Chapter V

Quantitative Analysis (Survey Study)

5.1. Introduction

The environmental auditing idea and practice is recent development and still in infancy. The first part of the present study highlights emergence, conceptualization, evolution, institutionalization and importance of environmental auditing with the help of analytical and descriptive study of environmental accounting and auditing related issues carried out by different researchers and academicians. It reflects that still the idea and practice of environmental auditing has not received a hearty welcome amongst the industry. As such there is a rarity of systematic compiled literature review on environmental auditing, the literature review conducted brings into foray the researches carried out since coinage of the term and how it traversed academically and intellectually, finally emerging as a very significant practice. Thus it reflects that there is no uniformity in environmental accounting and auditing practices. Therefore, it shakes the mind with some questions like:

- why such an important issue do not get attention by society as a whole?
- why industries ignore this an important issue?
- how environmental accounting and auditing practice can be propagate so that it can get the attention of the society?

Therefore, in this chapter with the help of Structured instrument detailed survey study is conducted to expound significant issues on environmental accounting, compliance aspects and auditing practice by gathering opinions of Chartered Accountants, Company Secretaries, Cost and Management Accountants, Researchers as well as academicians which may further substantiate the existing corpus of understanding.

Universally and locally, governments have made pledges to address environmental issues pertaining to sustainable development. Global leadership

has contributed direction and facilitated cooperation on numerous environmental issues. Environmental auditing underway in the late 1970s in response to the upsurge of high-impact environmental regulations enacted by Congress in U.S.A. Companies incapable to have trail of a fast growing regulatory scenery were hit with notices of violation, enforcement schedules, and NGO and/ or citizen suits. Entities were in need of a consistent procedure for identifying the applicable requirements and getting into its compliance. By the early 1980s progressive companies had formed internal environmental auditing or evaluation groups, as part of an environment, health, and safety (EH&S) program. Some companies established separate reporting mechanism to management. The aim was to diminish potential liability and improve EH&S performance to ensure the compliance. These encompassed systematic auditing of the company's amenities, typically at three to four year intervals or more frequently as required.

This part of the study focuses on collecting and analysing opinion received from the respondents through a survey method i.e. quantitative method. Quantitative method is generally used when the problem at hand is concerned with questions, concepts and attributes and tests the relationship between the answers to questions and tests a specific theory when factual data is available along with supporting evidence (Creswell, 2003).

This study seeks to expound the theoretical understanding of environmental accounting frame work and document the environmental accounting disclosure practices of corporates.

The study intends to reveal the application of 'Environmental Auditing' i. e. assessment or evaluation with reference to 'Environmental Disclosure' practices and its impact in India. The present study has been carried out towards the assessment of driving forces for implementation of Environmental Auditing, which is one of the objectives of this research work. The objective here in this study is not only to analyse data but also to obtain understanding from the executives, professionals and academicians with respect to the Environmental

Accounting aspects, Environmental Compliance scenario and Environmental Auditing practices in enterprises in India.

In order to obtain views on Environmental issues; adoption of Environmental Accounting; enforcement of Environmental Laws vis-a-vis compliance thereof and impact and applications of Environmental Auditing in Indian enterprises, structured instrument was administered amongst Chartered Accountants (CA), Cost and Management Accountants (CMA), Company Secretaries (CS) in practice as well as in service, managers of companies, research scholars, academicians and students of accounting and auditing. The present research intends to guide in understanding issues and practice of Environmental Auditing in India. The prime objective of this research endeavour is to carry out a systematic study of present status, applications of Environmental Auditing practice and its impact in India. The research design followed has been essentially descriptive and explorative in nature considering objectives identified.

This chapter is divided into two sections, first section explains the methodology and second section deals with data analysis.

5.2 Methodology

In last three decades, even after identification of Environmental Auditing as a promising area of research in the field of accounting, auditing and environmental reporting, it is still in infancy the world over. The scenario is not different in India.

The Research study is on Environmental Audit practices followed in India by organisations in general and corporates in particular. An attempt has been made to encompass Environmental Accounting and financial aspects along with the study and analysis of the existing Environmental Compliances.

A Structured instrument was developed to study Environmental Auditing's impact and applications in India as an effective tool for environmental protection and preservation. The survey analyzed the behavior of all possible important variables on Environmental issues, Environmental Accounting, Environmental

Laws vis-a-vis compliance thereof and Environmental Auditing. The answers made by the respondents for each question as well as sub question were quantified in categories and then computed in table form to illustrate the responses.

The questionnaire was designed in such a way that it would help in obtaining the relevant data required by the researcher. Multi-item measures were used to provide stronger construct validity as single item measure may not address all of the aspects of the multidimensional constructs. It is believed that more questions under the same construct would enable examination of the construct from different angles (Foster & Swenson, 1997). This study uses a Likert Scale with equal intervals between response categories, like what is identified as opinionnaire in the literature comprising close ended questions.

Part - I of questionnaire in this study contained questions pertaining to general Environmental awareness, Environmental Accounting, Environmental Law vis-à-vis compliance and Environmental Auditing. Part – II of questionnaire elicits the Personal Profile (demographic details) of the respondents.

The pilot study consisted of presenting a set of questionnaire consisting of individual questions with a view of collecting the primary data on awareness, practices and practicability of objective and effectiveness of Environmental Auditing and its applications in organisations and corporates.

The pilot study was done by giving a pre-test questionnaire to group of Chartered Accountants (CA), Cost and Management Accountants (CMA), Company Secretaries (CS) in practice as well as in service, managers at corporates, research scholars and post graduate students. The group taking part in the study were informed about the objective of the questionnaire and were asked to evaluate the questionnaire keeping in view the research objectives and were permitted to make necessary changes in the questionnaire as and where required. The questionnaire was then edited accordingly. The pre-test reframed questionnaire was then appeared to a group of three experts who examined and

suggested changes. A pilot study of the questionnaire was conducted in order to bring about evaluation of all important variables according to the reference by Smith (2003).

The last draft of the questionnaire was then finalised as per the suggestions provided by observers and advisors of the pilot study which were to be introduced to the respondents in different states of India through posts and emails towards seeking the opinion (Annexure 2).

The questionnaire was framed by following the Likert method of rating. For framing the questionnaire, statements related to the Awareness on Environment, Environmental Accounting, Environmental Compliance and Environmental Auditing along with respondents profile were framed. For analysis purpose, this study is divided into Two parts as under:

Part-I Questions pertaining to:

1. Awareness on Environment
2. Environmental Accounting aspects
3. Environmental Compliance issues
4. Environmental Auditing practices
5. Overall evaluation criteria

Part-II Personal Profile of Respondents

Simple and less time consuming close ended nature questionnaire was constructed. Respondents were requested to indicate their degree of agreement and disagreement with a series of questions and give rank or preferences.

5.2.1 Structure of the Questionnaire

Structure of the Questionnaire along with the review of literature which was considered useful & relevant in the drafting of Questionnaire too has been outlined as below.

In the first Question regarding Evaluation of Environmental awareness, initial six statements are related to environment, global warming and sustainable

development. The subsequent six statements attempt to cull out information regarding Triple Bottom Line Reporting, Decoupling, Carbon credit and Corporate pledge on 3R (Reduce, Reuse and Recycle). Most of the statements in the first question have been derived from e-books available on United Nations Environment Programme's (UNEP) and publication on 'Carbon Credit Primer' from Institute of Chartered Accountants of India's website. The statements pertaining to general environmental concepts and specific issues focused on international arena in the field of environment. The answers of these questions were to be attempted either in 'Yes' or 'No'. These statements endorse the eighth objective of the research study for assessment of driving forces for implementation of Environmental audit.

In the second question about exploring implementation related to Environmental Accounting aspects in the organisations, seven statements were given to respondents and information relating to salient features of Environmental Accounting practices in the organisations and advantages emerging from adoption of Environmental Accounting practices in entities is gathered. These statements are scaled from 1 to 5, Strongly Agree = 5, Agree = 4, Indifferent = 3, Disagree = 2 and Strongly Disagree = 1 and reflected the degree of information provided by Environmental Accounting system.

