Chapter - II

This chapter discusses

Conceptual Framework

and

Research Methodology

CHAPTER – II

Conceptual Framework and Research Methodology

[Aim of this chapter is firstly, to convey in brief about important concepts and operational variables and secondly, to describe methodologies relating to the present research]

2.1 Conceptual Framework

2.1.1 Market Segmentation

Market segmentation was introduced into academics by Smith (1956). According to him "market segmentation involves viewing a heterogeneous market as a number of smaller homogeneous markets, in response to differing preferences, attributable to desires of consumers for more precise satisfaction of their varying wants". He also emphasised that market segments arise from managers' conceptualisation of a structured and partitioned market, rather than the empirical partitioning of the market on the basis of collected data on consumer characteristics.

Apart from affordability and viability and effective segment must possess six criteria- identifiability (extend the manager can recognise distinct groups of customers), substantiality (capacity to produce marginal revenue greater than marginal cost), accessibility (ability to reach target segment through promotional and distributional efforts), stability (a period long enough to identify segment and make strategies), responsiveness (each segment should response differently than other segments in case of a change in marketing mix) and actionability (identification should provide guidance to marketers to take specific action) (Frank, Massy & Wind, 1972; Kotler, 1988).

Kamakura and Wedel (2000) classified methods of segmentation based into whether, general (independent of products, services or circumstances) and product specific (related to both customer and product service and

circumstance) along with whether observable (can be measured directly) or unobservable (inferred). The table 2.1 shows different bases of segmentation:-

Table 2.1 Classification of Segmentation Bases

	General	**Product Specific**
Observable	Based on Cultural, Geographic, Demographic And Socio-Economic Variables.	User Status Frequency Of Use Situation, Store Loyalty And Patronage.
Unobservable	Psychographic, Values, Personality And Life Style	Psychographic, Benefits, Perceptions, Elasticity's, Attributes, Preferences, Intentions

Source: Wedel & Kamakura (1999)

2.1.2 Psychographics

Demby (1994) defines psychographics as "The use of psychological, sociological and anthropological factors, such as benefits desired (from behaviour being studied), self-concept and lifestyle (or serving style) to determine how the market is segmented by the propensity of groups within the market – and their reasons- to make a particular decision about a product, person, ideology or otherwise hold an attitude or use a medium."

Psychographics study is analysis of consumer lifestyles to create a detailed customer profile. Market researchers conduct psychographic research by asking consumers to agree or disagree with activities, interests and opinions statements. (Business Dictionary, 2016).

Quantitative research intended to place consumers on psychological- as distinguished form of demographic- dimensions (Wells, 1975).

Psychographics study and classification of people according to their attitudes, aspirations, and other psychological criteria, especially in market research (Oxford Living Dictionary, 2017).

Genesis of Psychographics

The term "Psychographics" can be traced back to World War I, when it was used to describe people by their looks (Demby, 1994). As the insufficiency of demographic profile is experienced in explaining consumer behaviour researchers have engaged continuous search for new, more comprehensive and exciting ways of market segmentation, especially since the end of World War II. Continuous experiments on the use of clinical psychology, motivation along with demographic data in marketing research.

The word psychographics was first used by E. H. Demby; he put together the words psychology and demography. His aim was to understand consumer behaviour and to develop more adequate strategies. The psychographic analysis seeks to group consumers based on three broad groups' personality traits, personal value and lifestyle. There are many psychographic schemes to group consumers such as VALS™ (Values and Lifestyle), AIO (Activity Interest and Opinion), LOV (List of Values), RVS (Rokeach's Value Scale) and so on.

VALS is the short for values and lifestyles. It is a system based on personality traits survey and was developed by social scientist and consumer futurist Arnold Mitchell in 1970. At that time it was based on social values. Later Mitchell proposed a Values and Lifestyle Topology which is widely known as VALS™ system. Originally drawn from Maslow it grouped customers into nine segments. Recently the VALS system has been redefined in 1989 by experts of SRI International, Stanford University and University of California, Berkeley. VALS is considered as the most popular and commercially available classification system based on the psychographic measurement (Kotler & Keller 2006). It is a very popular tool to determine the placement of a given product to a certain niche in an industry.

