K.J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES & RESEARCH

PGDM (COMM) – III 2017 – 19 BATCH

Marketing Research

(End Term Exam)

Total Marks : 50 Time : 3 Hours Date : 28/03/2018

Attempt any 4 Question (Each carries 12.5 Marks)

Q1. The company is producing herbal tooth powder which is widely accepted in rural Punjab. It wants to enter the urban market. The company decided to get a research study conducted with the following objectives:

- To estimate the proportion of population that used tooth powder.
- To understand the demographic and psychographic profile of people who used tooth powder.
- To understand the reasons for not using tooth powder.
- To get an understanding of the media habits of both the users and non-users of tooth powder.

Design a Questionnaire to conduct this research.

Q2. The Marketing Manager of Reynolds wants to know how the customer values the various tangilble and intangible features offered by its micro-tip pen. He identifies the attributes of his product which are important to customers, then the level for each attribute that the company is willing to design and offer to a customer. These are the following attributes of a micro-tip pen, which are considered to be important.

1. Price of the cicro-tip pen
2. Color of the ink in refill
3. Diameter of the tip of the refill.

The levels of these attributes are:

1. Price – Rs 5, Rs 7, and Rs 10
2. Color of ink – Blue, Black and Red
3. Diameter of tip- 0.25mm, 0.45 mm, and 0.5 mm

Dummy variable were used for running the regression for the above

Price of the Pen	var 1	var2
P5	1	0
P7	0	1
P10	-1	-1

Color of the INK	var 3	var4
Blue	1	0
Black	0	1
Red	-1	-1

Diameter of the tip	var 5	var6
DO-25	1	0
DO-45	0	1
DO-50	-1	-1

The conjoint analysis is run with regression model. The following is the output

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867[a]	.751	.677	4.51179

a. Predictors: (Constant), VAR00006, VAR00004, VAR00002, VAR00005, VAR00003, VAR00001

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1230.875	6	205.146	10.078	.000[b]
	Residual	407.125	20	20.356		
	Total	1638.000	26			

a. Dependent Variable: VAR00007

b. Predictors: (Constant), VAR00006, VAR00004, VAR00002, VAR00005, VAR00003, VAR00001

\

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.321	.872		16.422	.000
	VAR00001	2.012	1.231	.211	1.635	.118
	VAR00002	1.457	1.231	.153	1.184	.250
	VAR00003	-4.099	1.231	-.430	-3.331	.003
	VAR00004	.568	1.231	.060	.462	.649
	VAR00005	-6.210	1.231	-.632	-5.046	.000
	VAR00006	-1.227	1.215	-.128	-1.010	.324

a. Dependent Variable: VAR00007

Find out the Part Utility and Range Utility of the attributes. What inference can you derive form it.

Q3. B-segment cars form the largest part of the consumer vehicle market in India. Post liberalization in 1990s a large number of consumers have graduated from two-wheelers to cars, resulting in a boom in the B- segment car market. A study to understand what factors influence the purchase of B-segment cars in India. A survey was conducted on 75 respondents in which they were asked to rate 18 attributes in terms of their importance while purchasing a B-segment car.

The factor analysis was carried out on 18 variables using a sample size of 75 respondents. The following are the results.

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.613
Bartlett's Test of Sphericity	Approx. Chi-Square	355.669
	df	153
	Sig.	.000

Communalities

	Initial	Extraction
Price on Road	1.000	.743
Brand Name	1.000	.773
Engine Capacity	1.000	.650
Looks & Design	1.000	.763
Fuel Efficiency	1.000	.710
Discount Schme	1.000	.582
Resale Value	1.000	.671
After Sale Services	1.000	.554
Running and Maintaining Cost	1.000	.686
Convenience Features	1.000	.493
Purpose of Purchase	1.000	.697
Performance Information Available	1.000	.587
Driving Pleasure	1.000	.635
Car Image & Positioning	1.000	.579
Economical	1.000	.738
Colours Available	1.000	.595
Advertising & Marketing	1.000	.463
Safety	1.000	.740

Extraction Method: Principal Component Analysis.