Four dichotomous questions were also asked to find or locate the extent of treatment and inclusion of Environmental Costs in the financial records by adopting Environmental Accounting tool in the entities.

Some of the statements incorporated in these questions were derived from 'Environment and Climate Change- Auditing Guidelines' issued by Comptroller and Auditor General of India (C&AGI)' (www.cag.gov.in/sites/default/files/cag_pdf/EA) and "Environmental Accounting and Reporting, Theory, Law and Empirical Evidence" by Pahuja S., New Century Publications, New Delhi.

This part of the questionnaire attempted to expound the theoretical understanding of environmental accounting frame work which is the first objective stated in the research study.

In the third question, Evaluation of Environmental compliance with applicable environmental laws, rules, regulations, requirements, etc. by organisations was evaluated. Auditing embeds compliance of Environmental law(s) and other requirements within it, so few questions were included in the questionnaire pertaining thereto. Opinions have been sought from this segment of questionnaire with respect to compliance with provisions of applicable Acts; adoption of environmental calendar activities, Environmental Management System as per ISO 14001; and embracing GRI disclosure requirements.

These statements are scaled from 1 to 5, Strongly Agree = 5, Agree = 4, Indifferent = 3, Disagree = 2 and Strongly Disagree = 1 and reflected the degree of information accuracy provided towards extent of compliance by organisations with applicable Environmental laws, Rules, Regulations and requirements.

Some of the statements incorporated in these questions were derived from "Environment and Climate Change- Auditing Guidelines' issued by Comptroller and Auditor General of India (C&AGI)" and Guide 'Auditing the Government Response to Climate Change' Guidance to Supreme Audit Institutions (SAI) issued by International Organization of Supreme Audit Institutions (INTOSAI).

Sixth objective of the research study also seeks to evaluate the extent of compliance of the ISO 14001 (EMS) requirements on environmental disclosures by corporates.

In the fourth Question, Comparative Evaluation of Application of Environmental Auditing Practices adopted by organizations, total nineteen statements were provided to seek the opinion on objectives of Environmental Auditing, advantages of Environmental Auditing and the reasons for non-adoption or minimal adoption of Environmental Auditing practices. These statements are

scaled from 1 to 5, Strongly Agree = 5, Agree = 4, Indifferent = 3, Disagree = 2 and Strongly Disagree = 1.

Four statements were provided to observe the key areas or types of Environmental Auditing in different organisations, which were to be replied in Yes or No.

The underlying objective of this research study is to study application of 'Environmental Auditing' i. e. Assessment or Evaluation with reference to 'Environmental Disclosure' practices. Attempt is made here to ascertain the views of practising accountants, auditors, members of the professional bodies, employees serving in organizations and managers with regard to the practice and utility of Environmental Auditing information.

Most of the statements incorporated in these questions were derived from "Environment and Climate Change- Auditing Guidelines' issued by Comptroller and Auditor General of India (C&AGI)" (www.cag.gov.in/sites/default/files/cag) and "Environmental Accounting and Reporting, Theory, Law and Empirical Evidence" by Pahuja S., New Century Publications, New Delhi.

In the fifth question five overall evaluation statements were asked to validate instrument with respect to Accounting treatment for environmental liabilities in financial statements, Compliance with environmental laws and reporting requirements, Applicability of Environmental Management System (EMS), Development of facilities and programmes for the treatment, storage or disposal of hazardous wastes and Adoption of programmes on prevention of pollution and waste minimization.

These statements are scaled from 1 to 5, Strongly Agree = 5, Agree = 4, Indifferent = 3, Disagree = 2 and Strongly Disagree = 1.

Part II provides the demographic details of the respondent. It provides the information regarding: Name, Address, Gender, Education qualification, Specialization and Designation or position held.

The non-probability sampling approach was put to use based on convenience sampling method supported with personal interviews for drawing of sampling units. Views of professionals like Chartered Accountants (CA), Cost and Management Accountants (CMA), Company Secretaries (CS) etc., and representatives from various industries, owners, managers and academicians are included in the research. To circulate questionnaires wherever it was possible a personal approach was made to reach the respondents. In some cases questionnaires were also sent to the respondents by post and also E-mail. The questionnaire was canvassed to three hundred individuals through personal approach wherever possible or by post or via E-mail. In response two hundred and ten questionnaires were received back from the respondents, and one hundred and ninety were considered for analysis purpose. The answers given by the respondents for each question as well as sub question were quantified in categories and then computed in table form to illustrate the responses.

5.2.2. Data Analysis Techniques

The questionnaires that were complete in all respects were only considered for the analysis. The raw data collected was further converted into numerical data, coded and fed into a computer for analysis and storage. It was stored in the form of a data file using MS Excel. The data collected was coded and subjected to statistical analysis after consultation with the expert and available Statistical Package for Social Sciences (SPSS version 21). The statistical analysis of the variables in the study has been performed using the following tests:

- Chronbach alpha
- Descriptive Statistics
- Factor Analysis
- Pearson's Chi-square and
- ANOVA

Chronbach alpha

Instrument reliability was tested by evaluating the Cronbach alpha coefficient, which is the usual method accepted by researchers (Smith, 2003). Coefficient alpha indicates the degree of internal consistency among items in the

questionnaire. Further, it also suggests how well items in a set are positively correlated to each other (Sekaran, 2003). Although the range of Cronbach alpha is from 0 to 1, values closer to 1 are accepted to have greater internal consistency. Any value above 0.6 is considered to be good and lesser than that as poor (Nunnally, 1978).

In present study, after consultation with the expert and available software, data were analyzed and reliability was computed. Cronbach's alpha was calculated to find the reliability factor for all the main research variables.

Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study, to simply describe what the data shows and to present quantitative descriptions in a manageable form. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Descriptive statistics helps to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. Even carrying some limitations, descriptive statistics provide a powerful summary that may enable comparisons.

Here in this study, frequency distribution, percentages, graphs and mean have been used for better understanding and presentation of raw data.

Factor Analysis

Factor Analysis is used to summarize the information contained in a large number of variables into smaller subsets called factors. Factor analysis is designed for interval data, although it can also be used for ordinal data. In many real life problems, the number of independent variables used in predicting a response variable will be too many. The difficulties in having too many independent variables are as increased time in data collection, too much expenditure in data collection, difficulty in making inferences and presence of redundant independent variables. These can be avoided by using factor analysis. Factor analysis aims at 'grouping' the original input variables into 'factors' that underlie the input variables. Theoretically, the total number of factors is equal to the total number of input variables. But after performing factor analysis, the total

number of factors in the study can be ‘reduced’ by dropping the insignificant factors based on certain criterion. Thus, it is commonly used as a data reduction or structure detection method.

This study uses principal component analysis which provides ‘unique solution’, so as to reconstruct data from the results. It takes into account the ‘total’ variance among the variables, so that the solution generated will include as many factors as there are variables although it is unlikely that they will all meet the criteria for retention. Factor loadings were used to measure correlation between criteria and the factors. A factor loading close to 1 indicates a strong correlation between a criteria and factor, while a loading closer to zero indicated weak correlation. The factors are rotated with the use of Varimax with Kaiser Normalization rotation method. Principle Component Analysis (PCA) method is used for factor extraction and consider only those factors for interpretation purpose whose values are greater than 0.6.

There are several methods of factor analysis, but they do not necessarily give same results. As such factor analysis is not a single unique method but a set of techniques. Important methods of factor analysis are:

(i) the centroid method;

(ii) the principal components method;

(iii) the maximum likelihood method.

Before we describe these different methods of factor analysis, it seems appropriate that some basic terms relating to factor analysis be well understood.

Factor: A factor is an underlying dimension that account for several observed variables. There can be one or more factors, depending upon the nature of the study and the number of variables involved in it.

Factor-loadings: Factor-loadings are those values which explain how closely the variables are related to each one of the factors discovered. They are also known as factor-variable correlations.

In fact, factor-loadings work as key to understanding what the factors mean. It is the absolute size (rather than the signs, plus or minus) of the loadings that is important in the interpretation of a factor.

