Customer Segmentation in Mobile Services Industry
A Cluster and VALS 2 Systems Approach.

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INTRODUCTION

•Market segmentation and corresponding product differentiation strategy can give a firm a commercial advantage.

•The goal of our study was to propose a model that allows advanced technical approach findings to be correlated and expressed in easy and simpler approach for quick comprehension of one and all and as a tool for identification of the potential market for services and products.

•In our study we first made use of Cluster analysis to identify the distinct cluster or group of customer with similar buying habits from data gathered using primary research in our earlier study. Later we made use of VALS 2 (for "Values, Attitudes and Lifestyles") system, a psychographic segmentation and a marketing tool .

•We found that results from cluster analysis could well be equated with the findings drawn based on VALS2 system.

METHODS

Objectives: To understand Customer Segmentation for Mobile Services Operators using Cluster analysis and in turn compare them with VALS 2 classification.

Type of study: Descriptive.

Sample size: Hundred and eighty six respondent (Secondary data)

Data collection: Secondary data

Techniques used: Cluster analysis (The Hierarchical and the K-Means Cluster Analysis) and VALS2.

Limitation: The research is based on the data collected in an earlier study using primary by Dr. Neeraj Kaushik, to in Bhiwani and Hisar region of Haryana, India during the months of Feb-March, 2007.

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
181	4	56	87.754	172	165	183
182	5	6	90.090	175	177	183
183	4	5	109.093	181	182	185
184	1	32	121.675	180	178	185
185	1	4	148.263	184	183	0

Table1. Hierarchical Cluster Analysis

Number of Cases in each Cluster		
Cluster	1	22.000
	2	53.000
	3	19.000
	4	38.000
	5	54.000
Valid		186.000
Missing		.000

Table 2 . K Mean Cluster analysis

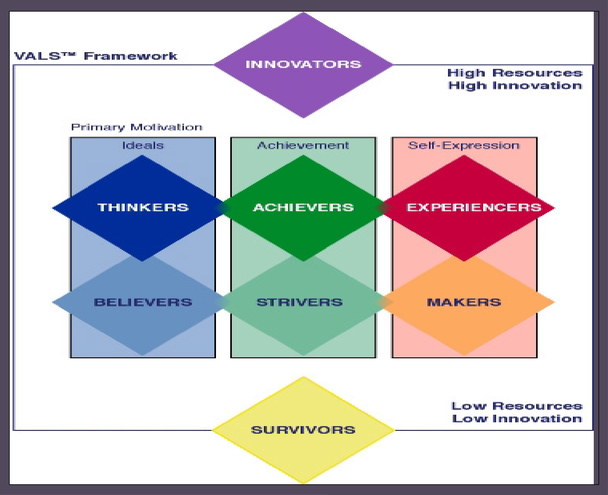

Figure 1. VALS2 Framework

RESULTS

Cluster\Variables	Cluster1	Cluster2	Cluster3	Cluster4	Cluster5
Background	Urban	Urban	Urban and also modest no. of rural	Urban and also has modest no. of rural	Urban
Marital status	Single and married	Single	Single	Single	Single & married
Age group	20-30	20-30	Less 20 and 20-30 and over 40	20-30, also has 30-40 and over 40	20-30 & more than 40
Qualification	Graduates	Postgraduate	Intermediate, graduate	Graduate and intermediate	Graduate and intermediate
Profession	Student & servicemen	Student & businessmen	Student & servicemen	Student and businessmen	Servicemen and businessmen
Family monthly income	15000-20000	1000-15000 & more 20000	upto 10000	10000-15000 & more than 20000	More than 20000
Mobile services provider	Airtel	BSNL	Airtel/BSNL also has Hutch and Idea users	Airtel, also has Hutch and Idea users	Idea and BSNL
VALS2	**Thinkers**	**Experiencers**	**Makers**	**Believers**	**Achievers**

Table3. Equating Clusters with VALS2 Framework

DATA ANALYSIS

STAGE I –HIERARCHICAL CLUSTER ANALYSIS

Hierarchical cluster analysis (HCA) is an exploratory tool designed to reveal natural groupings (or clusters) within a data set that would otherwise not be apparent. Hierarchical cluster analysis begins by separating each object into a cluster by itself.

In our HCA analysis we have used following parameters

Statistics: Agglomeration schedule

Method: Cluster method- furthest neighbour

Measure- Interval. Squared Euclidean distance

Standardisation- z scores as transform values.

Plot: Dendogram using furthest neighbour as cluster method and z scores as transform values. From the Dendogram we obtained seven distinct clusters.

STAGE II – K-MEAN CLUSTER ANALYSIS

K-means cluster analysis is a tool designed to assign cases to a fixed number of groups (clusters) whose characteristics are not yet known but are based on a set of specified variables.

In our K-Mean cluster analysis we have used following parameters:

Number of clusters: We used five as the number of predefined clusters

Efficiency Method: Iterate and classify

DISCUSSION

- Hierarchical cluster analysis generated seven clusters from the data. Upon further refinement using K Mean analysis we got a set of five distinct clusters.
- As per VALS 2 system, groups with similar buying habits and resources were identified.
- Cluster findings were compared with finding based on VALS 2 system analysis. That is Cluster 1 was found to be like Thinkers of VALS2, Cluster 2 was like Experiencers Cluster3 like Makers, Cluster4 like Believers and Cluster 5 was found to be like Achievers of VALS 2 framework.

CONCLUSIONS AND RECOMMENDATIONS

- Cluster analysis findings and VALS 2 framework findings are correlated.
- Cluster analysis findings can be interpreted in terms of VALS 2 framework for easy understanding of Marketers, for representation on corporate Dashboard and by services companies as a sound and handy tool to analyse there customer and thus identify the potential market.

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