

# Presentation on: Ice Cream



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# Objectives

- ▶ To analyze the consumers brand preferences for Ice creams
- ▶ To evaluate consumers liking towards ice creams
- ▶ To evaluate consumers perception about the important factors pertaining to ice cream purchase decision

# Hypotheses

- ▶ Sales of different brand of Ice creams are uniformly distributed i.e there is no significant difference in the sales of different Ice cream brands.
- ▶ There is no significant difference between the preferences of male and female consumers for their preference towards ice creams.
- ▶ Different factors which are important in the ice cream purchase decision do not differ significantly.
- ▶ Different types of ice creams (Scoop, stick etc.) are equally preferred by customers
- ▶ Preference for different type of ice cream (Scoop, stick etc.) are independent of consumer gender

# Hypothesis 1

To test hypothesis 1, chi square test was applied.

- | ▶ Brand          | Count      |
|------------------|------------|
| ▶ Amul           | 40         |
| ▶ Mother Dairy   | 6          |
| ▶ Vadilal        | 28         |
| ▶ Kwality        | 29         |
| ▶ Baskin Robbins | 10         |
| ▶ Cream Bell     | 11         |
| ▶ <b>Total</b>   | <b>124</b> |
- ▶ Chi square value (calculated) = 43.8
  - ▶ Critical Chi square value (0.05, 5) = 11.07
  - ▶ Chi square value (calculated) is greater than critical chi square value, hence hypothesis 1 is rejected and it can be concluded that preference for different brand of ice cream are not uniformly distributed

# Hypotheses 2

- ▶ There is no significant difference between the preferences of male and female consumers for their preference towards ice creams.
- ▶ To test this hypothesis z test was applied with following results

	Mean	n	Z value	Z value critical at .05 and 125 df	Result
Male	47.66	53	-1.5	1.95	Insignificant Accept the null hypothesis
Female	48.82	73			

- ▶ Since the calculated z value is less than z critical (two tailed) at .05 significance level, hence null hypothesis is accepted and it can be said that there is no significant difference between male and female consumers for their preferences about ice creams.

# Hypothesis 3

- ▶ Different factors which are important in the ice cream purchase decision do not differ significantly.
- ▶ To test this hypothesis, ANOVA was used with following results
- ▶ Anova: Single Factor

SUMMARY				
Groups	Count	Sum	Average	Variance
Price	126	2547	20.21429	84.18571
Flavor	126	2597	20.61111	73.05556
Taste	126	2697	21.40476	97.04286
Quality	126	2607	20.69048	71.03143
Brand name	126	2152	17.07937	93.83365



ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1436.349	4	359.0873	4.283526	0.001994	2.386188
Within Groups	52393.65	625	83.82984			
Total	53830	629				

Since F calculated is greater than F critical at 95% significance level, hence Null hypothesis is rejected.

So, it can be concluded that different factors which are important in the Ice cream purchase decision differ significantly.

But If Brand factor is omitted from the list,  
ANOVA results show insignificant  
difference

## Anova: Single Factor

SUMMARY					
Groups	Count	Sum	Average	Variance	
Price	126	2547	20.21428571	84.18571429	
Flavor	126	2597	20.61111111	73.05555556	
Taste	126	2697	21.4047619	97.04285714	
Quality	126	2607	20.69047619	71.03142857	



Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	92.85714286	3	30.95238095	0.380582858	0.767045652	2.622735
Within Groups	40664.44444	500	81.32888889			
Total	40757.30159	503				

**F calculated is less than F critical at 95% significance level, hence Null hypothesis is accepted. Different factors are equally important for various consumers.**

# Hypothesis 4

Different types of ice creams (Scoop, stick etc.) are equally preferred by customers

- | Type  | Count |
|-------|-------|
| Scoop | 44    |
| Stick | 19    |
| Cup   | 33    |
| Softy | 21    |
| Other | 9     |
- ▶ Chi square value (calculated) = 29.07
  - ▶ Critical Chi square value (0.05, 4) = 9.48
  - ▶ Chi square value (calculated) is greater than critical chi square value, hence hypothesis 4 is rejected and it can be concluded that preference for different types of ice cream are not uniformly distributed