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	3.860	21.447	21.447	3.860	21.447	21.447	2.621	14.558	14.558
2	2.275	12.640	34.087	2.275	12.640	34.087	2.303	12.794	27.353
3	1.738	9.658	43.745	1.738	9.658	43.745	1.748	9.711	37.063
4	1.436	7.975	51.720	1.436	7.975	51.720	1.696	9.420	46.483
5	1.244	6.910	58.630	1.244	6.910	58.630	1.682	9.343	55.826
6	1.104	6.131	64.761	1.104	6.131	64.761	1.608	8.936	64.761
7	.952	5.289	70.050						
8	.847	4.703	74.753						
9	.777	4.316	79.069						
10	.668	3.714	82.783						
11	.620	3.442	86.225						
12	.532	2.953	89.178						
13	.491	2.727	91.904						
14	.412	2.287	94.191						
15	.312	1.735	95.926						
16	.295	1.637	97.563						
17	.259	1.439	99.002						
18	.180	.998	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
Price on Road	-.063	.143	-.229	-.149	.802	-.026
Brand Name	.278	.156	-.587	.216	.264	.459
Engine Capacity	.116	.668	-.082	-.182	.173	.346
Looks & Design	.137	.030	.060	.138	-.059	.847
Fuel Efficiency	-.081	.822	.106	.109	.037	-.049
Discount Schme	.046	-.001	.250	.369	.588	-.188
Resale Value	-.084	.203	.359	.191	.670	.095
After Sale Services	.201	.081	.687	.157	.103	-.018
Running and Maintaining Cost	.230	.677	.277	.074	.195	-.232
Convenience Features	.645	.000	.221	-.007	-.025	.163
Purpose of Purchase	-.195	.403	-.128	.675	-.108	.113
Performance Information Available	.296	.291	.614	-.062	.082	.165
Driving Pleasure	.662	.088	.161	.389	-.072	.081
Car Image & Positioning	.309	-.084	.333	.591	.127	-.033
Economical	.141	.527	.054	.287	.114	-.585
Colours Available	.754	-.083	.068	.088	.026	.082
Advertising & Marketing	.337	-.057	-.041	.557	.181	.038
Safety	.788	.280	-.036	.029	-.063	-.186

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 19 iterations.

- What will you infer from the KMO statistics and Bartlett's test of sphericity.
- How many factors are extracted? How much is the total variance explained by the factors extracted?
- Which are the factors that influence the purchase of B-segment cars in India?

Q4. A major Indian FMCG company wants to map the profile of its target market in terms of lifestyle, attitudes and perceptions. The company's managers prepare, with the help of their marketing research team, a set of 15 statements, which they feel measure many of the variables of interest. These 15 statements are given below. The respondent had to agree or disagree (1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree) with each statement.

