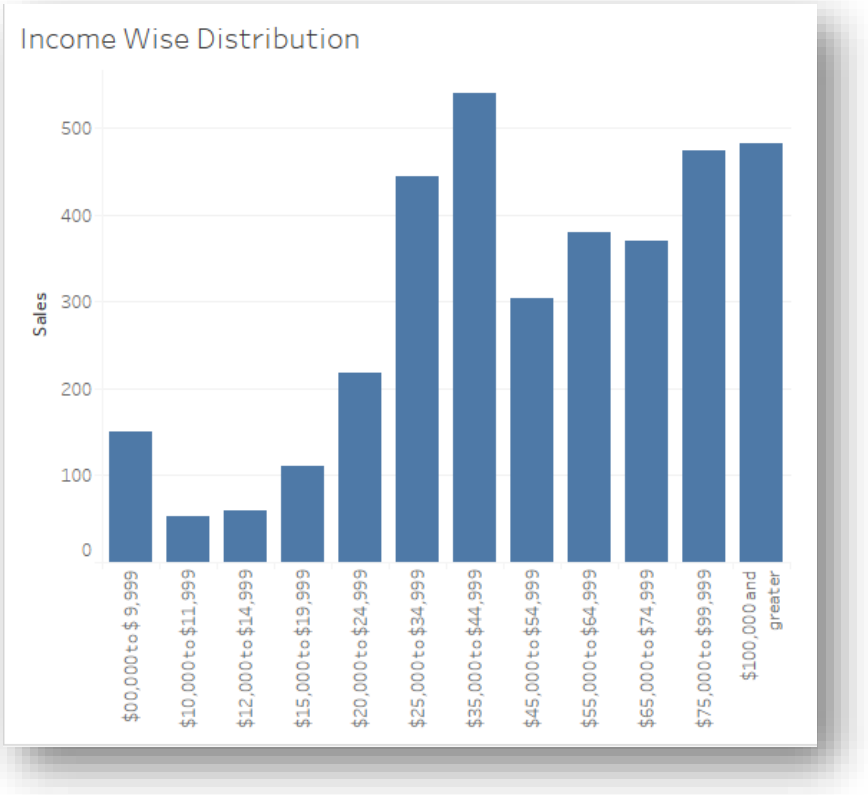
Market share of top 6 brands. This shows that our brand stands third in terms of market share.

L5 (Brand)	Market share (in %)
Prego	19.07
Ragu/Ragu old world style	18.10
Classico	11.33
Five Brothers	6.23
Hunts	5.92
Private Label	4.79



On analysis we found that most of the customers preferred flavors like Mushroom and Meat. However, we found that these flavors are not available in our brand CLASSICO due to which the sales of CLASSICO are lesser when compared to other brands like PREGO and RAGU.

INCOME WISE SALES DISTRIBUTION



On observing the income wise distribution chart, we found that people belonging to Middle Class or higher income category preferred CLASSICO brand. Thus, the lower level income people need to be targeted.

RECOMMENDATIONS

- We would like to recommend the brand manager to introduce the mushroom and meat flavors as introduction of new flavors will help to increase the sales.
- We would recommend the brand manager to introduce new discount offers or new coupons which will attract lower income category people as well thereby increasing the sales of their product. Also, to maintain the customers which are already using CLASSICO products, the advertisement strategies and the features which are currently being used should be continued.

LINEAR REGRESSION ANALYSIS

What is the effect of Feature, display and price on the sales of CLASSICO?

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	44.52668	21.56588	2.06	0.0444
PricePerUnit	1	-16.20894	11.07094	-1.46	0.1497
AvgDisplay	1	16.72649	8.35508	2.00	0.0510
AvgFeature	1	9.92571	3.92717	2.53	0.0148

When looking at the main effects we see that Display and feature are both significant at 90% confidence level.

INSIGHTS:

- If there is a display, weekly sales will increase by 16.72 dollars compared to when there is no display.
- If there is Feature, then weekly sales will increase by 9.92 dollars compared to when there is no feature.
- If price per unit increases by 1 dollar, weekly sales will reduce by 16.20 dollars.

