

# *Chapter - 3*

*Research*

*Methodology*



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### 3.1 Introduction

It is a world of information and all are surrounded by data of various fields and in various forms. Sometimes it happens that what seems apparently in form of data may not be the actual picture. By correlating variety of data one may get a different picture. The conclusions may differ from what we predict by just looking at a glance. So availability of data may not be a big issue in this world of information technology but applying an appropriate analytical tool, correlating meaningful variables and deriving proper judgments are more important. This process of searching real knowledge and deriving judgments from the available data is research. In every field research has its own place. Research is a journey from known to unknown. It is a scientific way to develop insight in any field.

### 3.2 Meaning of Research

Various authors have defined research as follows:

- 1) Redman and Mory define research as a “Systematized effort to gain new knowledge.”<sup>1</sup>
- 2) D. Slesinger and M. Stephenson defines research as “The manipulation of things, concepts or symbols for the purpose of generalising to extend, correct or verify knowledge, whether that knowledge aids in construction of theory or in the practice of an art.”<sup>2</sup>
- 3) The Advanced Learner’s Dictionary of Current English: “A careful investigation or inquiry specially through search for new facts in any branch of knowledge.”<sup>3</sup>

By studying the above definitions it can be said that research is a process in which a careful investigation is undertaken. It is the scientific way to know the truth. Hypothesis are defined before conducting a research and verified scientifically later. This process adds originality in the available knowledge and enhancing the literature by making the innovative conclusions and generalisations to the subject area. The process may lead to some useful solutions for the available problem. It is all inquisitiveness of researcher what makes a research complete and utilitarian.

### **3.3 Statement of Problem**

Based on the extensive literature review it has been decided by the researcher that the most interesting part in the area of entrepreneurship will be a study regarding their attributes in context to various industries. What are the common and uncommon attributes of entrepreneurs are found among various industrial entrepreneurs? They may belong to various socio-eco-cultural back ground. Even though there are possibilities some common attributes found from the same industry and vice versa. From the literature review it is also found that such survey has yet not taken place in the Saurashtra region of Gujarat state. That is why the researcher is motivated to conduct such survey for entrepreneurs of Saurashtra region.

The statement of problem will be as follows:

#### **“A Study of Attributes of Indian Entrepreneurs : A Case Study of Saurashtra Region ”**

This research will focus on attributes of various entrepreneurs belong to different industries. This study will include relationship of entrepreneurial attributes with various factors like economic background, educational background, family circumstances, familial entrepreneurial background and social status.

### **3.4 Geographical Area**

As defined in the problem, the study will be conducted on the entrepreneurs of Saurashtra region of Gujarat state. It includes various districts like Rajkot, Jamanagar, Bhavnagar, Morbi, Surendranagar, Amareli, Porbandar, Junagadh, Somanth. The industries may be situated in the above areas of Saurashtra region.

### **3.5 Sample of Industries under study**

Various industries are developed in Saurashtra region of Gujarat state. From that total 7 industries are selected by the researcher for study. The name and area of industries can be studied from the following table.

