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Management

'GAUGING THE RETAIL FORMAT CHOICE PARAMETERS FOR FOOD & GROCERY SEGMENT IN THE CITY OF AHMEDABAD.'

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ABSTRACT Indian retail market is booming in India. Various factors are responsible for retail boom in the country. With the rising cost of operation and cross shopping behavior of customers in all the consumer product segments, identifying the correct retail mix has gained importance. The paper examines and concludes the mall capital of India and selected demographic factor analysis. The study is based on primary data and it has been analyzed through ANOVA & factor analysis.

KEYWORDS : Organized Retail format, Demographic variable, Factor analysis, ANOVA

Introduction

[1] The Indian retail industry is one of the fastest growing in the world. Retail industry in India is expected to grow to US$ 1.3 trillion by 2020, registering a Compound Annual Growth Rate (CAGR) of 16.7 per cent over 2015-20. By 2018, the Indian retail sector is likely to grow at a CAGR of 13 per cent to reach US$ 950 billion. Organized retail is expected to account for 20 per cent by 2020.India is the fifth largest preferred retail destination globally. The country is among the highest in the world in terms of per capita retail store availability. India's retail sector is experiencing exponential growth, with retail development taking place not just in major cities and metros, but also in Tier-II and Tier-III cities. Healthy economic growth, changing demographic profile, increasing disposable incomes, urbanization, changing consumer tastes and preferences are the other factors driving growth in the organized retail market in India. The Government of India has introduced reforms to attract Foreign Direct Investment (FDI) in retail industry. The government has approved 51 per cent FDI in multi-brand retail and increased FDI limit to 100 per cent (from 51 per cent) in single brand retail, and plans to allow 100 per cent FDI in e-commerce, under the arrangement that the products sold must be manufactured in India to gain from the liberalized regime.

[2] Indian market has high complexities in terms of a wide geographic spread and distinct consumer preferences varying by each region necessitating a need for localization even within the geographic zones. India has highest number of outlets per person (7 per thousand) Indian retail space per capita at 2 sq ft (0.19 m^2)/ person is lowest in the world Indian retail density of 6 percent is highest in the world. 1.8 million households in India have an annual income of over ₹ 4.5 million (US$75,150.00).While India presents a large market opportunity given the number and increasing purchasing power of consumers, there are significant challenges as well given that over 90% of trade is conducted through independent local stores. Challenges include: Geographically dispersed population, small ticket sizes, complex distribution network, little use of IT systems, limitations of mass media and existence of counterfeit goods. A number of merger and acquisitions have begun in Indian retail market. PWC estimates the multi-brand retail market to grow to $220 billion by 2020.The opening of retail industry to global competition is expected to spur a retail rush to India. It has the potential to transform not only the retailing landscape but also the nation's ailing infrastructure.

Research Methodology

Objectives of the Study

1. To understand the effect of age & gender on retail format choice decision for food & grocery segment products.
2. Identifying prime factors that affect retail format choice decision for food & grocery segment.

Hypothesis

1. There is significant difference in retail format choice with respect to gender of the shopper.
2. There is significant difference in retail format choice with respect to consumers age group
3. There is statistically significant interrelationship between variables affecting the choice of format choice in the food & grocery segment.

Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy procedure. Research design is the conceptual structure within which research is conducted. The research design adopted here is descriptive.

Sources of Data

Primary data consists of original information gathered for specific purposes at hand. These are gathered for a specific purpose or for a specific research project. Primary data is collected through online survey.

Data Collection Method

For the collection of primary data, online survey was conducted.

Sample Size

A sample of 603 was drawn from the population, which is the retail shoppers for food & grocery segment in the city of Ahmedabad.

Sampling Method

This study is exploratory as well as descriptive in nature, Primary data has been collected by framing a structured questionnaire as an instrument of survey. Sample survey has been conducted in the city of Ahmedabad. Ahmedabad is the Tier -II city of Gujarat

Sampling Method for the research was Non-Probabilistic, convenience Sampling Method.

Sampling Unit

The sample units of this research are the retail shoppers for food & grocery segment in the city of Ahmedabad.

Data Collection Instrument

For the collection of primary data, a questionnaire was designed. This questionnaire contained Likert scale questions and questions pertaining to demographic information extraction.

Data analysis

One way ANOVA between Retail format choice and Age in shopping for food & grocery segment.

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.868	4	8.467	6.193	.000
Within Groups	817.548	598	1.367		
Total	851.416	602			

Interpretation

According to the table this shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means. It can be seen that the significance value is 0.000 (i.e., p = .00), which is below 0.05. and, therefore, there is a statistically significant difference between Retail format choice and Age in shopping for food & grocery segment.