Communality (h2): Communality, symbolized as h2, shows how much of each variable is accounted for by the underlying factor taken together. A high value of communality means that not much of the variable is left over after whatever the factors represent is taken into consideration. It is worked out in respect of each variable as under:
h2 of the ith variable = (ith factor loading of factor A)2 + (ith factor loading of factor B)2 + …

Eigen value (or latent root): When we take the sum of squared values of factor loadings relating to a factor, then such sum is referred to as Eigen Value or latent root. Eigen value indicates the relative importance of each factor in accounting for the particular set of variables being analysed.

Total sum of squares: When eigen values of all factors are totaled, the resulting value is termed as the total sum of squares. This value, when divided by the number of variables (involved in a study), results in an index that shows how the particular solution accounts for what all the variables taken together represent. If the variables are all very different from each other, this index will be low. If they fall into one or more highly redundant groups, and if the extracted factors account for all the groups, the index will then approach unity.

Rotation: Rotation, in the context of factor analysis, is something like staining a microscope slide. Just as different stains on it reveal different structures in the tissue, different rotations reveal different structures in the data. Though different rotations give results that appear to be entirely different, but from a statistical point of view, all results are taken as equal, none superior or inferior to others. However, from the standpoint of making sense of the results of factor analysis, one must select the right rotation. If the factors are independent orthogonal rotation is done and if the factors are correlated, an oblique rotation is made.

Communality for each variables will remain undisturbed regardless of rotation but the eigen values will change as result of rotation (Kothari, C. 1990)

Pearson's Chi-square

The chi-square test is an important test amongst the several tests of significance. The Chi Square statistic is commonly used for testing relationships on categorical variables. The null hypothesis is that no relationship exists on these categorical variables in the population; they are independent. Chi-square is a statistical measure used in the context of sampling analysis for comparing a variance to a theoretical variance. Neil R. Ullman (1978) has stated that as a non-parametric test, it "can be used to determine if categorical data shows dependency or the two classifications are independent. It can also be used to make comparisons between theoretical populations and actual data when categories are used."

As a test of independence, Chi-square test enables to explain whether or not two attributes are associated. It may, however, be stated here that Chi-square is not a measure of the degree of relationship or the form of relationship between two attributes, but is simply a technique of judging the significance of such association or relationship between two attributes. To know statistical significance of differences in the observed and expected frequencies the p value were observed. P value less than 0.05 was considered significant. In this study chi-square test is used to determine dependency of various demographic qualities of respondents.

In this study chi-square test is used to determine relationship among various demographic qualities of respondents and variables like the respondents' understanding and awareness on some present Environmental concerns, Environmental accounting system and Environmental auditing types.

ANOVA

As per Kothari, C. R. (1990) ANOVA technique is important in the context of all those situations where we want to compare more than two populations such as in comparing the yield of crop from several varieties of seeds, the gasoline mileage

of four automobiles, the smoking habits of five groups of university students and so on. In such circumstances one generally does not want to consider all possible combinations of two populations at a time for that would require a great number of tests before we would be able to arrive at a decision. This would also consume lot of time and money, and even then certain relationships may be left unidentified (particularly the interaction effects). Therefore, one quite often utilizes the ANOVA technique and through it investigates the differences among the means of all the populations simultaneously.

5.3 Data Analysis

5.3.1 Reliability of Structured Questionnaire

Reliability refers to the extent to which a scale produces consistent results if repeated measurements are made on the characteristics. One of the popular approaches for assessing reliability includes the Internal Consistency Reliability method which is used to assess the reliability of a summated scale where several items are summed to form a total score. Instrument reliability was tested by evaluating the Chronbach alpha coefficient, which is the usual method accepted by researchers (Smith, 2003). Coefficient alpha indicates the degree of internal consistency among items in the questionnaire. Further, it also suggests how well items in a set are positively correlated to each other (Sekaran, 2003). Although the range of Chronbach alpha is from 0 to 1, values closer to 1 are accepted to have greater internal consistency. Any value above 0.6 is considered to be good and lesser than that as poor (Nunnally, 1978). An overview of all the Chronbach alpha coefficients is illustrated in table:

Reliability Statistics

An overview of all the Cronbach alpha coefficients is illustrated in table:

Table 5.1

Summary of Indicators and Reliability Alpha Score

Sr. No.	Grouped Indicator Items	Statement Code in Questionnaire	No. of Items	Chronbach Reliability Alpha Coefficient
01	Evaluation of salient features of Environmental Accounting	2-A	04	0.810
02	Evaluation of advantages of Environmental Accounting	2-C	03	0.910
03	Evaluation of extent of Compliance on Environmental Laws and requirements	3	06	0.925
04	Evaluation of objectives of Environmental Auditing	4-A	05	0.861
05	Evaluation of advantages emerging from of Environmental Auditing	4-C	06	0.905
06	Evaluation of reasons for non-adoption of Environmental Auditing	4-D	08	0.889
07	Evaluation of some opinion criteria	5	05	0.815
08	Evaluation of ALL Scaled statements	Above ALL	37	0.908
09	Evaluation of ALL statements (Scaled and Dichotomous statements)	1 to 5	57	0.887

The reliability test was run using Chronbach alpha to show how strongly the attributes/ opinion were related to each other and to the composite score. All dimensions of the questionnaire related with measuring opinion were tested and the Chronbach's alpha ranged from 0.810 to 0.925 (Appendix) which really shows the Internal reliability of the scale. The reliability of a scale as measured by coefficient alpha reflects the degree of cohesiveness among the scale items (Naresh K. Malhotra, 2007; Jum C. Nunnally, 1981). Testing the scale for reliability revealed that for all the above scaled statements Chronbach alpha coefficient of 0.908. Therefore, this scale is considered reliable and it is capable enough for further data processing and analysis.

5.3.2 Validity of Structured Questionnaire

In this empirical investigation, while undertaking this research study, the structured questionnaire was given to accountants, auditors, company secretaries, academicians, research scholars and students. Results of measurement of the criterion wise validity and overall means score is given in the tabular form.

It had total number of 12 questions inclusive of Demographic Variables (07 criteria); General Variables of Respondents' Opinion about Environmental Auditing: Impact and Applications in India (criteria grouped under Q. No. 1 to 4); and also their overall opinion respectively (criteria under Q. No.05) (Naresh K. Malhotra, 2007; Parasuraman et. al., 1991).

5.3.3 Respondents' Profile

The main aim of this survey was to collect the views of practising accountants, company secretaries, auditors, individuals in service, managers, academicians and research scholars and students with respect to the information about Environmental Auditing practices. Therefore, the questionnaires were circulated to the respondents from the wide range of different age groups, qualifications, experience etc. The present section presents the overall profile of the respondents in terms of their age, educational background, professional qualification, their employment and work experience. Following section provides the demographic details of the sample selected.

Gender wise classification of respondents

The mix of respondents is classified into Male and Female segment as under:

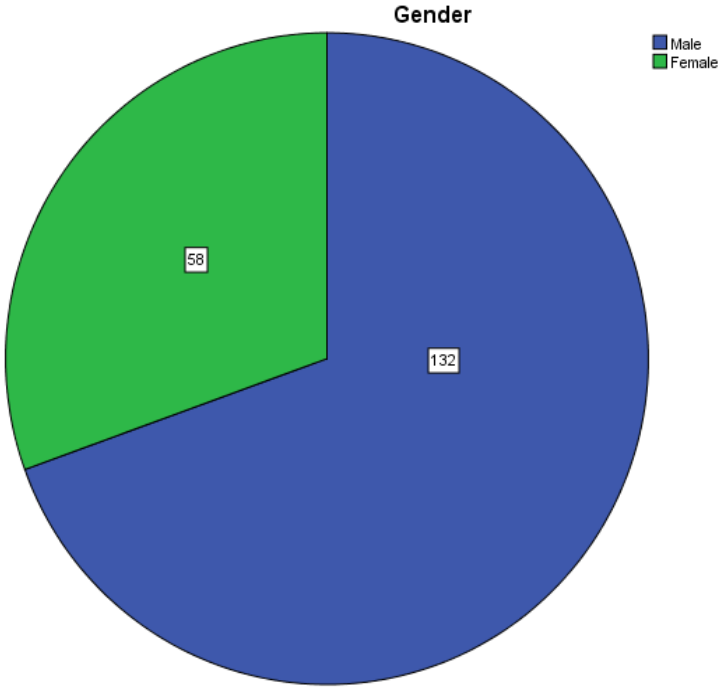
Table 5.2

Gender wise classification of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	132	69.5	69.5	69.5
	Female	58	30.5	30.5	100.0
	Total	190	100.0	100.0	

Graph 5.1

Gender wise classification of respondents



From above table and graph it is observed that the majority (69.5%) of respondents were Male and rest represent Female (30.5%).

