CHAPTER - 3

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3.1 Introduction

This chapter explains the research design used in the study. A research design serves as the framework for a study and it is taken as a guide in the collection and analysis of data. Hence this chapter explains the details of questionnaire design, pilot study, sampling design, data collection design and the statistical methods used for data analysis in the study.

Main objectives of the study are as follows:

1) To study the influence of different demographic variables on the dimensions of the entrepreneurial attitude among the youth of Kerala.

2) To study the entrepreneurial attitude dimensions of youth in Kerala.

3) To study the influence of different demographic variables on the attitude of youth towards entrepreneurs in Kerala.

4) To study the attitude of youth towards entrepreneurs in Kerala.

5) To differentiate the attitude of youth towards entrepreneurs and entrepreneurship among male and female.

6) To differentiate the attitude of youth towards entrepreneurs and entrepreneurship among the different age sub groups.

This chapter also includes a detailed description of the scaling procedures which is used in understanding the attitude of youth towards entrepreneurs.

3.2 Research design

This study adopted both exploratory and conclusive research design. The exploratory research design includes the steps such as literature review, finalization of objectives, identification of variables, formulation of hypothesis, designing the questionnaire, pilot study and questionnaire revision. The conclusive research design is considered as the second phase of research in this study. Conclusive research design includes both descriptive research design and the causal research design.
Descriptive research design helped the researcher to understand the sample design, data collection design, data processing and data analysis using different statistical tools like mean, percentage, t-Test, one way ANOVA(Analysis of variance), factor analysis, confirmatory factor analysis, discriminant analysis and multiple discriminant analysis. The next sections of this chapter will discuss about the different research design adopted for the study in detail.

### 3.2.1 Exploratory research design

Exploratory research serves as the basis of a good study (Churchill and Iacobucci 2004\(^1\)) and it has to be often flexible, unstructured and qualitative (Burns and Bush 2002\(^2\)). In this study, the researcher has taken up the exploratory research in two stages.

#### 3.2.1.1 First stage

In this stage an extensive literature review was carried out to check the availability of scales to study the attitude of youth towards entrepreneurs and entrepreneurship. The researcher was able to identify a scale called EAO (Entrepreneurial Attitude Orientation) scale which was developed by Robinson et al.’s (1991)\(^3\). The scale was developed on the tripartite attitudinal theory and it has four dimensions namely-entrepreneurial achievement attitude, entrepreneurial innovation attitude, entrepreneurial perceived personal control attitude and entrepreneurial self esteem attitude. These four dimensions were spread across seventy five statements. Each dimension was considered as subscales of EAO (Entrepreneurial Attitude Orientation) scale. The four attitude subscales are:

- **Achievement in business**, referring to concrete results associated with the start-up and growth of a business venture. Twenty three statements were related to this dimension in the EAO (Entrepreneurial Attitude Orientation) scale.

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3. ibid
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- **Innovation in business**, relating to perceiving and acting upon business activities in new and unique ways. Twenty six statements were related to this dimension in the EAO (Entrepreneurial Attitude Orientation) scale.

- **Perceived personal control of business outcomes**, concerning the individual's perception of control and influence over his or her business. Twelve statements were related to this dimension in the EAO (Entrepreneurial Attitude Orientation) scale.

- **Perceived self-esteem in business**, pertaining to the self-confidence and perceived competency of an individual in conjunction with his or her business affairs. Fourteen statements were related to this dimension in the EAO (Entrepreneurial Attitude Orientation) scale.

Robinson et al.’s (1991)\(^4\) used sixty-three undergraduates in developing and establishing the test-retest reliability of the EAO (Entrepreneurial Attitude Orientation) scale. Fifty-four entrepreneurs and fifty-seven non-entrepreneurs served as known groups in establishing the discriminant validity of the EAO (Entrepreneurial Attitude Orientation) scale. There was a significant difference between known groups for all four of the EAO (Entrepreneurial Attitude Orientation) subscales (entrepreneurial achievement attitude, entrepreneurial perceived personal control, entrepreneurial innovate attitude, entrepreneurial self-esteem attitude). The findings indicated that EAO (Entrepreneurial Attitude Orientation) scale was able to differentiate entrepreneurs from non-entrepreneurs with an accuracy of seventy seven per cent. Based on prior research on personality, demographics and entrepreneurship, and Carlson’s (1985)\(^5\) attitude consistency model; Robinson et al.’s (1991)\(^6\) developed the entrepreneurial attitude orientation EAO (Entrepreneurial Attitude Orientation) model to predict entrepreneurial activity. Many studies in literature revealed that this scale can be used for studying attitude of youth towards entrepreneurship. Hence it was decided to incorporate EAO (Entrepreneurial Attitude Orientation) scale and its dimensions in the present