List of Values (LOV) was developed by the researchers of University of Michigan Survey Research Centre (Kahel, 1983) was based on theoretical foundations of Feathers's (1975), Maslow's (1954) and Rokeach's (1973) work on human values. In this method respondents identify their two most important from a list of nine values, which include self-respect, security, warm relationships with

others, sense of accomplishment, self-fulfilment, sense of belonging, being well respected, fun and enjoyment in life, and excitement (Kahle, 1983). And then decided to rank the values (Beatty et al. 1985, Kahle et al. 1986), or to rate values on a 1 to 9 interval scale from extremely important to extremely unimportant (Beatty et al, 1988). LOV is easier and quicker to administer than VALS and as it is not a subject to individual interpretation therefore it can be employed in international situations and findings can be statistically verified (Beatty et al, 1988).

The Rokeach Value Survey (RVS) considers value as an enduring prescriptive or proscriptive belief that a specific end state existence or specific mode of conduct is preferred to an opposite end state or mode of conduct (Rokeach, 1973). This values are considered the important principles guiding ones behaviour throughout life. RVS ranks two sets of values composed of 18 terminal values (desirable end state of existence or ultimate goal) and 18 instrumental values (preferable modes of behaviour or beliefs that are instrumental to attainment of terminal values) respectively which are alphabetically listed in two separate pages. M. Rokeach was one of the pioneers in the quantitative measure of value and value system.

Activities Interest and opinion (AIO), focuses on what people like to do, what are their areas of interest, and what are the opinion people hold on various matters (Lazer, 1963). The best way to understand and know the customer is to know what they do, What they want, and what they think; thus it is key   to effective communication and successful sales.

Important concepts and operational definitions of different terms concerning to this study are as follows.

2.1.3 Youth

Youth are those people who are in the age group of 16 to 35 years (Exposure Draft National Youth Policy 2012). Literary youth is the time of life when one is young, but often means the time between being a child and an adult (Merriam-Webster,2017)

Youth is also explained as an experience that may shape an individual's level of dependency, which can be marked in various ways according to different cultural perspectives. Personal experience is marked by an individual's cultural norms or traditions, while a youth's level of dependency means the extent to which he still relies on his family emotionally and economically. (Andy, 2013)