1. I prefer to use e-mail rather than write a letter.

2. I feel that quality products are always priced high.

3. I think twice before I buy anything.

4. Television is a major source of entertainment.

5. A car is a necessity rather than a luxury.

6. I prefer fast food and ready to use products.

7. People are more health conscious today.

8. Entry of foreign companies has increased the efficiency of Indian companies.

9. Women are active participants in purchase decisions.

10. I believe politicians can play a positive role.

11. I enjoy watching movies.

12. If I get a chance, I would like to settle abroad.

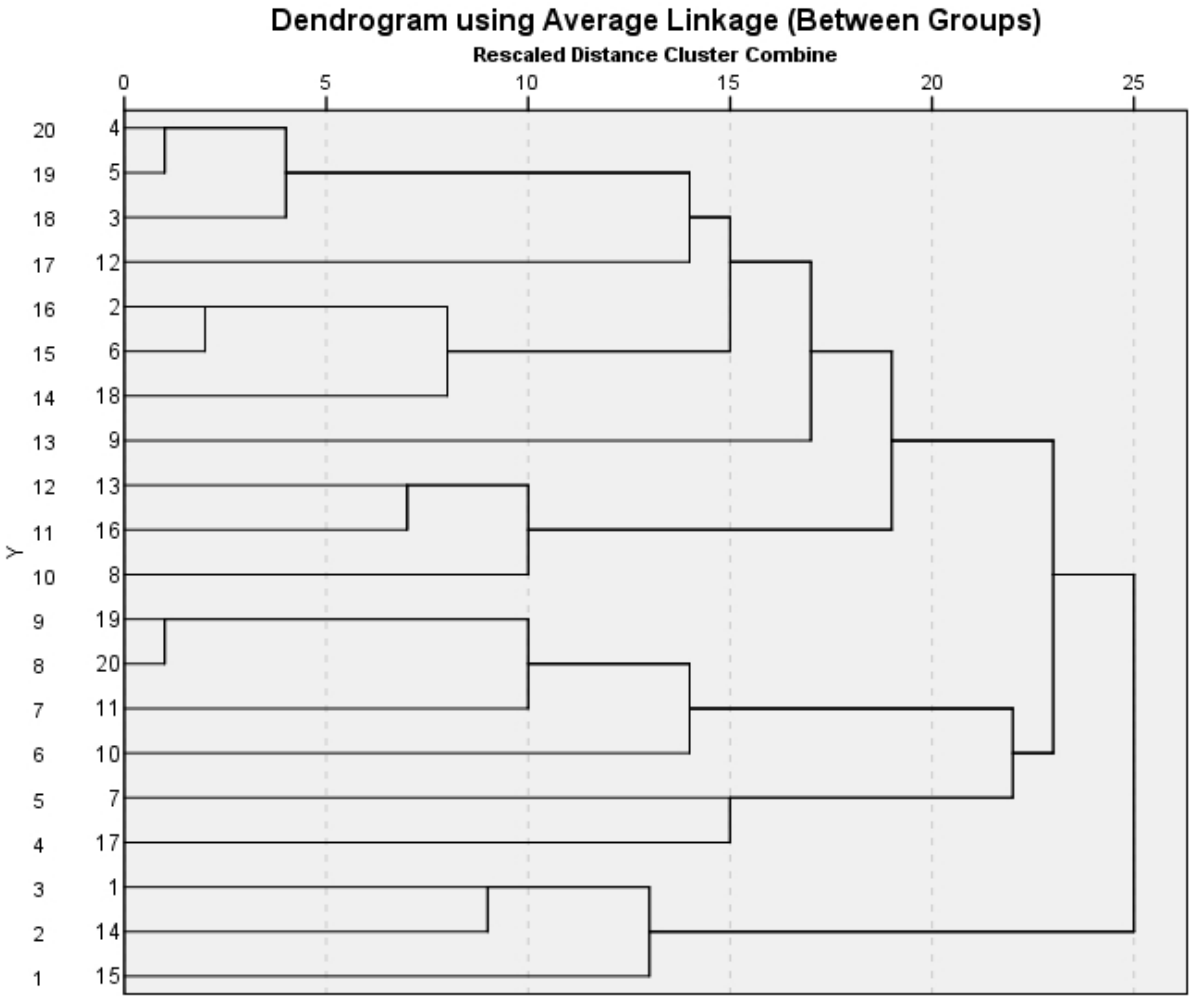
13. I always buy branded products.

14. I frequently go out on weekends.

15. I prefer to pay by credit card rather than in cash.

20 respondents answered the questionnaire

Following is the output



In stage 2, a k-means clustering is run with 3 cluster solution. The following are the final cluster centers.