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\(^4\) ibid


\(^6\) ibid
study. The scale was simplified, modified and customized according to the need of this study.

On the other hand, none of the studies pointed to the existence of a scale to study the attitude of youth towards entrepreneurs. Since the literature review did not show any evidence of scale related to the attitude of youth towards entrepreneurs, the researcher decided to develop a scale for continuing the research in a better manner. The following lines explain the steps followed to develop a scale.

➢ Scale development procedure

Scale development is a long and iterative process (Churchill 1979; Netemeyer et al., 2003). This research has followed the scaling procedure recommended in the literature (e.g., Churchill 1979; Gerbing and Anderson 1988; Nunnally and Bernstein 1994; Clark and Watson 1995; Netemeyer et al., 2003). The following figure shows the steps followed in developing a scale to understand attitude of youth towards entrepreneurs.
Step 1: Literature review and in depth interviews with young student entrepreneurs

- Extensive review of literature on attitude towards entrepreneurs.
- In-depth interview with four young student entrepreneurs.

Step 2: Item generation

- The researcher generated 30 items/statements based on extensive review of literature and in-depth interview with student entrepreneurs.

Step 3: Initial item purification

- Edited the items for repetition, ambiguity, wording etc with the help of academic experts.
- After editing 30 items were reduced to 24 items.

Figure 3.1

Overview of the steps followed in developing the scale

Step 1: Literature review and in depth interviews with young student entrepreneurs

Extensive review of literature on attitude towards entrepreneurs helped the researcher to identify few items for developing a scale. It helped to understand the conceptual aspect of attitude towards entrepreneurs. It also helped to understand, how similar studies is being carried out by other researchers. An in-depth review of the literature which is carried out by the researcher is provided in the second chapter. An in-depth interview with four young student entrepreneurs (see appendix-1 for the list of student entrepreneurs) from Kerala was conducted to know more about attitude of youth towards entrepreneurs in Kerala. Literature review and in depth interview with student entrepreneurs from Kerala helped the researcher to develop few items on the scale which is related to attitude of youth towards entrepreneurs in Kerala.

Step 2: Item generation

On the basis of literature review and in depth interview with student entrepreneurs from Kerala, the researcher generated thirty items/statements (see appendix-3) on the scale which is related to attitude of youth towards entrepreneurs
in Kerala. Five point Likert scale was used in this study to measure the attitude of the youth towards entrepreneurs.

**Step 3: Initial item purification**

The researcher edited the items for repetition, ambiguity, wording etc with the help of academic experts. After editing, thirty items were reduced to twenty four items (see appendix-3). With the recommendation of academic experts (see appendix-2 for list of academic experts) and research guide, the twenty four items were finalized for collecting data from youth in Kerala during pilot survey.

**3.2.1.2 Second stage**

In this stage the scales which were identified and developed in the first stage of exploratory research design is employed on a small sample of forty respondents from each age sub group to check the reliability and validity of the scales. This was done with the help of a pilot study. A detail explanation regarding the pilot study, reliability, validity, questionnaire revision and final questionnaire used in this study is explained in the following sections.