2.1.4 Initially Employed Youth

Initially employed youth are those people who are employed with experience of 5 years or less, having the age group between 16 to 35 years. This people are earning and economically very active. Many are married or planning to get married. They are still dependent to parents emotionally and economically. They have started taking responsibilities and many are struggling to get establish.
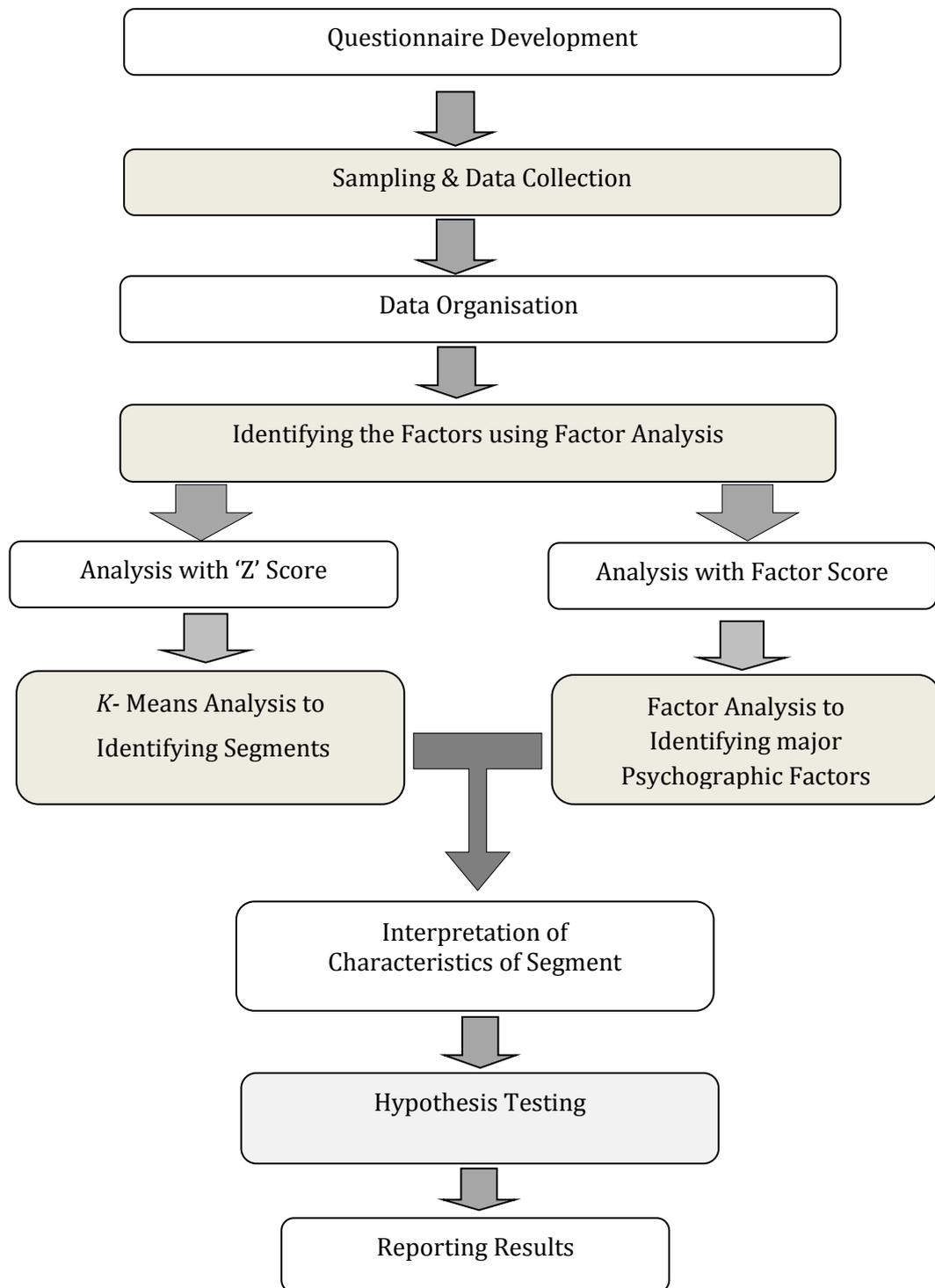
2.1.5 Junior College Student

Junior College Students are those students who are studying in 11th and 12th Standards. They are generally in their teens. Economically this people are totally dependent upon family. Many are planning for higher education and training so that they can get better employment opportunities.

2.1.6 Aspiration

Aspiration is a goal or objective that is strongly desired (Dictionary.com, 2017). They also connote hopes or ambition of achieving something (oxforddictionaries.com, 2017). In this research it has been used as desires or wishes that one wishes to fulfil if there are no economic constraints. They are common wishes related to luxuries, fashion related purchases, desire to serve social causes and perform charity for religious purposes, fulfil family requirements, give gifts to loved once, purchasing household appliances and furniture, invest for future, accumulation of wealth in fixed assets, visiting places for tourism and spend for necessities.

Fig 2.1 Flow Chart Describing the Methodology Adopted for the Study

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┌─────────────────────────────────────────┐
│        Questionnaire Development          │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│         Sampling & Data Collection        │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│            Data Organisation              │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│   Identifying the Factors using Factor    │
│                Analysis                   │
└─────────────────────────────────────────┘
         ↓                          ↓
┌──────────────────┐      ┌──────────────────┐
│ Analysis with    │      │ Analysis with    │
│ 'Z' Score        │      │ Factor Score     │
└──────────────────┘      └──────────────────┘
         ↓                          ↓
┌──────────────────┐      ┌──────────────────┐
│ K- Means         │      │ Factor Analysis  │
│ Analysis to      │      │ to Identifying   │
│ Identifying      │      │ major            │
│ Segments         │      │ Psychographic    │
│                  │      │ Factors          │
└──────────────────┘      └──────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│         Interpretation of                 │
│      Characteristics of Segment           │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│           Hypothesis Testing              │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│           Reporting Results               │
└─────────────────────────────────────────┘
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Source: Primary