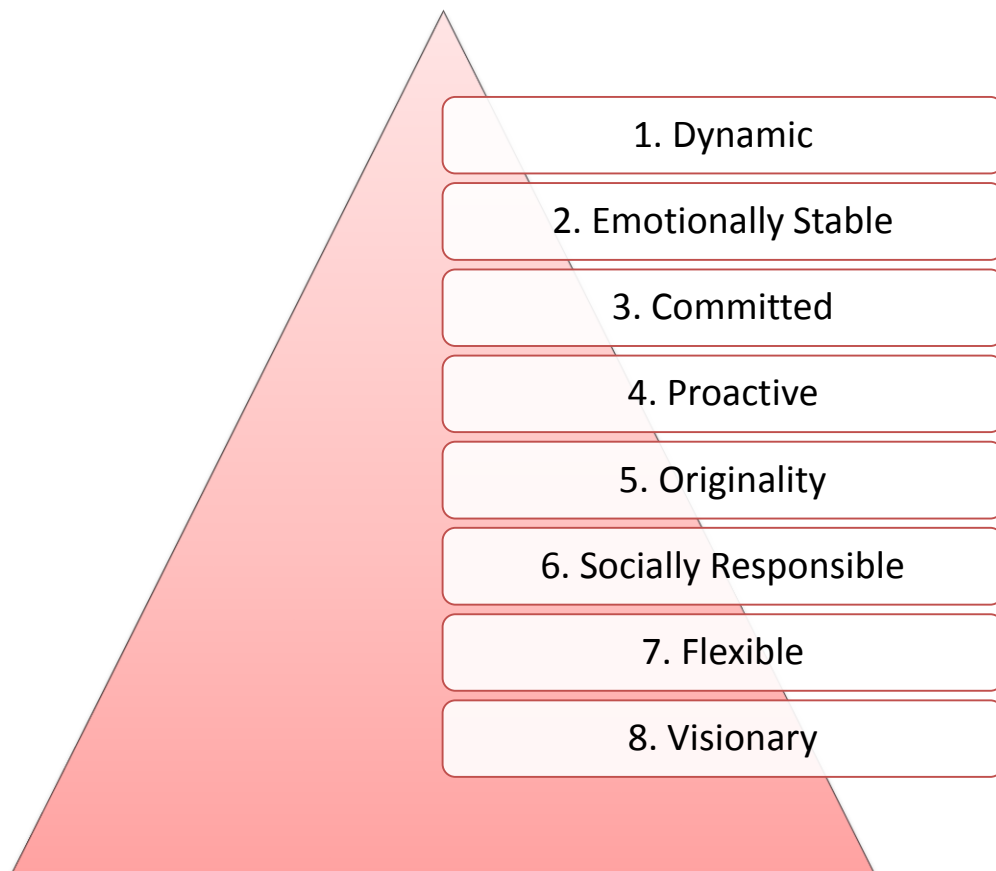
### 3.5 .1 A Table showing Industries located in Saurashtra - Gujarat

Name of Industry	Area
1.Brass	Jamanagar
2.Cotton	Wankaner
3.Ceramic	Morbi
4.Casting - Dying	Rajkot, Jamanagar
5.Imitation Jewelers	Rajkot
6.Bearing	Rajkot, Jamanagar
7.Engine	Rajkot

### 3.6 Attributes of Entrepreneurs

As per the title, it is a descriptive study of entrepreneurs' attributes. The identity of an entrepreneur is a bundle of attributes what makes him different from the other factors of production. From the literature review it has been noticed that various researches have taken place regarding attributes of entrepreneurs which includes commonly certain attributes like Ambitious, Tolerance of Ambiguity, Bearing risk and uncertainty, Stick ability etc., which are normally found almost in every entrepreneur irrespective of the type of their industry. So the researcher has decided to conduct a research on those attributes on which the research is not done in Saurashtra region of Gujarat state. These are as follows.

### 3.6.1 A Chart Showing List of Attributes of Entrepreneurs to be studied



Understanding them in detail.

#### 1. Dynamic

A person is having positive attitude, full of energy and new ideas can be said as dynamic. A dynamic entrepreneur means energetic person, ready to work for a continuously, long time with the same temperament. As per the oxford dictionary, a leader having a lot of energy and a strong personality.<sup>4</sup> It is observed that many entrepreneurs are like this. Always ready to introduce something new. New technology, method, pattern of working is the result of dynamism in the entrepreneur.

#### 2. Emotionally Stable

An emotionally stable person is one who is able to control his feelings whether negative or positive. The behaviour, decisions should not be affected by emotions. Such a stable and cool minded person can take rational decision. An entrepreneur

should be emotionally stable. He has to bear uncertainty and risk so in any adversity he should not become emotional and take the decision but he should be able to judge the situation neutrally by balancing the mind. Emotionally stable entrepreneur can understand and grab the profitable opportunity. So it is an important attribute for a successive entrepreneur.

### **3. Committed**

Successful business men are committed. They are ready to fulfil their business commitment in any circumstances. Committed is person who is pledged or bound to a certain course or policy - dedicated.<sup>5</sup> Once a person gives commitment means he will definitely do something. In any business relationship, commitment is a must. One should be ready to stick with the words spoken by him. In business it is all about a chain of relationships and interdependencies. If one breaks, the effect will be in multiple. Many unknown parties may suffer due to lack of fulfilment of the promises made. So success in business is quiet dependant on committed behaviour.