- **Pilot study**

  The pilot study was conducted before the actual study. Here, pilot study is basically conducted to check the reliability and validity of the scales identified and developed and also to finalize the questionnaire for main survey. Three sets of questionnaires were developed for pilot study, which was used to collect data from three different age sub groups of youth. This questionnaire had three sections. The first section of all the three questionnaires dealt with demographic questions related to respondents, the second section of all the three questionnaires contained seventy five statements from EAO (Entrepreneurial Attitude Orientation) scale. Statements were modified and simplified to avoid ambiguity and confusions among respondents. The third section of all the three questionnaires had twenty four statements from the scale developed by the researcher. Convenience sampling method was used for pilot survey. Forty sample units from each age sub groups were taken for pilot study i.e. forty youth between the age group of 13-18 year old, forty youth within the age group of 18-25 year old and finally forty youth between the age
group 25-35 year old. A total of one hundred and twenty samples were drawn for the study. Based on the experiences and results of the pilot study, necessary and required corrections were made in the study. The data obtained from the pilot survey was developed to check the reliability and validity of the questionnaire.

➢ Reliability

In order to check the reliability of questionnaires Cronbach’s Alpha is used. One of the most popular reliability statistics in use today is Cronbach's Alpha (Cronbach and Meehl 1955). Cronbach's Alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability.

Table 3.1
Reliability statistics of variables used for the study

<table>
<thead>
<tr>
<th>Variables</th>
<th>No of items under each variable</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial achievement attitude</td>
<td>23</td>
<td>.829</td>
</tr>
<tr>
<td>Entrepreneurial innovative attitude</td>
<td>26</td>
<td>.803</td>
</tr>
<tr>
<td>Entrepreneurial perceived personal control attitude</td>
<td>12</td>
<td>.817</td>
</tr>
<tr>
<td>Entrepreneurial self esteem attitude</td>
<td>14</td>
<td>.764</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>.844</td>
</tr>
<tr>
<td>Enterprising attitude</td>
<td>7</td>
<td>.864</td>
</tr>
<tr>
<td>Change agent attitude</td>
<td>5</td>
<td>.903</td>
</tr>
<tr>
<td>Innovator attitude</td>
<td>4</td>
<td>.797</td>
</tr>
<tr>
<td>Resource exploiter attitude</td>
<td>3</td>
<td>.758</td>
</tr>
<tr>
<td>Risk taker attitude</td>
<td>3</td>
<td>.845</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>.912</td>
</tr>
</tbody>
</table>

Source: Survey data

An Alpha value of 0.70 or above is considered to be criterion for demonstrating strong internal consistency; Alpha value of 0.60 or above is considered to be significant. The table-3.1 reveals that cronbach’s Alpha value of all the constructs used for the study is above 0.70, which indicates strong internal consistency of the scale. Hence the questionnaire can be used for further study.

Validity

Content validity of the questions related to attitude of youth towards entrepreneurs and entrepreneurship was checked by a group of experts in this field, and some of the items were modified on the basis of their feedback. Construct validity of the questions related to attitude of youth towards entrepreneurs were tested using confirmatory factor analysis. The results were within the accepted range and hence it ensured the validity criterion.

Independent variables and dependent variables in the study

The independent variables used in this study are:

1) Gender: The two gender groups used in this study were ‘male’ and ‘female’.
2) Age: There were three age sub group considered for this study i.e. ‘13-18 years’, ‘18-25 years’ and ‘25-35 years’.
3) Occupation of father: There were four groups based on father’s occupations i.e. ‘government employee’, ‘private employee’, ‘self employment/business’ and ‘not working’.
4) Total annual income of family: Annual income was measured in Indian currency with denominations in lakhs’. The income was grouped under six different heads. The first head was ‘below 1 lakhs’ followed by the group ‘1-3 lakhs’, followed by ‘3-5 lakhs’, followed by ‘5-7 lakhs’, then ‘7-9 lakhs’, and last group was above ‘9 lakhs’.
5) Entrepreneurial family background: To know whether the respondents belong to entrepreneurial family, a dichotomous question was asked in the questionnaire. If they belong to entrepreneurial family they answered ‘yes’ and if not ‘no’.

The dependent variables used in this study are:

1) Entrepreneurial achievement attitude: This variable is referring to concrete results associated with the start-up and growth of a business venture.
2) Entrepreneurial innovative attitude: This variable is referring to perceiving and acting upon business activities in new and unique ways.
3) Entrepreneurial perceived personal control attitude: This variable is referring to the individual’s perception of control and influence over his or her business.