Age wise classification of respondents

The respondents were requested to reply on their age group. The respondents were classified into six age groups as mentioned in the below table.

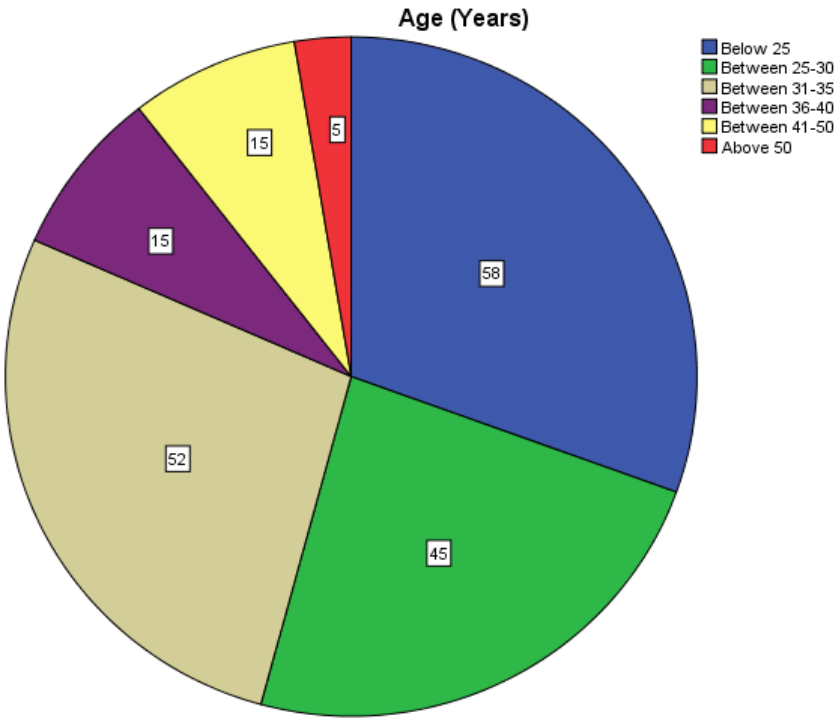
Table 5.3

Age (Years) wise classification of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25	58	30.5	30.5	30.5
	Between 25-30	45	23.7	23.7	54.2
	Between 31-35	52	27.4	27.4	81.6
	Between 36-40	15	7.9	7.9	89.5
	Between 41-50	15	7.9	7.9	97.4
	Above 50	5	2.6	2.6	100.0
	Total	190	100.0	100.0	

Graph 5.2

Age group of Respondents



From above graph and table, it is interpreted that 30.5% respondents were below 25 years and 23.7 % between 25-30 years and 27.4% respondents were between 31-35 years. Only 2.6% respondents were above 50 years.

It is observed from the above Table and Graph that cumulatively 81 % respondents are below 35 years which indicate that the respondents having knowledge in recent trends and developments have contributed significantly to the present survey study.

Educational qualification of respondents

In order to obtain the view on study related concepts, practicing accountants, auditors, managers, executives, research scholars, academicians and post graduate students were selected and the questionnaire was circulated to them. Educational qualification of the respondents is classified in the subsequent part. Graduate respondents were categorised in the following groups:

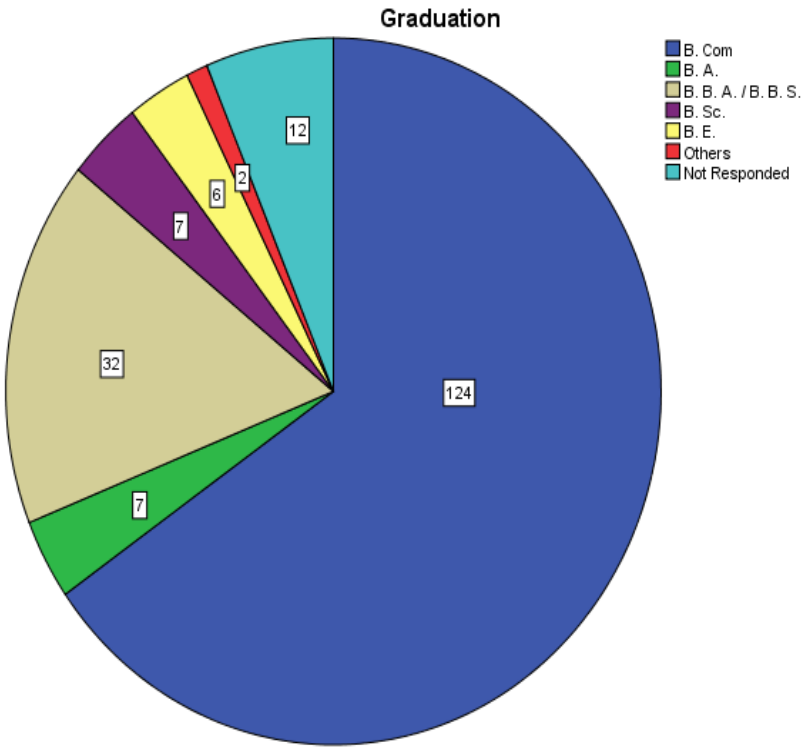
Table – 5.4

Graduation of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	B. Com	124	65.3	65.3	65.3
	B. A.	7	3.7	3.7	68.9
	B. B. A. / B. B. S.	32	16.8	16.8	85.8
	B. Sc.	7	3.7	3.7	89.5
	B. E.	6	3.2	3.2	92.6
	Others	2	1.1	1.1	93.7
	Not Responded	12	6.3	6.3	100.0
	Total	190	100.0	100.0	

Graph 5.3

Educational Qualification (Graduation) of Respondents



From above table and graph, it is found that 65.3% respondents have done Graduation from Commerce, 16.8% have done Business Administration studies,

3.7% have pursued graduation from Arts and Science each. Respondents from engineering field have found 3.2%.

Cumulatively, it can be seen that approximately 81 % respondents have done graduation from Commerce and Business Administration disciplines. This indicates that the respondents with commerce background can be helpful in the discussion related to new developments and knowledge in the area of commerce.

In aggregate 43.8% respondents have found completed Post-graduation in various disciplines. From amongst them, 31.1% have done post-graduation in Commerce and 7.4% in Business Administration.

Professional qualification of respondents

Following Table exhibits the details regarding the professional qualifications of respondents who have contributed their opinion in the present survey study.

Table 5.5

Professional Qualification of Respondents

Professional Qualification	Frequency	Percent
Chartered Accountant	47	24.7
Company Secretary	15	7.9
Cost & Management Accountant	13	6.8
Certified Financial Advisor	06	3.2
Any Other	17	8.9

Among all the respondents with professional qualifications, maximum respondents are Chartered Accountants (24.7%) followed by Company Secretary (7.9%) and Cost and Management Accountant (6.8%). Other professionally qualified respondents were Management consultants, Environmental consultants and Chartered engineers.

Specialization of respondents

Below table reflects the frequency and percent of the respondents having different specialization.

Table 5.6

Specialization of respondents

Specialization	Frequency	Percent
Accounting and Finance	33	17.4
Auditing	16	8.4
Marketing	04	2.1
Management or H. R. D.	12	6.3
Technical/ Engineering	09	4.7
Information Technology	03	1.6

From the above table it is evident that 25.8% of the respondents were having specialization in Accounting and Auditing, 8.4 percent respondents were from Marketing and Management field, and 4.7% respondents were from Engineering and technical background.