2.2 Research Methodology

Methodology is the accumulation of various steps adopted by the researcher during the study, the research problem and the logic behind them. Thus, methodology has many dimensions and constitutes vast scope within the research activities (Kothari, 2012). A simplified representation of course of research if presented in a flow chart (Fig 2.3)

2.2.1 Questionnaire Development

The questionnaire for this study was developed to the current shape through several trial and failed attempts. In order to identify suitable questionnaire, content wise, length wise and easy-to-administer, several prototypes were developed. While developing questionnaire the following objectives were kept in mind:

a) Psychographic questions selected or developed should be helpful to predict preferences and behaviour of consumers.
b) Questions should reflect people's thinking.
c) The questionnaire must give results which may be evaluated and tested.
d) The questionnaire must give results that should mathematically viable to produce meaningful clusters and segments.
e) The questionnaire also should provide future aspiration.
f) The questionnaire must be short and engaging so that people responded them willing and joyfully.

It was a challenge for us to present such a questionnaire which has the above mentioned characteristic. To gather demographic information 9 numbers of questions were used, for better understanding of activities, interest and opinion of the respondents. 84 numbers of opinions were grouped into 26 questions each containing four options numbered as a, b, c and d. LOV with ranking method, developed by Khel (1983) is included to measure values. Questions relating to different dimensions, with corresponding nature i.e. activities interest or opinion seeking presented in   in the Table 2.2.

Table 2.2 Dimension and Nature of Questions

Dimensions	Question No. and Issue Related to	Nature
Social	*8. Career or family preference	Activities
	22. Behaviour at social gathering	Activities
	*24. Influence on others	Activities
	*25. Coordination with others	Activities
	21. Politics	Interest
	1. Status consciousness	Opinion
	2. Friendship	Opinion
Psychological	7. Make or buy decision	Activities
	9. Enjoyment	Activities
	15. Law abidingness	Activities
	*16. Shopping behaviour	Activities
	5. Learn new things	Interest
	6. What to do with household items	Interest
	17. Visit to interesting place	Interest
	*10. Analytical reasoning	Opinion
	*11. Risk taking	Opinion
	*12. Believe in destiny and luck	Opinion
	*13. Media	Opinion
	20. Acceptability of high end trends.	Opinion
	*23. Materialism	Opinion
Spiritual	*3. Praying Time	Activities
	*26. Religious Books	Interest
	*4. Religious Belief	Opinion
Cultural	19. Dress for Occasions	Activities
	18. Fashion	Interest
	*14. Status of Women	Opinion

Note: Source Primary,   '*' indicates question with reverse score

The 26 dichotomous options of aspirations and some open spaces are provided to express all the aspirations. These aspirations later were grouped into 12 sets for meaningful and observable aspirations. Like urges to purchase luxury goods, Fashion related wishes, willingness to spend money for Social causes, Family, Education, Fixed assets, House hold goods, Religious purposes, spending money for loved once, desires for travelling and tourism, investing money for future uses and lastly spending for necessities. A copy of questionnaire is attached in the annexure.

2.2.2 Sampling and Data Collection

The research is exploratory and analytical in nature. The study is based on primary data. The data is collected with questionnaire in the greater area of Silchar (Fig: Map of Silchar, in appendix) during September 2014 – October 2015. Youth population of Silchar comprised the Universe of study. A stratified non-probability judgemental sampling was adopted for collecting data.

The questionnaires filled up from all the wards of Silchar in order to achieve more representative sample of the population. 980 questionnaires were used for the larger survey covering total geographical area of Silchar. Any defect in questionnaire like responding multiple time in single answer, questionnaire with missing value and incomplete questionnaires were shorted and rejected at the very beginning. Total of 684 questionnaires were finally accepted and data were entered into computer using SPSS package of IBM. In order to achieve the present research objectives, sample for targeted group of 250 Junior college students and 250 Initially Employed Youth were considered.