### **4. Proactive**

Proactive means creating or controlling the situation rather than just responding it after it happened. If a person is proactive means he has already thought about the things going to happen in the future so that preventive measure can be taken rather than corrective. It means taking control and making things happen rather than just adjusting to a situation or waiting for something to happen.<sup>6</sup> Proactive attitude reduces the harm of uncertainty. The future is risk and uncertainty. In this situation the proactive approach can be more helpful. Many entrepreneurs are able to sustain in adversities just due to proactive approach.

### **5. Originality**

It is the ability to think independently and creatively. It is a quality of being new and different in a good and appealing way. Possessing originality is a rare virtue. All may not possess it. There are many businessmen who just imitate and don't create but originality is something being first in any area. Sometimes it is also seen that entrepreneurs prefer to be original. They want to take initiative in any particular area even though it's costlier.



## 6. Socially Responsible

Social responsibility is a sense of understanding the needs of the society and putting it in a priority like profit motive. For a businessman profit is no doubt the first and primary but it should not be at the cost of the society as he receives resources from the society and offers output to them only. An entrepreneur should obligatory fulfil the needs of the society. The examples can be like Tata Group who has various societal welfare and development projects including maternal and child health services, relief programs in natural calamities.

## 7. Flexible

Flexibility is an ability to change as per the circumstances. In business also as per the time and situation one should be able to mould. Sometimes for the sake customers one should introduce some changes in the policy. On the other hand there are certain entrepreneurs have their own policy in which the involved parties have to mould. To create the unique identity, less flexibility is preferred. Sometimes flexibility is harmful for the long run future of the firm as a firm may lose the identity. So flexibility has both the sides. It depends upon the attitude of the entrepreneur.

## 8. Visionary

Planning is required in any group activity, but planning with wisdom leads to vision. An entrepreneur with vision can change the trend, set a trend. To be successful in the long run one should be able to visualise the future on concrete data base. A new product development is result of a perfect vision. Based on the vision if, the decisions are taken, become meaningful. Actually vision is a powerful imagination to predict the future. To sustain and develop for the long run, vision becomes an important attribute. It can be developed by experience and meaningful observation.

### 3.7 Objectives of the study

The objectives of the research can be explained as below:

1. To study the attributes of entrepreneurs of **various industries**.
2. To study the relationship between entrepreneurial attributes and **economic background** of the same industry.

3. To study the relationship between entrepreneurial attributes and **educational background** of the same industry.
4. To study the relationship between entrepreneurial attributes and **family circumstances** of the same industry.
5. To study the relationship between entrepreneurial attributes and **traditional / familial entrepreneurial background** of the same industry.
6. To study the relationship between entrepreneurial attributes and **social status** of the same industry.

### **3.8 Significance:**

The significance of this study can be classified in the following classes.

#### **3.8.1 Contribution to Knowledge**

- 1) To study the attributes of contemporary entrepreneurs.
- 2) To understand that how various factors affect entrepreneurial attributes.

#### **3.8.2 Contribution to Subject**

- 1) To create the positive environment for the development of most prominent factor that affects the entrepreneurship development if possible.
- 2) It will provide useful detail for potential entrepreneurs to take decision regarding any industry venture.
- 3) What are the common attributes and which are unique attributes of various industrial entrepreneurs can be classified.

#### **3.8.3 Contribution to the Industry**

- 1) To understand any industry in a new dimension with special reference to entrepreneurial attributes.
- 2) Develop entrepreneurship within in context to industrial entrepreneurial attributes.

- 3) To understand the attributes mostly found in a particular industry.
- 4) To develop entrepreneurship in any particular industry what type of environment is required that can be traced out.

### **3.8.4 Contribution to the Society**

- 1) The study will be helpful in developing entrepreneurial program.
- 2) The study will become a basis for classifying different groups in any entrepreneurship development program. To make the program effective separate techniques can be applied for specific group.
- 3) As per the requirement of the society, a new class of entrepreneurs can be developed.
- 4) To explore the particular mass or class of the society dominating in a particular industry.