Position held by the respondents

Following summary portrays the details pertaining to the position held at different levels by the respondents.

Table 5.7

Position held by respondents

Designation/ Position held	Frequency	Percent
Junior Executive	64	33.7
Middle Level Executive	35	18.4
Senior Executive	15	7.9

From the above table it is evident that 25.8% of the respondents were having specialization in Accounting and Auditing, 8.4 percent respondents were from Marketing and Management field, and 4.7% respondents were from Engineering and technical background.

It is also observed that 33.7% of respondents were holding junior position followed by 18.4% middle level and senior level in their work places.

5.3.4 Descriptive Analysis

Descriptive statistics are general means to explore the data collected and summarized it in the form of graphs and tables. This is usually the initial procedure undertaken in order to observe and obtain a general idea about the data. Other examples also include frequency distributions. The following section presents the descriptive statistics for various variables in this study.

5.3.4.1 Evaluation of some Environmental aspects

In this question respondents were asked to answer twelve statements regarding threats to planet Earth, importance of environmental concern, environmental issues and any role of Accounting, Global warming, Carbon credit, etc. which have direct or indirect bearing on Environmental Auditing. In all twelve statements, general environmental concerns and contemporary issues have been embedded. These statements were to be replied by respondents in either 'Yes' or 'No'.

Table 5.8

Evaluation of Environmental aspects

No.	Particulars	Yes (No.)	Yes (%)	No (No.)	No (%)
1	Are you aware about various threats to planet Earth's Environment?	177	93.16	13	06.84
2	Do you believe that 'Environment' is important concern in present day world?	180	94.74	10	05.26
3	Are you aware that environmental issues and concerns play any role in Accounting?	167	87.89	23	12.11
4	Whether 'Global Warming' is becoming the real 'Warning' to the mankind?	166	87.37	24	12.63
5	Do you believe that severe weather conditions viz. extreme cold, storms, glacier melting, rise in water level of sea, earthquakes, drought, tornados, tsunami, etc. are the results of Global Warming?	159	83.68	31	16.32
6	Whether Environmental pillar is important for Sustainable Development?	187	98.42	03	01.58

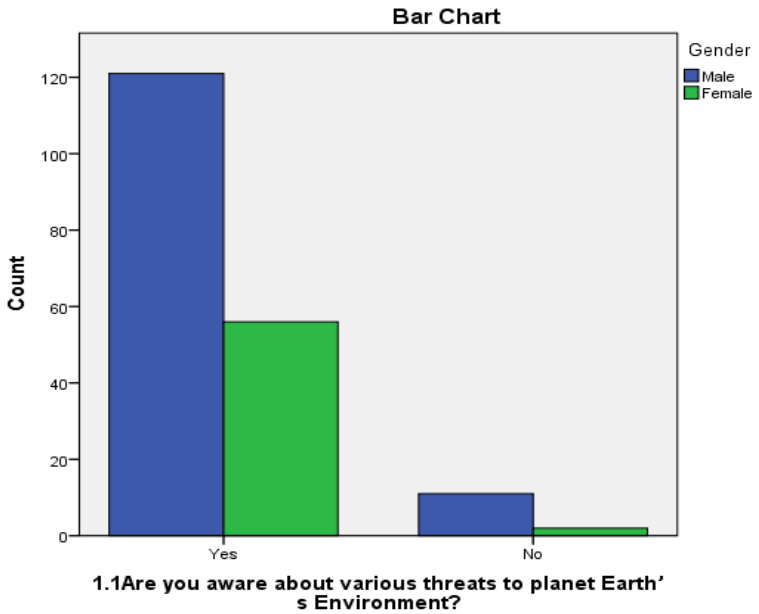
7	Are you aware about 'Triple Bottom Line' Reporting? i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports	146	76.84	44	23.16
8	Are you aware about the concept of UNEP's (United Nations Environment Programme) 'Decoupling' which provides for breaking the chain between the economic good and environmental bad?	109	57.37	81	42.63
9	Are you aware about 'Carbon Credit'?	152	80.00	38	20.00
10	Is One 'Carbon Credit' is equivalent to reduction in Two Ton emission of Carbon Dioxide (CO2)?	55	28.95	135	71.05
11	Do you think that more 'environmental awareness' is necessary in the society to minimise the 'impact' on the planet Earth?	187	98.42	03	01.58
12	Should the corporates take pledge towards 3Rs in various activities and operations? viz. Reduce (consumption of resources), Reuse (products) and Recycle (waste)?	183	96.32	07	03.68

In the following section, some significant revelations are discussed.

- Are you aware about various threats to planet Earth's Environment?

Graph 5.4

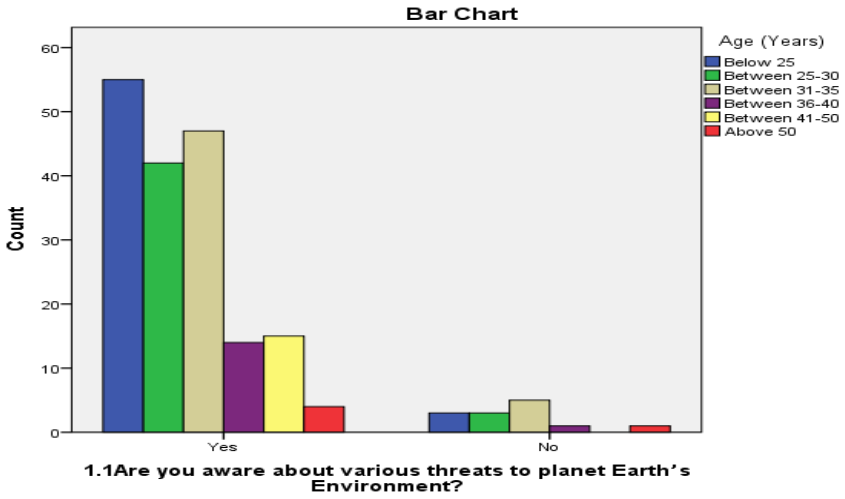
Gender wise response on awareness on threats to Environment



Out of Total 190 respondents, 177 respondents (Male=121 and Female=56, so 68.4% and 31.60% respectively) were aware about various threats to planet Earth's environment. 13 respondents (Male= 11 and Female= 02) were found unaware of such threats.

Graph 5.5

Age group wise response on awareness on threats to Environment

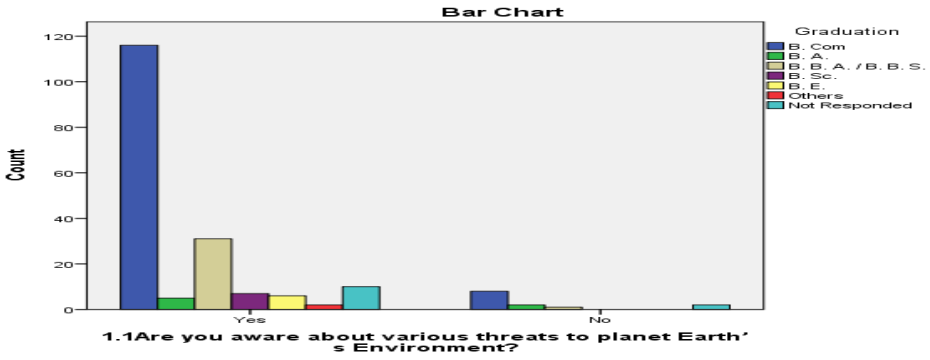


From total, 177 respondents who were aware about various threats to environment, 55 were below 25 years; 42 between ages of 25 to 30; 47 between 31 to 35, 14 between 36-40; 15 between 41 to 50 and 04 above 50.

Hence, it is evident that in total 81 percent respondents who were aware about threats to environment are below 35 years of age.Whereas 6.84% respondents were not aware about environmental threats to planet Earth.