# Hypothesis 5

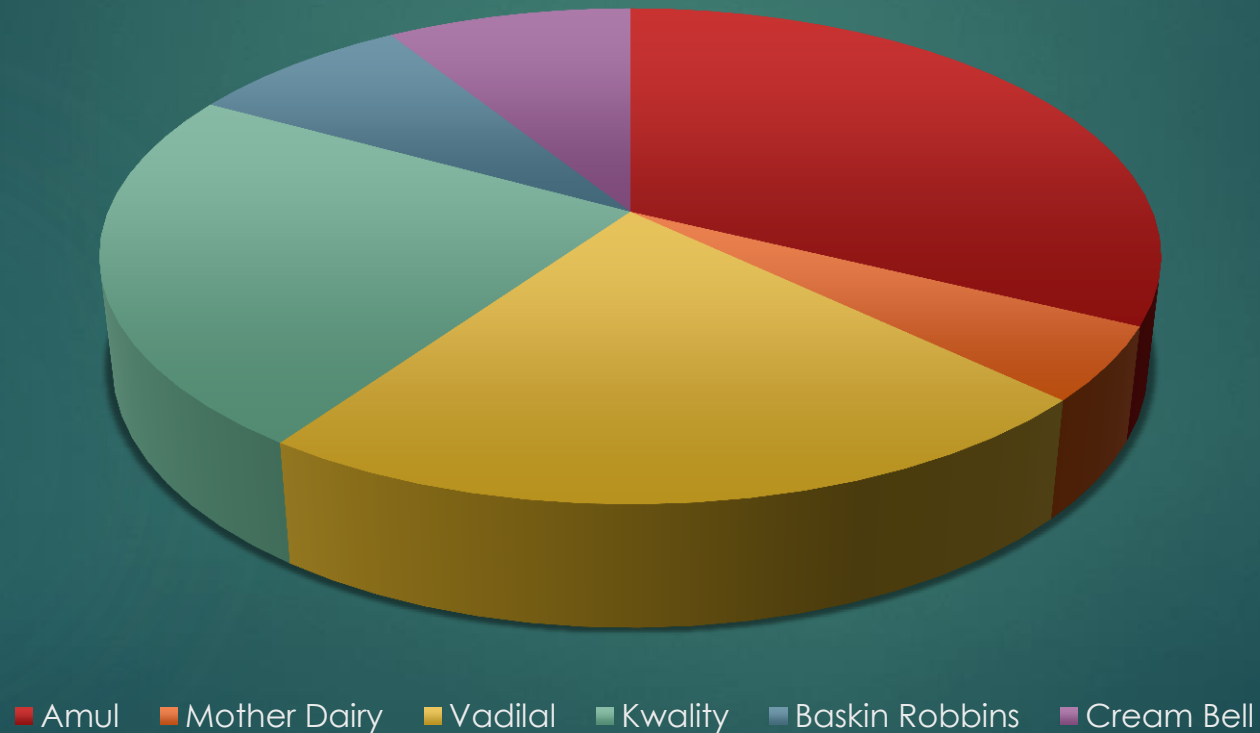
- ▶ Preferences for different type of ice cream (Scoop, stick etc.) are independent of consumers' gender

	Scoop	Stick	Cup	Softy	other	Total
Male	19	9	16	5	4	53
Female	25	10	17	16	5	73
Total	44	19	33	21	9	126

- ▶ Chi square value (calculated) = 3.69
- ▶ Critical Chi square value (0.05, 4) = 9.48
- ▶ Chi square value (calculated) is less than critical chi square value, hence hypothesis 5 is accepted and it can be concluded that preference for different type of ice cream (Scoop, stick etc.) are independent of consumers' gender.