### **3.9 Type of study:**

This study focuses on attributes of entrepreneurs. The attributes will be compared and correlated with various factors and analysed. The major purpose of the research is description of the state of affairs as it exists at present.<sup>7</sup> So, this study will be of a Descriptive – Analytical type.

### **3.10 Area and Scope of the Study**

- 1) The geographic area of our study will be Saurashtra region of Gujarat state.
- 2) In this survey only small scale / medium scale industries are included.
- 3) Various types of the industries will be surveyed.
- 4) In this research the researcher has focused on attributes/characteristics of entrepreneurs only. The other sides of entrepreneurship are not focused.

### **3.11 Hypothesis:**

- 1) There is no significant difference in the attributes of entrepreneurs of **various industries.**

2) There is no significant difference in the attributes of entrepreneurs of the same industry having different **economic background**.

3) There is no significant difference in the attributes of entrepreneurs of the same industry having different **educational background**.

4) There is no significant difference in the attributes of entrepreneurs of the same industry having different **family circumstances**.

5) There is no significant difference in the attributes of entrepreneurs of the same industry having different **traditional/familial entrepreneurial background**.

6) There is no significant difference in the attributes of entrepreneurs of the same industry having different **social status**.

### **3.12 Limitations:**

1) In this research the researcher has focused on attributes of entrepreneurs only. Any other aspect of entrepreneurship is not focused.

2) The research findings will be applicable to this area i.e. Saurashtra region of Gujarat only.

3) Since human being is also an individual he/she may possess or may not possess certain attributes.

### **3.13 Data collections:**

The data will be collected from both the source - primary data as well as secondary data. The primary data collection will be made on the basis of simple random sampling method. Survey method will be used to collect primary data. For secondary data collection different publications, journals, magazines surveys, government documents, newspapers etc. will be used.

### **3.14 Tools & techniques:**

1) The major tool for primary data collection will be questionnaire.

2) The technique will be analytical. ANOVA technique will be used to analyse the data. If the data is not multivariate then alternatively t-test can be applied. For post hoc test Tukey HSD will be used.

### 3.14.1 ANOVA

For analysis of the data various techniques are used. The application of the technique depends upon the type of data collected. If the data represents two sample means then z-test or t-test can be used but if it comprises of more than two sample means then ANOVA technique is used.<sup>7</sup> It is an abbreviation of Analysis Of Variances. By applying ANOVA one can compare the means of more than two samples and conclude that whether any significant difference is there or not. The process of applying ANOVA can be explained as follows.

1. Find the means of every sample i.e.  $\bar{X}_1, \bar{X}_2, \bar{X}_3, \dots, \bar{X}_k$
2. Based on means of every sample, find out the mean of sample means

$$\bar{\bar{X}} = \frac{\bar{X}_1 + \bar{X}_2 + \bar{X}_3 + \dots + \bar{X}_k}{\text{No of Samples}}$$

3. Now compare every mean of sample with mean of sample means and find the deviations. These deviations should be multiplied with the respective sample size and all deviations should be totaled. This is known as sum of squares for variances between the samples i.e. SS between. This can be done in following manner.

$$\text{SS between} = n_1(\bar{X}_1 - \bar{\bar{X}})^2 + n_2(\bar{X}_2 - \bar{\bar{X}})^2 + \dots + n_k(\bar{X}_k - \bar{\bar{X}})^2$$

4. Now the mean square will be found. For this purpose SS between will be divided by degrees of freedom. It can be written as follow.

$$MS \text{ between} = \frac{SS \text{ between}}{k - 1}$$

5. Now SS within will be found. It is sum of squares for variance within samples. Square of deviation from the mean will be taken from every observation. This will be totaled. This will be done for every sample. Then the grand total for every sample deviations will be made. It can be presented as follows.

$$SS \text{ within} = \Sigma(X_1 - \bar{X}_1)^2 + \Sigma(X_2 - \bar{X}_2)^2 + \dots + \Sigma(X_k - \bar{X}_k)^2$$

6. Now the mean square within sample will be found. For this purpose SS within will be divided by degrees of freedom. It can be written as follow.

$$MS \text{ within} = \frac{SS \text{ within}}{n - k}$$

Here n-k is the degrees of freedom within the samples, n is total no of items in all the samples and k is the no of samples.