Graph 5.6

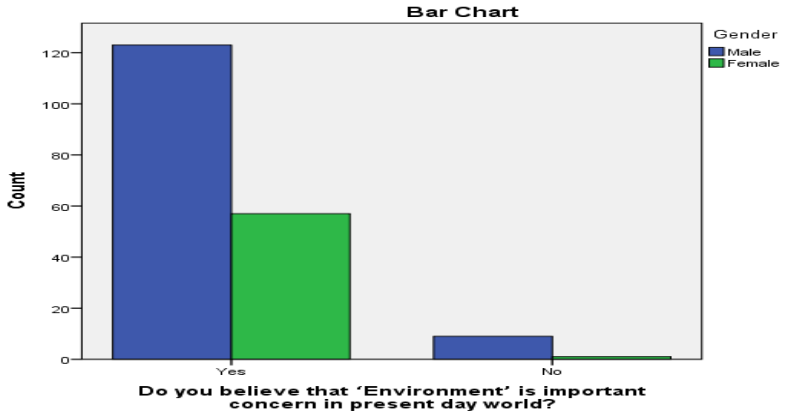
Educational Qualification of Respondents and awareness on Environmental threats



From total, 177 respondents who were aware about various threats to environment, 116 were B. Com.; 05 were B. A.; 31 B. B. A.; 07 B. Sc.; 06 B. E. and 02 others. So, 65.5 percent graduates responding about awareness were from Commerce stream, 17.5 percent from Business Administration/ Studies and 7.4% were from Science and Engineering field. Total 13 respondents who were unaware about various threats to environment, 08 were from Commerce discipline.

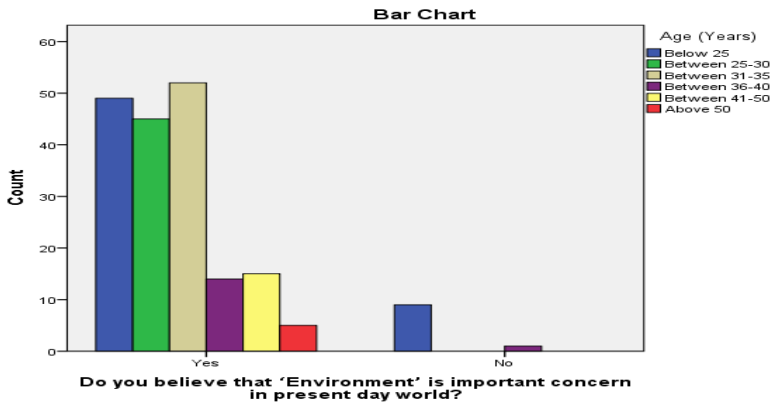
❖ Do you believe that 'Environment' is important concern in present day world?

Graph 5.7 - Gender of respondents and awareness on Environmental concerns



Total 180 respondents (Male=123 and Female=57, so 68.3% and 31.7% respectively) believe that 'Environment' is important concern in present day. 10 (Male= 09 and Female= 01) respondents have not considered 'Environment' as important concern in present day world.

Graph 5.8 - Age group wise response on awareness on Environment concerns



From total, 180 respondents who believe that 'Environment' is important concern in present day world, 49 were below 25 years; 45 found between 25 to 30 years;

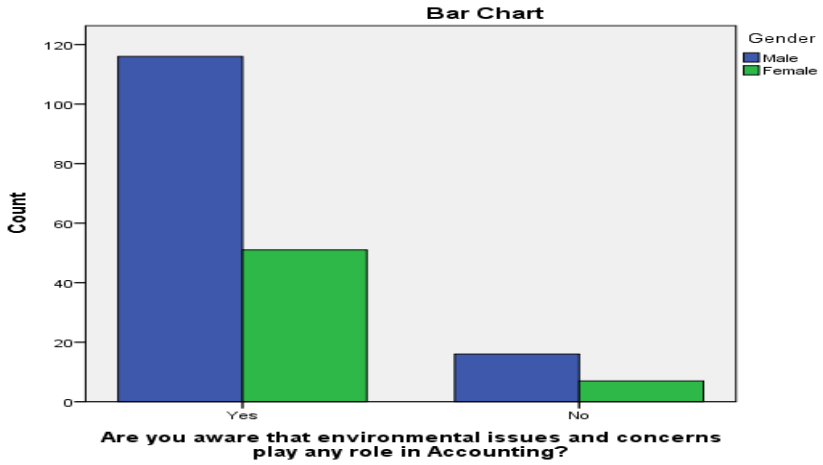
52 respondents were between 31 to 35 years, 14 were between 36-40 years; 15 respondents were between 41 to 50 years and 05 respondents were above 50 years.

Hence, it is evident that in total 81% respondents who believe that 'Environment' is important concern in present day are below 35 years of age.

While 5.26% respondents did not believe that 'Environment' is important concern in present day world.

Graph 5.9

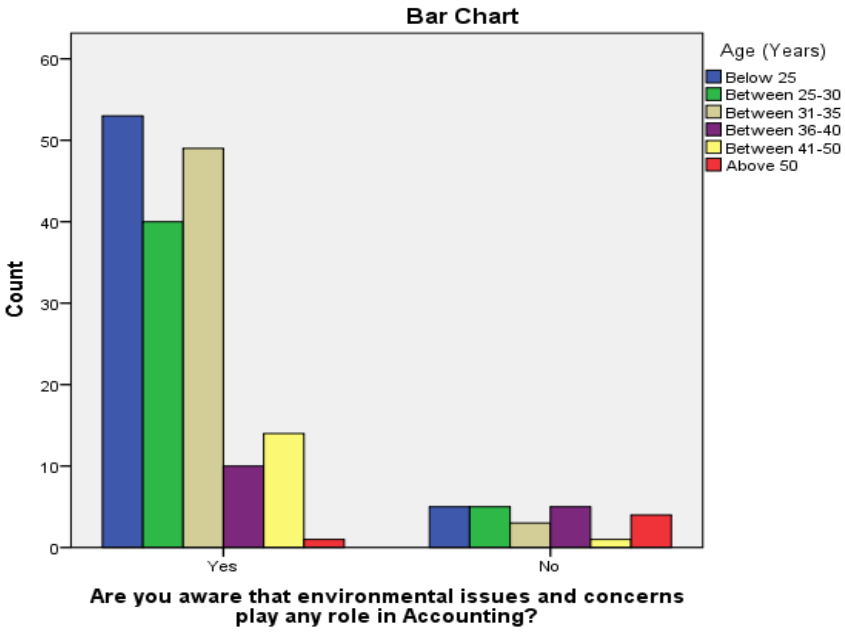
Gender wise response on Role of Environment issues in Accounting



Total 167 respondents, of which 116 Male (69.5%) and 51 Female (30.5%) agree that environmental issues and concerns play role in Accounting. Against this, 23 respondents (12.11%) did not believe that Accounting has some role to play on environmental issues and concerns.

Graph 5.10

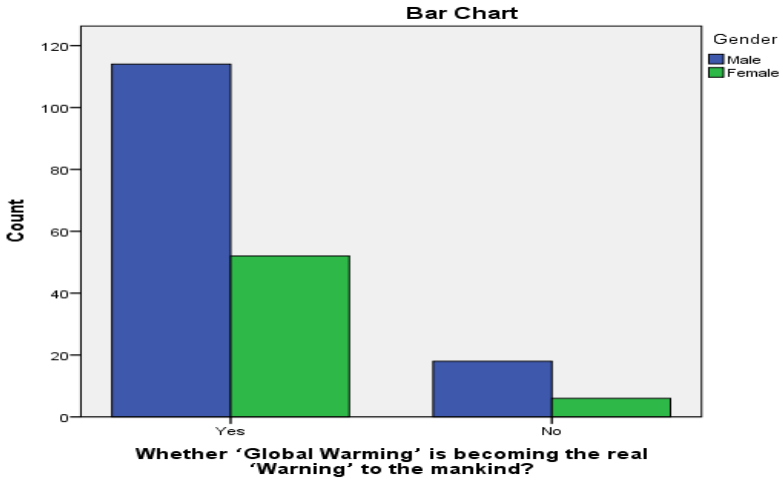
Age wise response on Role of Environment issues in Accounting



From total, 167 respondents who believe that environmental issue play role in accounting, 53 were below 25 years; 40 between 25 to 30; 49 between 31 to 35, 10 between 36-40; 14 between 41 to 50 and 01 above 50. Hence, it is evident that in total 85.03% respondents who believe that environmental issue play role in accounting are below 35 years of age. And 14.97% respondents were above 36 years.