4) Entrepreneurial self esteem attitude: This variable is pertaining to the self-confidence and perceived competency of an individual in conjunction with his or her business affairs.

5) Enterprising attitude towards entrepreneurs (Entrepreneurs as enterprising people): This variable is referring to the attitude of youth towards entrepreneurs i.e. the youth feel the entrepreneurs are compassionate towards the development of their society, helps in the economic development of the country, they are honest, they have a sense of social justice, they create job and they are optimistic.

6) Change Agent attitude towards entrepreneurs (Entrepreneurs as change agent): Concerning to this variable youth feel that the entrepreneurs are dynamic, good communicators and are inclined to bring regular changes in their lives.

7) Innovator attitude towards entrepreneurs (Entrepreneurs as innovators): Pertaining to this variable youth think that the entrepreneurs are having great ideas, have the ability to do things differently; they are creative and willing to share it for the development of the society.

8) Resource Exploiter attitude towards entrepreneurs (Entrepreneurs as resource exploiters): Referring to this variable, youth think that the entrepreneurs are willing to do whatever it takes to make his/her business a success and they exploit human/natural resources for making money.

9) Risk Taker attitude towards entrepreneurs (Entrepreneurs as risk takers): With respect to this variable youth think the entrepreneurs are able and willing to take risk to establish their business.

➤ Questionnaire Revision

Pilot survey helped the researcher to understand the feasibility of questionnaire among the samples selected for the study. There were three sections
(section-A, B, and C) in all the three questionnaires for each age sub groups. The first and second section of the entire three questionnaires remained the same but two items in the third section were removed on the basis of the feedback from the pilot survey. After questionnaire revision, a final version of the questionnaire was framed for main survey.

- **Final Questionnaire**

  A good questionnaire accomplishes the researcher’s objectives. This study used questionnaires for collecting primary data. Three sets of questionnaires were used for three different age sub groups in the study. All the three sets of questionnaire had three sections. The first section was developed to collect demographic information; second section of all the three questionnaires had seventy five statements from EAO (Entrepreneurial Attitude Orientation) scale which is modified and simplified to avoid ambiguity and confusions among respondents. This section was developed to find out the attitude of youth towards entrepreneurship. The third section of the questionnaire had twenty two statements from the scale which is developed by the researcher. This section was developed to find out the attitude of youth towards entrepreneurs.

- **First section** of all the three questionnaires of different age sub groups of youth contained questions regarding demographic information of sample. The number of questions in this section is ten and the number remained same for all the three sets of questionnaires. Few questions were related to each age sub group. Whereas questions related to gender, age, father’s occupation, total annual income of the family and entrepreneurial family background which are developed to study the influence of demographic variables on attitude of youth towards entrepreneurs and entrepreneurship were common for all the three age sub groups. Few open ended questions, few close ended questions and few dichotomous questions have been used in this section.

- **Second section** of all the three sets of questionnaire contained seventy five statements from EAO (Entrepreneurial Attitude Orientation) scale. These statements were used to find out attitude of youth towards entrepreneurship. The statements were modified and simplified so that the samples can
understand the statements and could avoid confusions. Five point Likert scale was used to measure the degree of intensity along with the agreement or disagreement with the statements that was mentioned in the questionnaires.

- The third section of all the three sets of questionnaire consists of twenty two questions. These questions are used for finding out the attitude of youth towards entrepreneurs. Twenty two questions were developed through scaling procedure which is mentioned in the above section of this chapter. Five point Likert scale was used in this section to measure the attitude of youth towards entrepreneurs. (see appendix-4 for final questionnaires used in the study).

3.2.2 Conclusive research design

Conclusive research is important because it is more formal and structured than exploratory research. Conclusive research design can include either the descriptive research design or the causal research design. The present study used descriptive research design. Descriptive research is of two type’s i.e. longitudinal research and cross sectional research. This research has used cross sectional research. In this study, the researcher has taken up descriptive research by developing sampling design tools, data collection design and by analyzing the collected data using different statistical tools like mean, percentage, \( t \)-Test, one way ANOVA (Analysis of Variance), factor analysis, confirmatory factor analysis, discriminant analysis and multiple discriminant analysis. The following section describes the steps involved in the descriptive research design.