7. At the end F-ratio will be find out by following formula:

$$F \text{ ratio} = \frac{MS \text{ between}}{MS \text{ within}}$$

To conclude the ANOVA analysis this ratio is important. It will make it clear that the difference among various sample means is significant or just sampling fluctuations. In the present research the level of significance is 5%. Means if the f value is less than 5%, the Null hypothesis is rejected and the alternative hypothesis is accepted.

### 3.14.2 Tukey's HSD Post hoc test

There is a need to test the post, especially after completing ANOVA in order to identify any Groups differ from each other. Post hoc test is not required, if Null Hypothesis accepted from ANOVA test. It is only required if the Null hypothesis is rejected. No differences to find, if you fail to reject the null hypothesis.

To undertake this test first find out the differences between the means of all the groups under study. Now the critical value is to be calculated which is known as HSD=Honestly Significant Difference. Now compare this difference score to a critical value to see if the difference is significant.

The formula to find HSD is as follows

$$HSD = q\sqrt{MS \text{ within}/n}$$

Where MS within is the value found to calculate ANOVA

q is the relevant critical value of the studentized range statistic

$n$  is the number of values we are dealing with in each group

After finding HSD one should compare differences already found with HSD value. If the difference value is larger than the HSD then it is significant.

### Example

The following table gives the monthly sales (in Lakhs Rs.) of a certain firm in four regions by its three salesmen.

Regions of the country	Monthly sales in Lakhs Rupees		
	Names of the sales men		
	A	B	C
East	12	10	10
West	14	10	8
South	6	6	6
North	16	14	8

Set up ANOVA table for the above information. Calculate F-coefficients and state whether the difference between sales affected by the three salesmen and difference between the sales affected in four regions are significant.

### Solution:

$$\bar{X}_1 = \frac{\sum xi}{n} = 12, \quad \bar{X}_2 = \frac{\sum xi}{n} = 10, \quad \bar{X}_3 = \frac{\sum xi}{n} = 8$$

*Mean of sample means*

$$\bar{\bar{X}} = \frac{\bar{X}_1 + \bar{X}_2 + \bar{X}_3}{3} = \frac{30}{3} = 10$$

*SS Between*

$$\begin{aligned} \text{SS between} &= n_1(\bar{X}_1 - \bar{\bar{X}})^2 + n_2(\bar{X}_2 - \bar{\bar{X}})^2 + n_3(\bar{X}_3 - \bar{\bar{X}})^2 \\ &= 4(12-10)^2 + (10-10)^2 + 4(8-10)^2 \\ &= 32 \end{aligned}$$

SS Within

$$\begin{aligned}
 \text{SS within} &= \Sigma(X_1 - \bar{X}_1)^2 + \Sigma(X_2 - \bar{X}_2)^2 + \Sigma(X_3 - \bar{X}_3)^2 \\
 &= [(12-12)^2 + (14-12)^2 + \dots + (8-8)^2] \\
 &= 96
 \end{aligned}$$

**3.14.1.1 A table Showing One Way Analysis of Variances - ANOVA**

Source of variation	SS	Df	MS	F-ratio	5% F-limit (From F table)
Between sample	32	(3-1) = 2	32/2 = 16	16/10.67=1.5	F(2,9) = 4.26
Within sample	96	(12-3) = 9	96/9 = 10.67		
	128	11			

(Source : *Research Methodology Methods and Techniques*, Kotahri C.R., Page 263)

The above table shows that the calculated value of F is 1.5 which is less than the table value of 4.26 at 5% level with d.f. being  $V_1 = 2$  and  $V_2 = 9$  and hence could have arisen due to chance. The analysis supports the Null hypothesis<sup>8</sup>. It can be concluded that there is no significant difference between the sales. Difference in sales is just a matter of chance.

**3.15 Chapter plan**

To undertake the research on the above mentioned topic the entire process can be divided into 5 chapters. That can be explained as follows.

- 1) Chapter -1 Introduction
- 2) Chapter -2 Review of Literature
- 3) Chapter -3 Research Methodology
- 4) Chapter -4 Data Analysis
- 5) Chapter -5 Findings, Conclusions and Suggestions.



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