2.2.3 Data Organization

After data collection, a screening for error and duplicate entries were done and defective entries were eliminated. Those questions which were in reverse order their scores were inversed (Detailed question wise data is reported in appendix). This data is then used for primary statistical analysis. Data is arranged in tabulated format and used for further analysis.
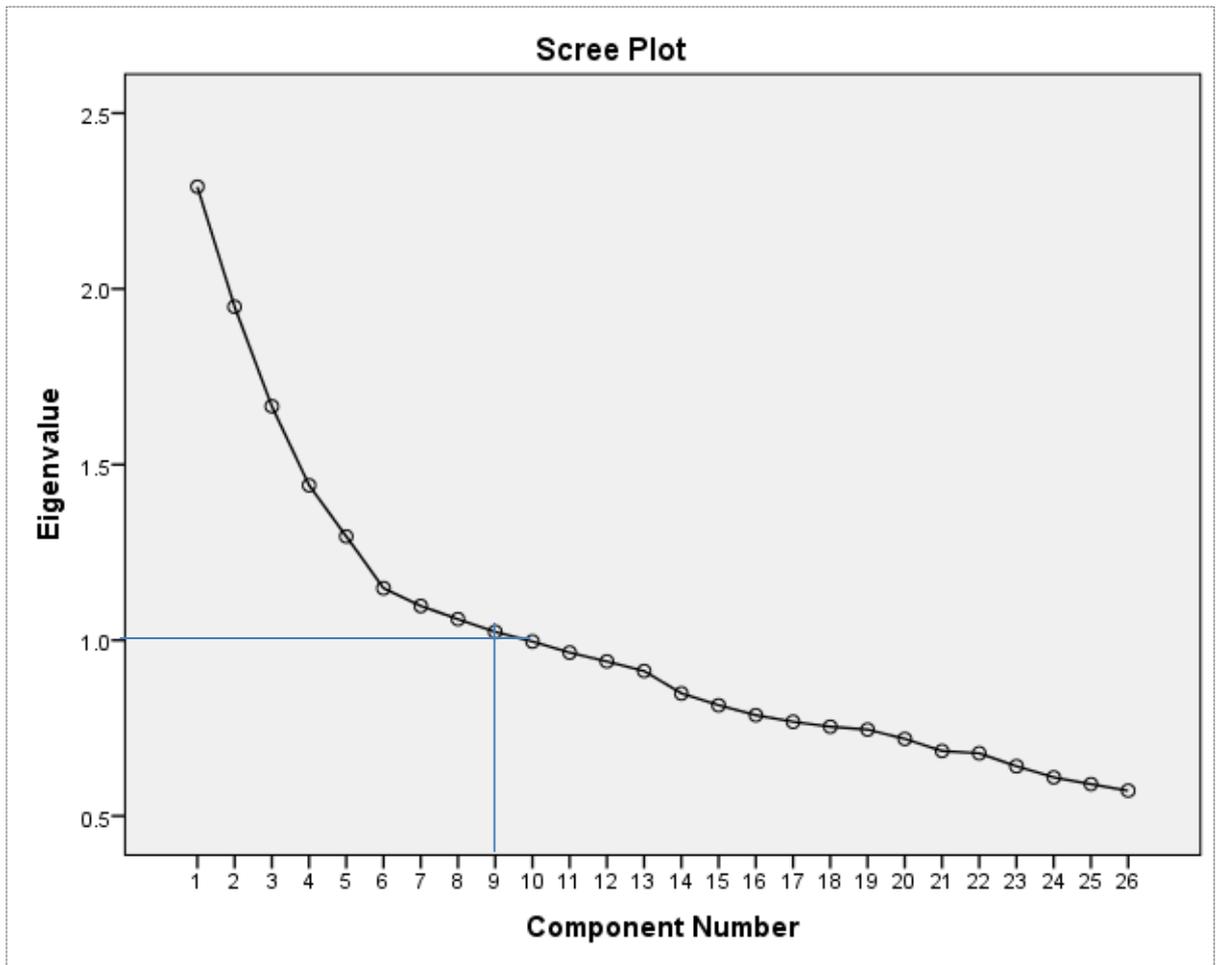
Fig 2.2 Scree plot

Table 2.3 KMO Measures

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.653
Bartlett's Test of Sphericity	Approx. Chi-Square	1223.803
	Degrees of freedom	325
	Sig.	.000