Graph 5.11

Gender wise response on Global Warming

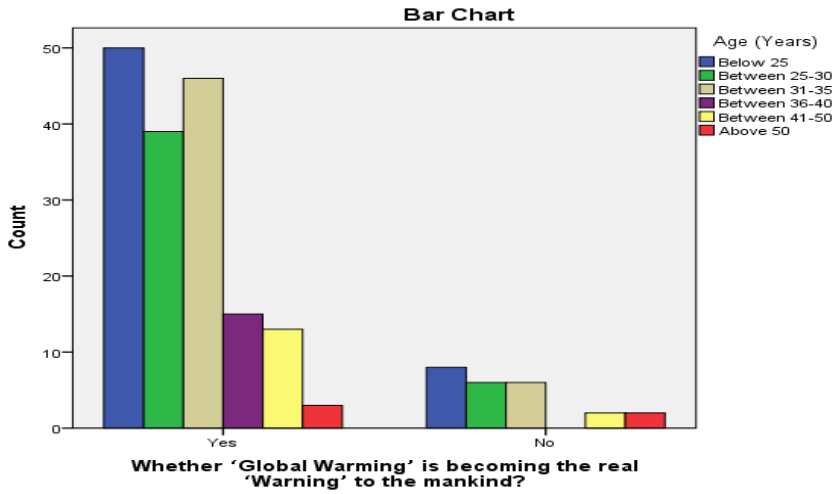


Total 166 respondents (Male=114 and Female=52, so 68.7% and 31.3% respectively) believe that 'Global warming' is becoming the real 'warning' to

mankind. 24 (Male= 18 and Female= 06) respondents have not considered 'Global warming' is becoming the real 'warning' to mankind.

Graph 5.12

Age wise response on Global Warming

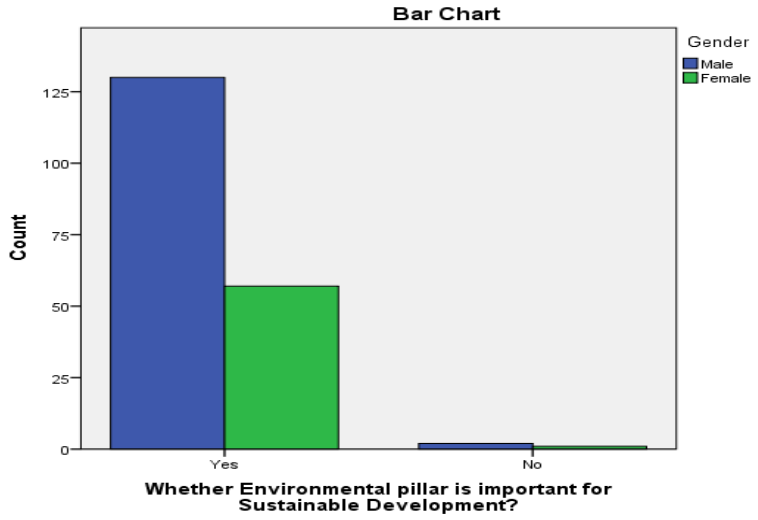


From total, 166 respondents who believe that 'Global warming' is becoming the real 'warning' to mankind, 50 respondents were below 25 years; 39 respondents were between 25 to 30; 46 respondents were between 31 to 35, 15 were between 36-40; 13 respondents between 41 to 50 and 03 were above 50.

Hence, it is evident that in total 46.3% respondents who believe that 'Global warming' is becoming the real 'warning' to mankind, are above 31 years of age.

Graph 5.13

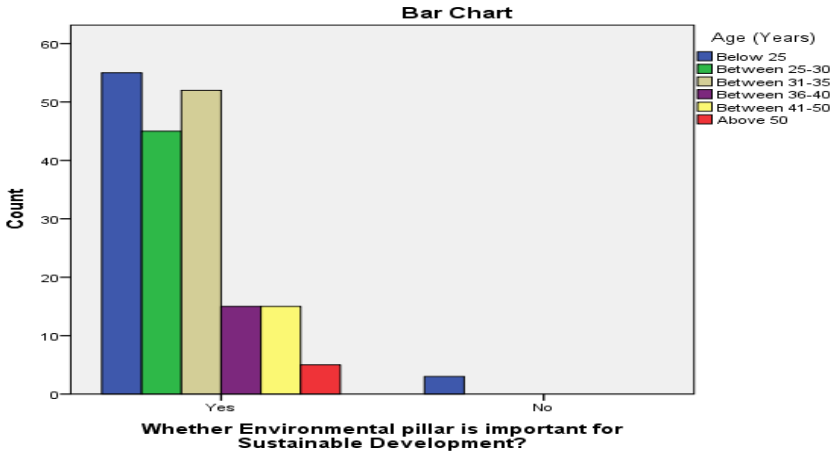
Gender wise response on Environmental pillar and sustainable development



It can be seen from above that unanimously 187 respondents (98.42%) have agreed that environmental pillar is important for sustainable development. 130 Male (69.5%) and 57 Female (30.5%) have supported the statement.

Graph 5.14

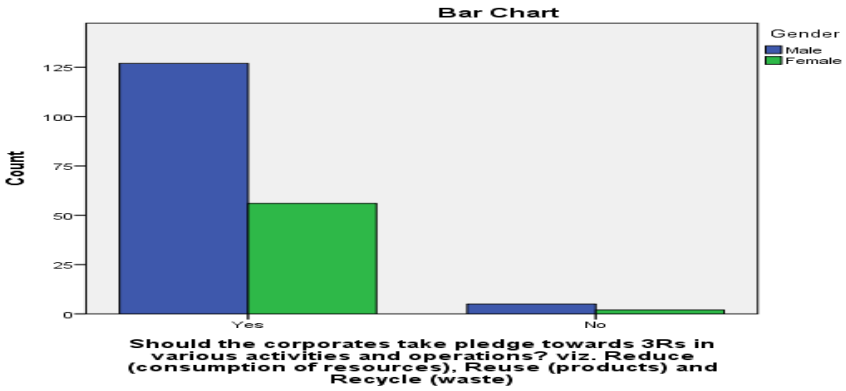
Age wise response on Environmental pillar and sustainable development



From total, 187 respondents who believe that environmental pillar is important for sustainable development, 55 respondents were below 25 years; 45 respondents were between 25 to 30; 52 respondents were between 31 to 35, 15 were between 36-40; 15 were between 41 to 50 and 05 respondents were above 50. Hence, it is noticeable that in total 46.5 percent respondents believe that environmental pillar is important for sustainable development, are above 31 years of age.

Graph 5.15

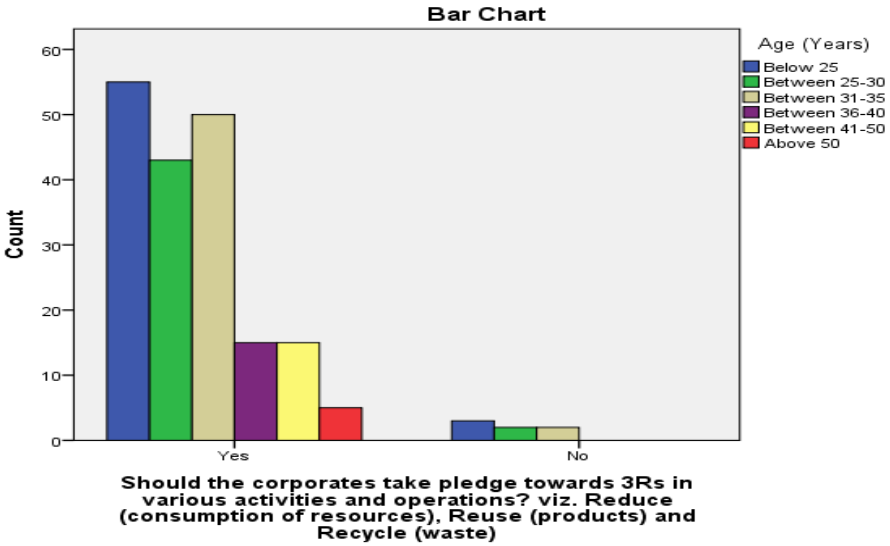
Gender wise response on Corporate pledge towards 3R



It can be seen from above that unanimously 183 respondents (96.31%) have agreed that corporates should take pledge towards 3Rs in various activities and operations. 127 Male (69.4%) and 56 Female (30.6%) have supported the statement.

