



An Empirical Study on Biscuit Variety Selection Behaviour of the Customers of Siliguri & Darjeeling Towns of Northern West Bengal

KEYWORDS

ANOVA, Biscuit-variety, Chi-Square, Occupational preference, Preference for variety.

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ABSTRACT *Media penetration, rising incomes, changing lifestyles, growth in organized retail consumers have made biscuits as fastest moving packaged food today. This research article attempts to identify the changing purchasing perception, behavioural preferences of the customers of hill town Darjeeling & Siliguri in plain towards biscuit variety selection. An empirical research methodology has been adopted here to unearth the key aspects of customers' perception in buying different varieties of branded biscuits & behaviour followed by identification of strongest variety selection factors. Finally the article concludes by sketching a competitive market scenario of popular shampoo brands in Siliguri using Importance Performance Analysis.*

Introduction

Biscuits continued to be one the fastest moving packaged food categories from retail channels. It was the most common snack along with tea and coffee in India, with sweet biscuits being particular popular, such as Britannia and Parle G. Increasing consumption of packaged and convenience food, the availability of a variety of biscuits and an increase in disposable incomes have provided a major boost to the industry. Indian Biscuits Industry being the second largest after USA is the largest among all the food industries with a turnover of around Rs.3000 crores. According to Federation of Biscuit Manufacturers of India (FBMI) a steady growth of 15 percent per annum in the next 10 years will be achieved by the biscuit industry of India. Besides, the export of biscuits will also surpass the target and hit the global market successfully. The market in India is diverse and biscuit sector is divided into organized sector (40%) and unorganized sector (60%). The branded and organized biscuit sector is forecast annual growth of 17%. Major players in this segment include Britannia, Parle, ITC, Priya Gold etc. Growth in the un-branded biscuit sector, which currently has a smaller market, is much smaller at 8% per year. This study is an attempt to examine the factors which influence the consumers to buy different varieties of branded biscuits. It also investigates the underlying reasons behind purchasing behaviour of the consumers together with their expectations with different biscuit varieties. This study is restricted to Darjeeling town of Hills and Siliguri, the tier I city of plains of Northern West Bengal.

Indian Biscuit Sector

The biscuits and cookies industry in India, valued at INR 145bn (~USD 2.41bn) in FY 2014, has been growing at a CAGR of ~10% over the last three years. The Britannia & Parle and ITC maker of Sunfeast biscuits, together control some three-fourths of India's Rs.12, 000 crore biscuits market. Per capita consumption of Biscuits in the country is only 1.8 kg, as compared to 2.5 kg to 5.5 kg in south eastern countries and European countries & USA respectively. With rising incomes, changing lifestyles, growth in organized retail consumers are being lured towards cream biscuits and cookies instead of glucose biscuits. Biscuits apart from being easy to carry & tasty to eat, growing media coverage on health, increasing concerns over physical appearance have led the biscuits and cookies market

to move towards a healthier path. Out of all Maharashtra, West Bengal, Andhra Pradesh, Karnataka, and Uttar Pradesh having larger intake of biscuits Maharashtra and West Bengal hold the maximum consumption of biscuits. An industry which enjoys 85% penetration in Urban and 55% penetration in rural areas has ultimately made it as the largest among all the food industry in India revenue wise. It also happens to be the largest employment generator of all food industries in India employing around 4 lakhs people both directly and indirectly.

Objective of the Study

- (i) Identifying different varieties of Biscuit Brand popular in Siliguri & Darjeeling towns and assessing the attributes of variety preference on brand selection
- (ii) Exploring area wise relative influence of occupational preference of biscuit lovers of Darjeeling & Siliguri on Biscuit & Brand selection for different varieties.

Design & Methodology

An exploratory cum descriptive by nature and thus semi-structured questionnaire was used to collect basic field data using random sampling. Siliguri city in plain and Darjeeling town in hill of North Bengal has been chosen as location of study. A total of 102 respondents from Siliguri & 98 from Darjeeling were sampled based on their availability and willingness to respond (Gravetter & Forzano, 2006) during March'15 to April'15. SPSS v.14.2 software was used to conduct different statistical analysis.

Table 01: Demographic Profile of the Respondents of Darjeeling & Siliguri towns

Demographic Factor	Categorical Divisions	Frequency	Percentage (%)
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Working Status	Govt (& Aided) Job holders	38	19
	Private Job holders	41	20.5
Student (High School to University)	11	5.5	
	14	7	
Businessmen & Traders	14	7	
	14	7	
Housewives	14	7	
	14	7	
Retired persons	14	7	
	14	7	
Age Group	Children upto 12 yrs	46	23
	66	33	
Teenagers (13 years – 19years)	52	26	
	52	26	
Young Adult (20 years – 40 years)	36	18	
	36	18	
More than 40 years	36	18	
	36	18	
Purchasing Influencer	Friend & Colleagues	53	26.5
	52	26	
Shop owner	23	11.5	
	40	20	
Children	38	19	
	38	19	
Parents & Senior family members	38	19	
	38	19	
Husband or Wife	38	19	
	38	19	
Area	Male	48	24
	Female	54	27
	Male	57	28.5
	Female	41	20.5

[Source: Field Survey/March'15 – April'15]

Research Hypothesis

- H₀: The preference of variety of biscuit is independent of the gender of the young biscuit lovers.
- H₁: Gender has a significant bearing in building preference for variety of biscuit among the young students.