Table 2.4 Rotated Component Matrix

Variables with Question No.	Component of Psychographics								
	1	2	3	4	5	6	7	8	9
HomeCre7	.670								
Creativity6	.662								
Politics21	.429								
PlaceofBuauty17	.387								
CareerFamily8		.625							
Friendship2		.585							
Excitement9		.557							
DressParty19			.694						
DessGen18			.677						
SmartPhoneUse1			.440						
rev_par22				.714					
rev_shopadv24				.574					
rev_work25				.508					
Prayer3					.687				
rev_re_4					.646				
rev_book26					.522				
Tattoo20						.603			
rev_dregirl14						-.541			
rev_money23							.735		
TryingMachine5							.437		
rev_risk11								.620	
rev_sb10								.508	
rev_succ12								.393	
rev_shop16								.363	
rev_tv13									.801
rev_bribe15									.371

1- Creativity, 2- Family orientation, 3- Trend consciousness, 4- Leadership, 5- Belief in God , 6- Fashion consciousness, 7- Curiosity , 8- Ambition, 9- Law abidingness

Extraction Method: Principal Component Analysis. Rotation: Varimax with Kaiser Normalization. Rotation converged in 12 iterations.   Data source : Primary

2.2.4 Identifying Factors Using Factor Analysis

Exploratory factor analysis technique Principal Component Analysis is used. Verimax rotation with maximum 25 iterations isolated 9 important factors in coming to 49.89% of total variance. It had a Kaiser – Mayer Olkin (KMO) measure of sample adequacy 0.653 (Table2.3) which is larger than 0.5 and considered acceptable, the sampling adequacy of Bartlett's Test shows a higher value indicating that sample are adequate and thus, the factor analysis is to be considered as reasonably good (Öcal, Oral, Erdis and Vural, 2007). Scree plot (Figure 2.2) shows 9 principal components that have Eigen value greater than one.

2.2.5. Analysis with 'Z' Score

'Z' score or standard score is a derived score, using mean and standard deviation. Absolute value of z represents the distance between the raw score and the population mean in units of the standard deviation. Z is negative when the raw score is below the mean, positive when above. (Wikipedia, 2017) The system generated standard scores of these 9 factors were considered for further analysis and clustering.

2.2.6 Identifying Segments using k - means analysis

In order to identify homogeneous groups of respondents 'k-means' clustering algorithm is used. k - means clustering aims to partition n observations into k clusters in which each observation belongs to the cluster with the nearest mean, serving as a prototype of the cluster (Wikipedia, 2017). 'k' means is run to identify the clusters and cluster solution with distance from cluster centroid. Different cluster membership and distance from cluster centre were saved.

Canonical discriminant analysis is a dimension-reduction technique related to principal component analysis and canonical correlation (SAS, 2017). Canonical discriminant analyses were used in order to find suitable and meaningful cluster solution by observing in two dimensional discriminant space (Fig: 2.3). Table 2.5 shows eigenvalues, percentage of variances and Canonical Correlations of the

distance from cluster centre. Table 2.6 shows the corresponding chi- squire and Wilks' Lamda scores with high degree of significance, this reveals that data are related. Hence, the cluster solution with 3 clusters is considered as an ideal choice for explaining the characteristics of the sample.

2.2.7 Analysis with Factor Scores of PCA

Geometrically an eigenvector, corresponding to a real nonzero eigenvalue, points in a direction that is stretched by the transformation and the eigenvalue is the factor by which it is stretched. If the eigenvalue is negative, the direction is reversed (Burden, Faires & Douglas, 1993). The Rotated component matrix in the Table 2.4 snows positive Eigenvalues with significance scores of the questions asked in the questionnaire. These values served the basis of identifying Psychographic Characteristics.

2.2.8 Identifying Major Psychographic Factors

The related factors were clubbed and named according to their nature, a higher loading on a specific factor was considered while naming the psychographic variables. Nine Psychographic factors identified through PCA are creativity, Family orientation, Trend consciousness, Leadership, Belief in God, Fashion consciousness, Curiosity, Law-abidingness and Ambition.