- Sampling design

Youth in Kerala was taken as the universe of the study. Since, the youth has already been defined in the first chapter as any individuals within the age group of 13-35 years which is further categorized into three age sub groups i.e. 13-18 years, 18-25 years and 25-35 years. It was also important to get sample having respondents from all these three age sub groups. Hence, the sampling design adopted for the study took at most care in ensuring adequate representation from each age sub group. For this sampling frame adopted for selecting respondents from first age sub
group was high schools and higher secondary schools from Kerala, for second age sub group the respondents were selected from arts and science colleges, management institutions and engineering colleges from Kerala, further for third age sub group respondents were selected from IT and ITES companies from Kerala. From each age sub group six hundred sample units were taken for the study. Hence a total of 1800 sample units were taken for the study. Researcher used Multi-stage sampling with simple random sampling technique in the study for collecting the data. In the research, the researcher has used **three stages** to select appropriate sample units.

**Stage 1:** In this stage, Kerala was divided into three zones i.e. South zone, Central zone and North zone. Kasargode, Kannur, Kozhikode, Malapuram and Waynad belong to north zone; Kottayam, Idukki, Ernakulam, Thrissur and Palakkad belong to central zone whereas Trivandrum, Kollam, Pathanamthitta and Alappuzha come under south zone.

<table>
<thead>
<tr>
<th>North Zone</th>
<th>Central Zone</th>
<th>South Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Kannur</td>
<td>2. Idukki</td>
<td>2. Kollam</td>
</tr>
<tr>
<td>5. Waynad.</td>
<td>5. Palakkad</td>
<td></td>
</tr>
</tbody>
</table>

Source: Economic Review 2013

**Stage 2:** In the second stage Kozhikode from north zone, Ernakulam from central zone and Trivandrum from south zone were selected using simple random sampling by lottery method.

<table>
<thead>
<tr>
<th>North Zone</th>
<th>Central Zone</th>
<th>South Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kozhikode</td>
<td>Ernakulam</td>
<td>Trivandrum</td>
</tr>
</tbody>
</table>

Table 3.3

**List of selected districts from each zone**
Stage 3: In the third stage, the sampling frames for picking up respondents from each of the three age sub groups were decided. Under this, for the first age sub group high schools and higher secondary schools were considered, for the second age sub group arts and science colleges, management institutions and engineering colleges were taken, further for the third age sub group IT and ITES companies were considered. Details with respect to the number of schools, colleges and IT/ITES companies in the selected districts from the second stage are presented in the table below.

Table 3.4
List of total the number of schools, colleges and IT/ITES companies in the selected districts

<table>
<thead>
<tr>
<th>Three zones/selected districts, number of schools, colleges &amp; IT companies</th>
<th>North Zone</th>
<th>Central Zone</th>
<th>South Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Districts</td>
<td>Kozhikode</td>
<td>Ernakulam</td>
<td>Trivandrum</td>
</tr>
<tr>
<td>Number of high schools and higher secondary schools.</td>
<td>505</td>
<td>672</td>
<td>545</td>
</tr>
<tr>
<td>Number of colleges.</td>
<td>50</td>
<td>80</td>
<td>66</td>
</tr>
<tr>
<td>Number of IT and ITES companies.</td>
<td>25</td>
<td>125</td>
<td>267</td>
</tr>
</tbody>
</table>

Source: Economic Review 2013

In this stage, using simple random sampling a total of thirty schools (9 from Kozhikode, 12 from Ernakulam and 9 from Trivandrum) were taken and from each school’s twenty students were selected using simple random sampling for the respondents of first age sub group. Similarly for the second age sub group using simple random sampling a total of thirty colleges (8 from Kozhikode, 12 from Ernakulam and 10 from Trivandrum) were taken and from each college’s twenty students were selected using simple random sampling. Finally for the third age sub group using simple random sampling a total of thirty IT/ITES companies (2 from Kozhikode, 9 from Ernakulam and 19 from Trivandrum) were taken and from each company’s twenty young employees were selected using simple random sampling. (List of number of high schools, higher secondary schools, colleges and IT/ITES companies in Kerala is mentioned in appendix-6).
Data collection design