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	49.28909	20.56472	2.40	0.0206
PricePerUnit	1	-17.57427	10.52576	-1.67	0.1016
AvgDisplay	1	-0.62136	10.54156	-0.06	0.9532
AvgFeature	1	-0.44195	5.57822	-0.08	0.9372
disp_feature	1	73.27251	29.32164	2.50	0.0160

After running the model with interaction terms, we see that there are no main effects of display and feature but the price co-efficient is significant.

This means that feature and display have no effects on weekly sales individually.

PricePerUnit is significant which says that if the price increases by 1 dollar, the weekly sales will reduce by 17.57 dollars.

Interaction of display and feature (disp_feature) is significant which means that if there is both display and feature of CLASSICO products , the weekly sales will increase by 73.27 dollars

RECOMMENDATIONS:

- Both display and feature should be used at the same time at Grocery stores for CLASSICO so that the weekly sales can be increased.

MULTINOMIAL LOGIT

What demographics factors affect the choice of CLASSICO brand?

Discrete Response Profile			
Index	CHOICE	Frequency	Percent
0	1	7280	17.65
1	2	4266	10.34
2	3	2265	5.49
3	4	3805	9.22
4	5	1693	4.10
5	6	21946	53.20

inc2	1	-0.0756	0.007978	-9.48	<.0001
inc3	1	0.0500	0.0102	4.92	<.0001
inc4	1	-0.0379	0.008331	-4.55	<.0001
inc5	1	0.0119	0.0113	1.06	0.2906
inc6	1	-0.0188	0.005663	-3.33	0.0009
Family_Size2	1	-0.0426	0.0175	-2.44	0.0147
Family_Size3	1	-0.2008	0.0234	-8.57	<.0001
Family_Size4	1	0.005137	0.0178	0.29	0.7734
Family_Size5	1	-0.1292	0.0254	-5.08	<.0001
Family_Size6	1	-0.0788	0.0122	-6.44	<.0001
Children_Group_Code2	1	-0.0396	0.009928	-3.99	<.0001

INSIGHTS:

- **Inc3**- As the inc3 variable is significant and has a positive co-efficient which means that, as the income increases, the probability of choosing CLASSICO brand increases.
- **Family_Size3** – As the variable is significant and has a negative co-efficient, this says that as the family size increases, probability of choosing CLASSICO decreases.

Children_Group_Code3	1	0.0185	0.0135	1.37	0.1707
Children_Group_Code4	1	-0.0437	0.0101	-4.34	<.0001
Children_Group_Code5	1	0.004644	0.0147	0.32	0.7514
Children_Group_Code6	1	-0.0185	0.007044	-2.62	0.0088
Type_Residence2	1	-0.1462	0.0545	-2.68	0.0073
Type_Residence3	1	0.0499	0.0748	0.67	0.5044
Type_Residence4	1	-0.2341	0.0568	-4.12	<.0001
Type_Residence5	1	-0.2493	0.0767	-3.25	0.0012
Type_Residence6	1	-0.1966	0.0401	-4.91	<.0001
HH_OCC2	1	-0.003016	0.004597	-0.66	0.5117
HH_OCC3	1	0.0113	0.005743	1.97	0.0484
HH_OCC4	1	-0.004422	0.004771	-0.93	0.3541
HH_OCC5	1	0.003510	0.006436	0.55	0.5855
HH_OCC6	1	0.009005	0.003227	2.79	0.0053

- **Children_Group_Code3** – As the variable is not significant, this means that there is no effect of increase in number of children on CLASSICO brand.
- **Type_Residence3 –** The variable is not significant, so whether the person is renter or is not a renter does not impact the selection of choosing CLASSICO brand.
- **HH_OCC3 –** The variable is significant and has a positive co-efficient which means that if the head household falls under the following occupations except for 'other' 0 = 'Other' 1 = 'Professional or technical' 2 = 'Manager or administrator' 3 = 'Sales' 4 = 'Clerical' 5 = 'Craftsman' 6 = 'Operative (machine operator)' 7 = 'Laborer' 8 = 'Cleaning, food, health worker' 9 = 'Private household worker' 10 = 'Retired'
  Then the probability of choosing CLASSICO increases.

RECOMMENDATIONS:

- Based on above analysis, it can be said that low income families should be the new target market that the brand should aim at so as to increase its sales as high and mid income families already are buyers of this product.
- CLASSICO should come up with bundle offers, to target larger families and increase their sales.