# Descriptive statistics analysis

## 1. Most popular brand: Amul



<u>BRAND:-</u>	<u>Percent :-</u>
AMUL	31%
Mother dairy	6%
Vadilal	23%
Kvality	24%
Baskin robbins	8%
Cream bell	8%

# Rank Preference analysis

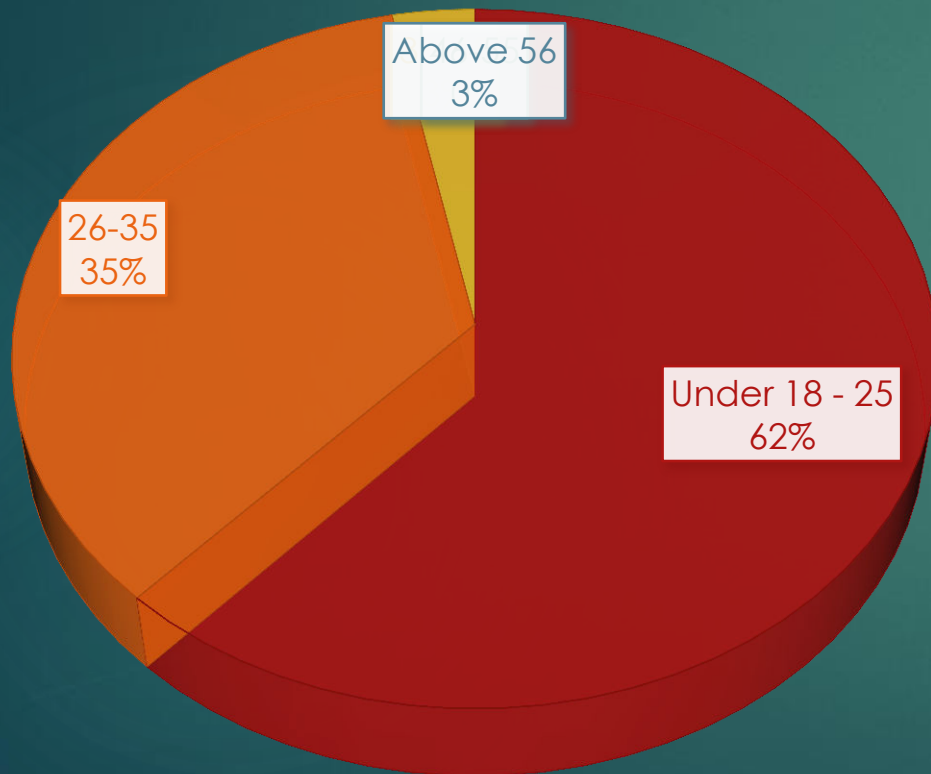
Rank	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Total
Amul	37	20	38	23	5	3	126
Mother Dairy	15	31	30	38	9	3	126
Vadilal	28	40	22	14	20	2	126
Kwality Walls	24	16	22	32	21	11	126
Baskin Robbins	16	13	5	9	54	29	126
Creambell	5	6	8	11	18	78	126

## Characteristics of factors which are considered most for purchasing ice creams

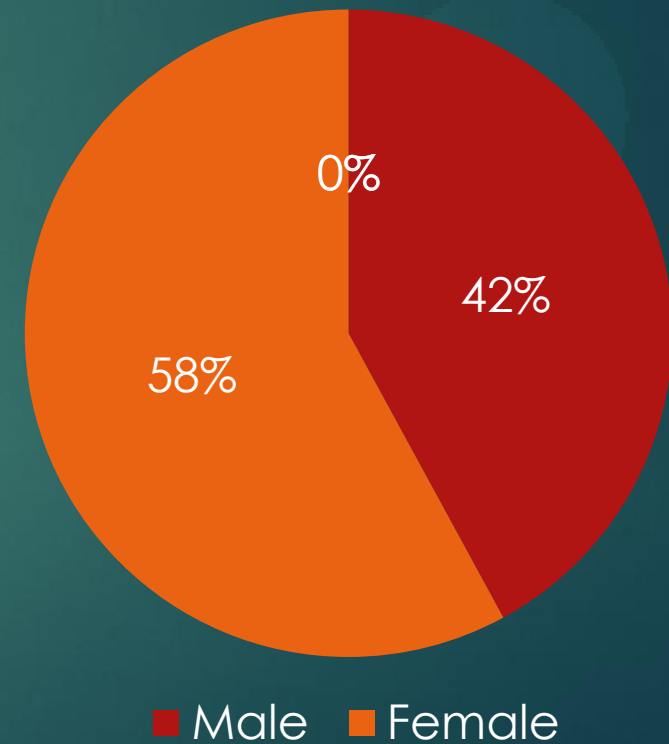
Score	Price	Flavor	Taste	Quality	Brand Name
Max	50	45	50	50	40
Min	0	0	0	0	0
Avg.	20.21	20.61	21.40	20.69	17.07
Sum	2547	2597	2697	2607	2152