The researcher utilized both the secondary and primary data for her study. The secondary data was collected from secondary data sources like various publications of central, state, and local government; journals, books, magazines, websites and newspapers; reports and publications of concerned organizations; reports prepared by research scholars and universities; public records and statistics, historical documents and other sources of published information. The primary data was collected through questionnaires and interview. Questionnaires were prepared to collect data from school students, college students and working class. Researcher herself administered the questionnaires to the samples. Clarifications regarding the statements in the questionnaire were clarified then and there for the respondents. In case of first age sub group, special care was taken. To find out the attitude of youth towards entrepreneurs, names and details of five well known entrepreneurs were carried with the questionnaire (see appendix-5 for the list of five well known entrepreneurs).

Processing of Data

The data processing conducted in this study is by editing, coding and analysis. In the first step-editing, the researcher carefully scrutinized the completed questionnaires and through this the researcher ensured that the data collected are accurate, consistent with other facts gathered, uniformly entered and have been well arranged to facilitate coding and tabulation. In the next step-coding, the researcher developed a code book which assigned numerical values to answers obtained from respondents. Finally analysis-before analyzing the data a frame work was developed to understand which variable to be analyzed and how it should be analyzed. In this research the researcher used SPSS 21.0 version and AMOS 20.0 version for analyzing the data obtained.

Data Analysis

The different statistical tools and methods used in the study are briefed below:

- Descriptive statistics: Descriptive statistics allow the researchers to present the data acquired in a structured, accurate and summarized manner
The descriptive statistics utilized in the current research was used to analyze the demographic data and it included frequency, percentage and mean scores.

- **t-Test**: The t-Test is used to compare means of two different groups to find out whether the groups are statistically different. The t-Test assumes that samples are randomly drawn from normal distributed population. The t-Test can be conducted on one sample, paired samples, and independent samples. In this study it is the independent sample method that has been used. Independent t-Test in this study is being used to understand the significant difference among gender and entrepreneurial family background on the attitude of youth towards entrepreneurs and entrepreneurship.

- **One way ANOVA (Analysis of Variance)**: When an independent sample t-test is used to compare means of two groups, the one-way ANOVA (Analysis of variance) is used to compare the means of more than two groups. One-way ANOVA (Analysis of Variance) in this study is being used to understand the significant difference among age, father’s occupation and total annual income of the family on the attitude of youth towards entrepreneurs and entrepreneurship.

- **Factor Analysis**: Factor analysis is generally used to check the interrelationship among a large number of variables. This is about explaining theses variables in terms of some common latent dimensions or factors. Factor analysis also helps in condensing the data. In this study factor analysis is used as a part of scale development. It was used to check whether the twenty two (22) variables used to find out the attitude of youth towards entrepreneurs in the questionnaire had some grouping within them based on the common underlying factors.

- **Confirmatory Factor Analysis**: Confirmatory factor analysis (CFA) is a special form of factor analysis. It is used to test whether measures of a construct are consistent with a researcher’s understanding of the nature of

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that construct (or factor). Confirmatory factor analysis (CFA) is used in this study to validate the underlying constructs measuring the attitude of youth towards entrepreneurs.

- **Discriminant function analysis**: Discriminant function analysis is a statistical analysis to predict a categorical dependent variable (called a grouping variable) by one or more continuous or binary independent variables (called predictor variables). Discriminant function analysis is useful in determining whether a set of variables is effective in predicting category membership. Discriminant analysis is used when groups are known prior. Each case must have a score on one or more quantitative predictor measures, and a score on a group measure. In simple terms, discriminant function analysis is classification - the act of distributing things into groups, classes or categories of the same type. In this study Discriminant function analysis is used to differentiate the attitude of youth towards entrepreneurs and entrepreneurship on the basis of age subgroups and gender.

### 3.3 Chapter summary

This chapter was mainly developed to discuss the research design adopted in this study. Hence this chapter provides the detailed description of the pilot study, questionnaire design, sampling design, data collection design and the analysis used in this study. This chapter also provided an in-depth insight about the scale which is developed to understand the attitude of youth towards entrepreneurs. The next chapter presents the report of analysis done with the data collected.