Post Hoc Test

Multiple Comparisons
Dependent Variable: format Tukey HSD

(I) age	(J) age	MeanDifference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.167	.138	.744	-.54	.21
	3	-.100	.138	.951	-.48	.28
	4	-.622*	.134	.000	-.99	-.25
	5	-.365	.211	.416	-.94	.21
2	1	.167	.138	.744	-.21	.54
	3	.067	.145	.991	-.33	.46
	4	-.455*	.141	.012	-.84	-.07
	5	-.198	.215	.889	-.79	.39
3	1	.100	.138	.951	-.28	.48
	2	-.067	.145	.991	-.46	.33
	4	-.522*	.142	.002	-.91	-.13
	5	-.265	.216	.735	-.85	.33
4	1	.622*	.134	.000	.25	.99
	2	.455*	.141	.012	.07	.84
	3	.522*	.142	.002	.13	.91
	5	.257	.213	.749	-.33	.84
5	1	.365	.211	.416	-.21	.94
	2	.198	.215	.889	-.39	.79
	3	.265	.216	.735	-.33	.85
	4	-.257	.213	.749	-.84	.33

*. The mean difference is significant at the 0.05 level.

Post hoc test reveals that there is significant difference in preference for retail format choice age group 15-25 years,26-35 years,36-45 years & 46-55 years, but the age group 55 & above have different preferences while choosing the retail format for food & grocery products shopping.

Further relationship among age groups & Retail format Choice is examined by Multinomial Logistic Regression

Mann-Whitney Test between Retail Format choice and Gender

Ranks				
gender		N	Mean Rank	Sum of Ranks
format	1	316	241.66	76366.00
	2	203	288.54	58574.00
	Total	519		

The table above it indicates which group can be considered as having the higher association namely, the group with the highest mean rank. Therefore, the female group has higher impact on format choice in the food & grocery segments.

Test Statistics

	format
Mann-Whitney U	26280.000
Wilcoxon W	76366.000
Z	-3.629
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: gender it can be concluded that format choice decision is statistically significantly higher in female groups (U = 26280.000, p = .000).

Further relationship Gender, age groups & Retail format Choice is examined by Multinomial Logistic Regression

Reliability Statistics	
Cronbach's'Alpha	N of Items
.937	69

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. it is a coefficient of reliability (or consistency). Reliability of questionnaire was tested by calculating Cronbach Alpha. The reliability stands at .937 which is more than .07, suggesting that the items have relatively high internal consistency.

KMO and Bartlett's 'Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.845
Bartlett's 'Test of Sphericity	Approx. Chi-Square	17886.120
	df	2346
	Sig.	.000

The Kaiser-Meyer-Olkin is the measure of sampling adequacy, which varies between 0 and 1.

The Kaiser-Meyer Olkin (KMO) and Bartlett's 'Test measure of sampling adequacy was used to examine the appropriateness of Factor Analysis. The KMO statistic of 0.845 is also large (greater than 0.50).

Factor Analysis.

Exploratory factor analysis (EFA)

(EFA) is used to identify complex interrelationships among items and group items that are part of unified concepts. The researcher makes no *a priori* assumptions about relationships among factors.Commonality is the square of standardized outer loading of an item. Analogous to Pearson's'r, the squared factor loading is the percent of variance in that indicator variable explained by the factor. To get the percent of variance in all the variables accounted for by each factor, add the sum of the squared factor loadings for that factor (column) and divide by the number of variables.

Communalities		
	Initial	Extractio
Belongingness	1.000	.614
Family orientation	1.000	.763
Family opinion	1.000	.725
review	1.000	.686
Proud of known	1.000	.697
More ability	1.000	.672
New things	1.000	.647
Variety is spice	1.000	.637
Independent decision	1.000	.677
Charge of group	1.000	.575
Women better	1.000	.696
presentable	1.000	.551
Reflect personality	1.000	.597
Track new trend	1.000	.658
Feel good	1.000	.681
Fun excitement	1.000	.687
Branded reliable	1.000	.593
Not compare price	1.000	.621
Window display	1.000	.578
all@ single store	1.000	.635
discount	1.000	.663
Less crowd	1.000	.669
Pack size	1.000	.639
Saves time	1.000	.663
Nearest store	1.000	.621
Sale announcement	1.000	.660
Pleasant experience	1.000	.636
Regular shopper	1.000	.569
Fixed format	1.000	.710
Convenient location	1.000	.618
Easily accessible	1.000	.642
Timing	1.000	.638
One stop shopping	1.000	.684
Quality merchandise	1.000	.615
Choice for selection	1.000	.657
Well-known brands	1.000	.600
Lower prices	1.000	.635
Reasonable price	1.000	.620
Value for money	1.000	.630
Free home delivery	1.000	.668
Promotional offer	1.000	.589
Frequency of sale	1.000	.577
Redemption is the reason	1.000	.681
Sales personnel	1.000	.701
Trust product knowledge	1.000	.632
Personnel respond	1.000	.673
Billing speed	1.000	.752
Easy return	1.000	.636
Club membership	1.000	.666
Value added services leads to repeated visit	1.000	.697
Store design	1.000	.636
display	1.000	.557
stylish	1.000	.658

cleanliness	1.000	.759
ambience	1.000	.676
Credit card	1.000	.640
Safe parking	1.000	.693
Children activity	1.000	.678
Stress free	1.000	.648
Low social status	1.000	.686
Urgent items	1.000	.669
Large quantities	1.000	.621
Routine activity	1.000	.650
New ideas	1.000	.665
Continue visit	1.000	.711
Visit again	1.000	.680
Like grocery	1.000	.680
Recommend to friends	1.000	.668
Shop online	1.000	.563
Extraction Method: Principal Component Analysis.		