Final Cluster Centers

Final Cluster Centers

	Cluster		
	1	2	3
VAR00001	2.00	2.80	3.43
VAR00002	2.25	2.20	3.43
VAR00003	3.63	3.20	2.43
VAR00004	2.88	2.60	3.43
VAR00005	3.13	2.60	3.71
VAR00006	4.50	3.40	3.29
VAR00007	2.50	1.40	4.14
VAR00008	2.75	4.60	1.71
VAR00009	3.63	1.80	2.43
VAR00010	3.00	3.00	3.86
VAR00011	3.63	4.20	3.29
VAR00012	2.50	3.60	3.29
VAR00013	2.75	2.40	3.86
VAR00014	2.75	2.40	3.86
VAR00015	4.13	1.80	2.57

- Map the profile of cluster 3 and suggest your marketing and communication plan for this target segment.

Q5. A set of 8 brands of TV available in the Indian market are taken and multidimensional scaling is used to determine how these 8 brands are perceived by Indian consumers. Data were collected from a sample of respondents each of whom was asked to rate the dissimilarity between all pairs of TV brands on a numerical scale. If you want to launch a new brand of TV in the same market what would be your positioning strategy.

TV Brands
1. Aiwa
2. Videocon
3. LG
4. Samsung
5. Sony
6. Onida
7. Thomson
8. BPL

	Var1	Var2	Var3	Var4	Var5	Var6	Var7	Var8
Var1	.00	3.00	6.00	8.00	1.00	2.00	7.0	8.00
Var2	3.00	.00	4.00	6.00	4.00	5.00	2.00	5.00
Var3	6.00	4.00	.00	3.00	2.00	4.00	6.00	1.00
Var4	8.00	6.00	3.00	.00	3.00	5.00	4.00	7.00
Var5	1.00	4.00	2.00	3.00	.00	2.00	8.00	5.00
Var6	2.00	5.00	4.00	5.00	2.00	.00	3.00	6.00
Var7	7.00	2.00	6.00	4.00	8.00	3.00	.00	5.00
Var8	8.00	5.00	1.00	7.00	5.00	6.00	5.00	.00

The three important factors important for the customers for the choice of TV are –

Dimension 1 : Value for Money

Dimension 2 : After Sales Service

Dimension 3 : Current Brand Image

- Which solution will you consider from the following output for your inference?why?

The following is the output.

One Dimension Solution
Stress = .43158 RSQ = .35255

Stimulus Coordinates

		Dimension
Stimulus Number	Stimulus Name	1
1	VAR00001	1.6474
2	VAR00002	.4073
3	VAR00003	.0704
4	VAR00004	-1.2044
5	VAR00005	1.0409
6	VAR00006	.2644
7	VAR00007	-1.2424
8	VAR00008	-.9837

Two Dimension Solution
Stress = .24021 RSQ = .58135

Stimulus Coordinates

		Dimension	
Stimulus Number	Stimulus Name	1	2
1	VAR00001	1.6156	.4725
2	VAR00002	-.2760	1.3795
3	VAR00003	-.2540	-1.0559
4	VAR00004	-1.2855	-.7792
5	VAR00005	.9600	-.9336
6	VAR00006	1.1045	.0665
7	VAR00007	-.5681	1.5126
8	VAR00008	-1.2967	-.6624

Three Dimension Solution
Stress = .05230 RSQ = .96043

Stimulus Coordinates

Stimulus Number	Stimulus Name	Dimension 1	2	3
1	VAR00001	1.9512	.2028	.0664
2	VAR00002	-.1995	1.3140	.7743
3	VAR00003	-.6043	-1.3429	.4679
4	VAR00004	-.9038	-.2968	-1.8497
5	VAR00005	.8931	-1.0092	-.0350
6	VAR00006	1.1045	.1529	-.7070
7	VAR00007	-1.1031	1.6088	-.1289
8	VAR00008	-1.1381	-.6295	1.4121

- For practical purpose interpret the 2 dimensional plot below for designing the

positioning strategy for your new brand to launch in the same market.