2.2.9 Interpretation of Segment Characteristics, Hypothesis testing and reporting results

Data analysis is done with help of crosstab, multivariate analysis and graphical representation using different software. The results are reported elaborately in upcoming chapters. Chapter III and IV reports psychographics of Junior College Students and Initially Employed Youths respectively; Chapter V critically discusses the differences between the Psychographics of the two categories of youth; Chapter VI elaborates the aspirations of the two categories of youth and prospective business applications; and lastly the null and research Hypotheses are being tested in the Chapter VII.
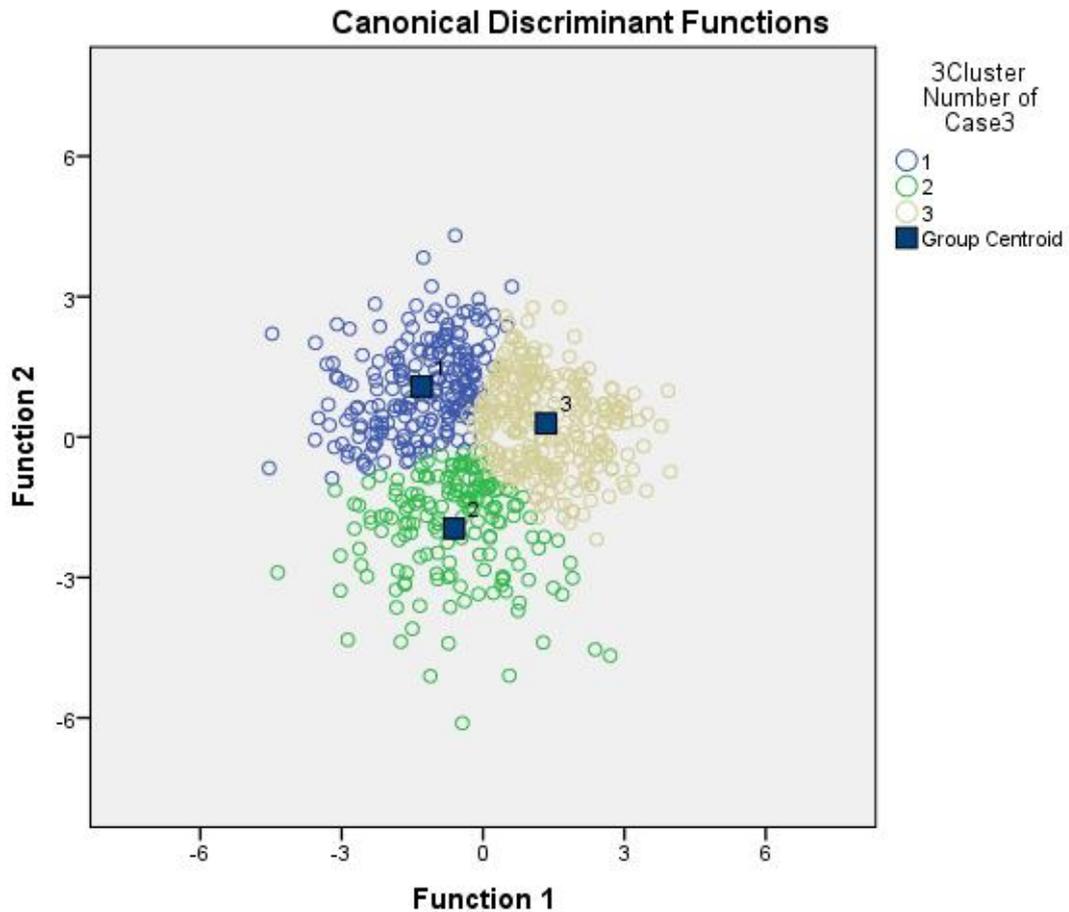
Canonical Discriminant Functions

Fig: 2.3 Canonical Discriminant Space Showing 3 clusters

Table 2.5 Eigenvalues, percentage of variances and Canonical Correlations

Function	Eigenvalue	Percentage of Variance	Cumulative percentage	Canonical Correlation
1	1.424a	51.3	51.3	.767
2	1.354a	48.7	100.0	.758

a. First 2 canonical discriminant functions were used in the analysis.

Table 2.6 Chi- squire and Wilks' Lamda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.175	1179.265	18	.000
2	.425	579.709	8	.000