Table No 2: Cross Tabulation for H₀

Gender/Brand	Marie	Glucose	Cream	Cookies	Milk	Total
Male	16	58	15	7	14	110
Female	24	41	10	9	6	90
Total	40	99	25	16	20	200

[Source: Field Survey/March'15 – April'15]

Table No 3: Chi-Square Test Result in relation to Table 2

Statistical Measures	Value	Degree of freedom	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.878*	7	0.262
Likelihood Ratio	12.033	7	0.099
Linear-by-Linear Association	3.791	1	0.052
N of Valid Cases	200		

As per Table 3, at 5% level of significance, the chi-square table value/critical value is 14.067. Here since the p value of 0.262 being more than 0.05 and the calculated Chi – Square value of 8.878 falls within the acceptance region, hence acceptance of null or H₀ results. Therefore the pref-

erence of biscuit variety is independent of the gender of the young biscuit lovers.

Table No 4: Descriptive statistics of Biscuit's variety preference factors

Variety Preference Factors	N	Mean	Standard Deviation
Price & Discount offers	200	5.19	0.73
Taste & fun founting value	200	5.07	0.76
Nutritional value & Less calorie intake	200	5.68	0.68
Brand image	200	4.92	0.79
Availability of varied Pack sizes	200	5.01	0.81

The above table shows that the highest average mean factor was found for Nutritional value & less calorie intake, followed by Price & Promo offers and Taste.

Table No 5: Regression Analysis of Variety Preference Factors

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	SE	Beta	t	Sig
1 (Constant)	0.603	.066		4.644	.000
Price & Discount offers	0.199	0.011	0.337	10.584	0.000*
Taste & fun founting value	0.156	0.013	0.308	14.228	0.000*
Nutritional value & Less calorie intake	0.147	0.016	0.394	15.358	0.000*
Brand image	0.125	0.009	0.317	11.645	0.000*
Availability of varied Pack sizes	0.155	0.015	0.284	14.324	0.000*

[Dependent Variable: Biscuit Variety Preference]

R = 0.872, R² = 0.815; adjusted R² = 0.799 F = 579.538 Sig. at p < 0.001. As per the above Table No 5, the multiple coefficient (R) value of 0.872, suggests reasonably good correlation between all the variety preference factors taken together and SSA. The adjusted R² figure of 0.799 suggests that they can explain 79% of the variance, leaving only 21% unexplained.

Table 6: ANOVA values of Biscuit Varieties relative to different brands

Biscuit Brands	Britannia	Sunfeast	Bisk firm	Anmol	Priya
Degree of freedom	1.196*	3.194	4.193*		2.158*
Variety					
Marie	0.013	0.007*	0.002		0.006*
Glucose	0.097	0.147	0.000*		0.533
Cream	0.003*	0.003*	0.003*		0.001*
Cookies	0.495	0.004*	0.647		0.065**
Milk	0.163	0.115	0.000*		0.312

- Significant at 1% level & ** Significant at 5% level

The values in above table reflect that respondents significantly differ in preferring different varieties of biscuit with respect to the major five variety making Brands in Siliguri & Darjeeling towns.

Table No 7: Area wise Relative Influence of Occupation-

al Preference on Biscuit & Brand selection for different varieties

Occupational Status	Darjeeling town (in Hills)		Siliguri City (in Plain)	
	Mean	Std. Deviation	Mean	Std. Deviation
Govt (Govt & Aided) Job holders	3.0387	1.2555	3.9754	1.04485
Private Job holders	3.5583	1.0802	3.8971	1.05983
Student (High School to University)	3.6489	1.0682	4.1413	0.98528
Businessmen & Traders	3.8592	0.8739	3.9355	0.90918
Housewives	3.2397	1.2456	3.2014	1.39830
Retired persons	3.6157	0.9865	3.0214	1.31414

Occupation wise the Govt & Private job holders of Siliguri are more concerned on variety preference in selecting branded biscuits than their counterparts in Darjeeling. The findings indicate that the students & business men of Siliguri plains are truly loyal to their biscuit brands whereas the same communities from Darjeeling are spuriously loyal when it comes to variety preference. Housewives from both areas are almost on same platform regarding variety preference for biscuit brands. Finally the retired persons of Darjeeling hill town appeared to be highly concerned about different varieties of biscuits available in different brands than their counterparts of Siliguri.

Conclusion

Like Indian biscuit market, biscuit brands in Siliguri & Darjeeling towns of Darjeeling district of West Bengal are competing to achieve a sustainable competitive advantage over the rivals by introducing several varieties. Here except the occupation no other demographic factors put substantial influence on biscuit variety preference for both the towns. Five major factors play major role in shaping variety preference and ANOVA measure also confirms that respondents significantly differ in preferring different varieties of biscuit with respect to the major five variety making Brands in Siliguri & Darjeeling towns. Govt & Private job holders of Siliguri are more concerned on variety preference in selecting branded biscuits than their counterparts in Darjeeling which is reverse in case of retired persons.. Housewives from both areas are almost on same platform regarding variety preference for biscuit brands.

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