# Consumer Profiles:-

**AGE PROFILE:**

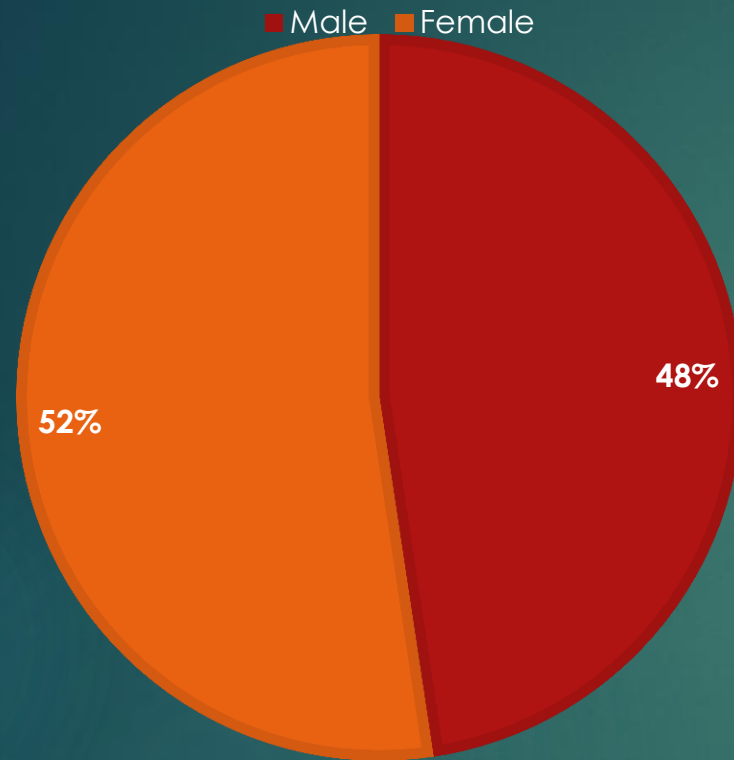


**Gender:**

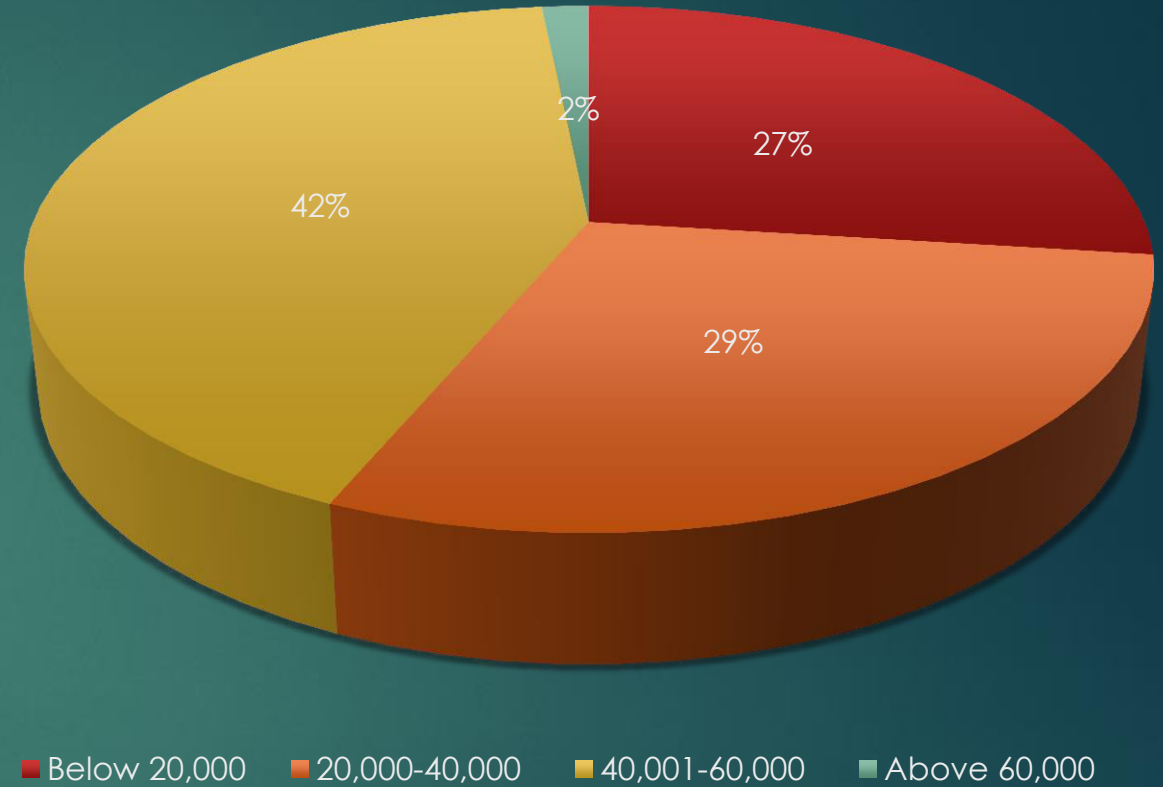




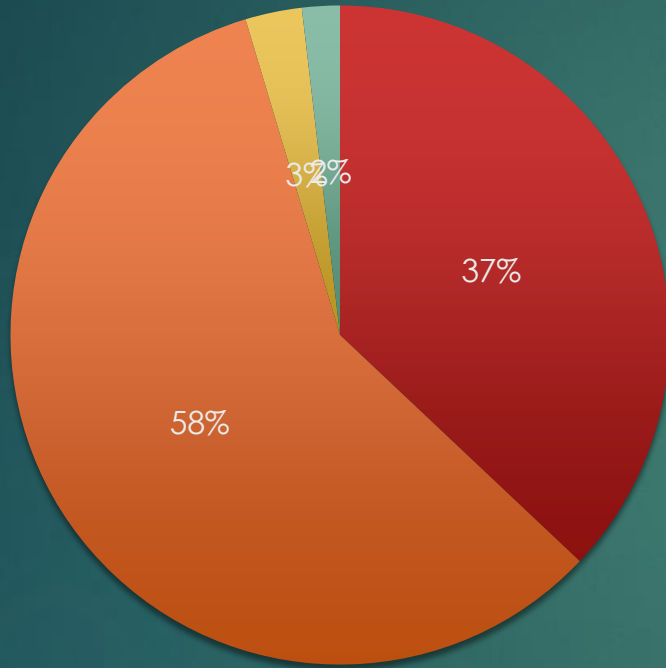
## MARITAL STATUS



## . Monthly Family income (Rs.):

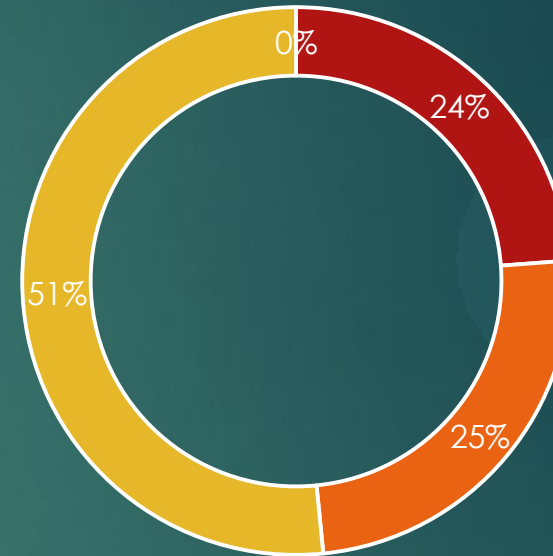


## Occupation:



■ Student
 ■ Service
 ■ Business
 ■ Professionals

## Educational qualification:



■ Under- Graduate
 ■ Graduate
 ■ Post- Graduate
 ■ Others:

Thank You