Exploratory Factor analysis was run to identify the prominent factors. communality is the extent to which an item correlates with all other items. The communality for a given variable can be interpreted as the proportion of variation in that variable explained by the factors.Since commonality score of all the variables is above 0.5 the study shall proceed by including all the variables for factor analysis.After running factor analysis, the following factors were identified and named.

The identified and rechristened factors under the study are following

1. Store feel
2. Affinity towards the store
3. Merchandise composition
4. Store operations parameters
5. Assurance of store choice
6. Emotional orientation towards Store choice
7. shopping outlook
8. value added store offerings
9. store fidelity
10. price sensitivity
11. feel good factor
12. in store ambience
13. conscious about store experience
14. outdoor display
15. vicinity
16. product denomination
17. matches shopper's personality
18. women oriented activity
19. group decision maker

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.394	19.411	19.411	13.394	19.411	19.411	3.292	4.771	4.771
2	3.748	5.431	24.843	3.748	5.431	24.843	3.129	4.535	9.306
3	2.785	4.036	28.879	2.785	4.036	28.879	2.776	4.023	13.329
4	2.522	3.654	32.533	2.522	3.654	32.533	2.636	3.821	17.149
5	2.224	3.223	35.756	2.224	3.223	35.756	2.633	3.815	20.965
6	2.149	3.115	38.871	2.149	3.115	38.871	2.613	3.787	24.752
7	1.955	2.833	41.704	1.955	2.833	41.704	2.566	3.718	28.470
8	1.747	2.531	44.235	1.747	2.531	44.235	2.523	3.657	32.127
9	1.704	2.470	46.705	1.704	2.470	46.705	2.517	3.648	35.775
10	1.642	2.379	49.084	1.642	2.379	49.084	2.374	3.441	39.216
11	1.601	2.320	51.404	1.601	2.320	51.404	2.371	3.436	42.652
12	1.371	1.988	53.392	1.371	1.988	53.392	2.160	3.131	45.783
13	1.304	1.890	55.282	1.304	1.890	55.282	2.053	2.976	48.759
14	1.270	1.841	57.123	1.270	1.841	57.123	2.028	2.939	51.697
15	1.208	1.750	58.873	1.208	1.750	58.873	2.023	2.932	54.629
16	1.159	1.680	60.553	1.159	1.680	60.553	1.933	2.801	57.430
17	1.120	1.623	62.176	1.120	1.623	62.176	1.932	2.800	60.231
18	1.053	1.527	63.702	1.053	1.527	63.702	1.713	2.482	62.713
19	1.016	1.473	65.175	1.016	1.473	65.175	1.699	2.462	65.175
20	.958	1.388	66.564						
21	.941	1.364	67.927						
22	.923	1.337	69.264						
23	.912	1.322	70.587						
24	.873	1.265	71.852						
25	.829	1.201	73.053						
26	.799	1.158	74.210						
27	.789	1.144	75.354						
28	.732	1.061	76.415						
29	.700	1.014	77.429						
30	.680	.986	78.415						
31	.672	.974	79.389						
32	.653	.946	80.335						
33	.619	.897	81.232						
34	.591	.857	82.089						
35	.571	.828	82.916						
36	.558	.809	83.725						
37	.539	.781	84.506						
38	.528	.765	85.271						
39	.515	.747	86.018						
40	.510	.739	86.757						
41	.488	.707	87.464						
42	.477	.691	88.156						
43	.465	.673	88.829						
44	.448	.649	89.478						
45	.444	.644	90.122						
46	.420	.609	90.730						
47	.411	.595	91.326						
48	.406	.588	91.914						
49	.372	.539	92.453						
50	.364	.528	92.981						
51	.362	.524	93.505						
52	.347	.503	94.008						
53	.336	.487	94.495						
54	.319	.463	94.957						
55	.311	.451	95.409						
56	.307	.445	95.854						
57	.294	.426	96.280						
58	.278	.403	96.683						
59	.268	.389	97.072						
60	.262	.380	97.452						
61	.242	.350	97.802						
62	.225	.326	98.128						
63	.213	.309	98.437						
64	.206	.299	98.736						
65	.194	.281	99.017						
66	.191	.276	99.293						
67	.181	.262	99.555						
68	.177	.256	99.811						
69	.130	.189	100.00						

Extraction Method: Principal Component Analysis.

On the basis of Varimax Rotation with Kaiser Normalization, 19 factors have been extracted. All the 19 factors together explain for 65.07% of the variance in Choice of retail format in food & grocery segment.

Findings

The study reveals that with respect to age of the shopper in the food & grocery segment of retail market there is difference in the preference for the retail format type in the higher age bracket.While with respect to gender it is revealed that females have preferences for the format type. This is an outcome pertaining to the Indian value system wherein the food & grocery segment decisions are still to a large extent dominated by the female segment .It draws attention towards maneuvering retail offerings keeping in mind female shoppers. Further ,it is concluded that food & grocery products shopping in india is still female dominated decision making process.

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