Graph 5.16

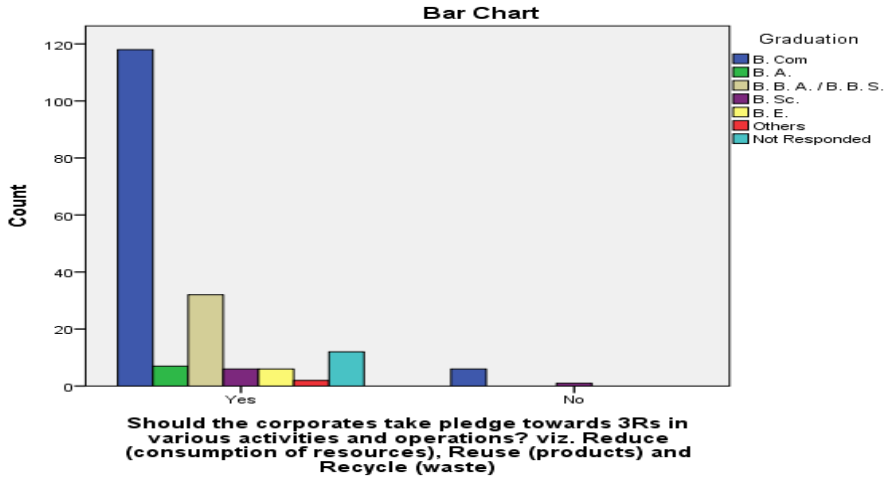
Age wise response on Corporate pledge towards 3R



From total, 183 respondents who believe that corporates should take pledge towards 3Rs in various activities, 55 respondents were below 25 years; 43 were between 25 to 30; 50 respondents were between 31 to 35, 15 were between 36-40; 15 were between 41 to 50 and 05 respondents were above 50.

Graph 5.17

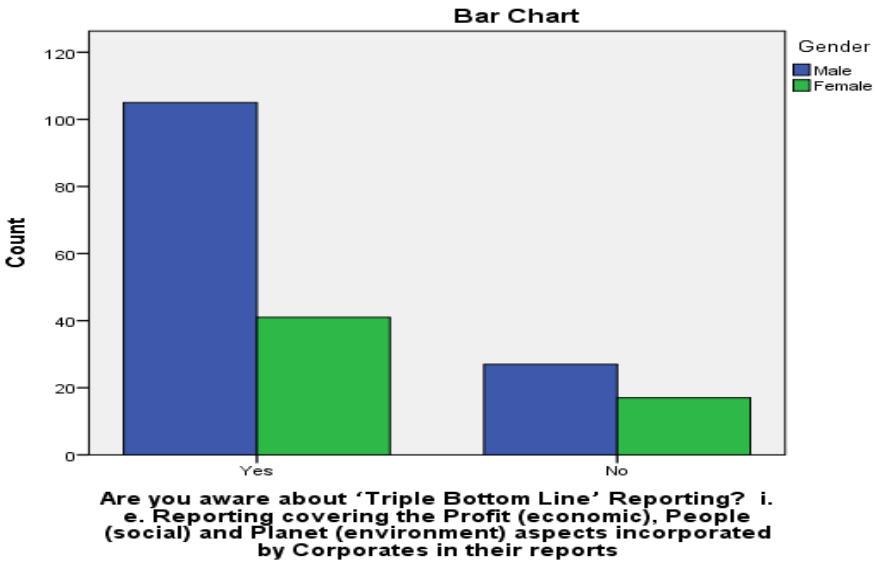
Qualification wise response on Corporate pledge towards 3R



From above, it is evident that out of total 183 respondents, 118 (64.5%) are from Commerce stream and 32 (17.5%) from Business Administration. Rest 21 respondents are from Arts, Science, Engineering and other fields.

Graph 5.18

Gender wise response on awareness about Triple Bottom Line reporting

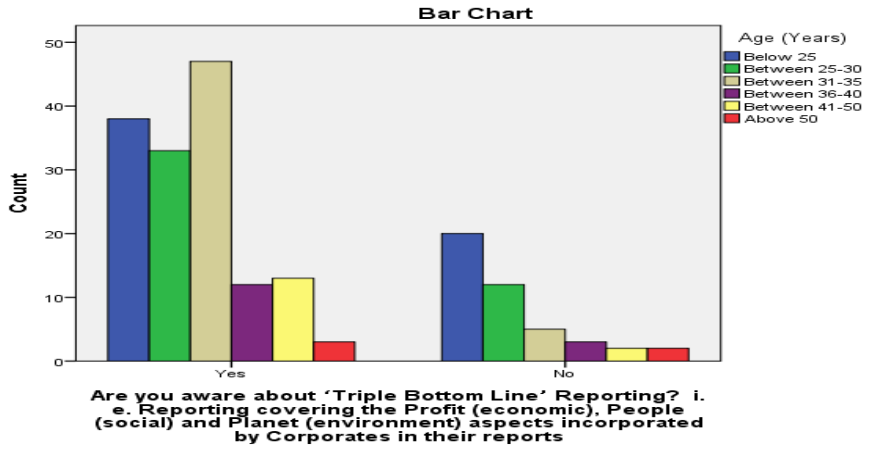


It can be seen from above that 146 respondents (76.84%) were aware about 'Triple Bottom Line' Reporting by corporates in their reports. 105 Male (71.0%) and 41 Female (28.1%) have supported above.

Here it would be noteworthy that total 44 respondents were still not aware about the 'Triple Bottom Line' Reporting by corporates in their reports.

Graph 5.19

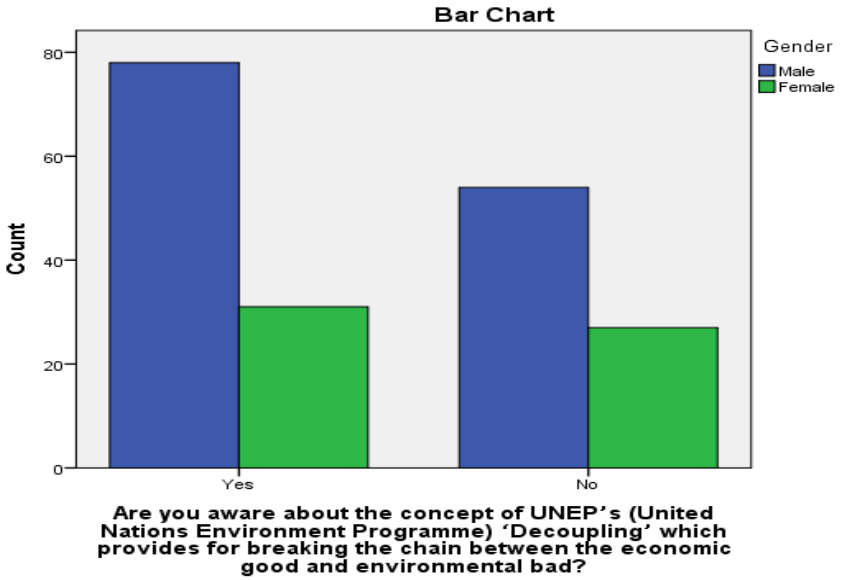
Age wise response on awareness about Triple Bottom Line reporting



From total, 146 respondents who were aware about 'Triple Bottom Line' reporting by corporates in their reports, 58 respondents were below 25 years; 45 were between 25 to 30; 52 respondents were between 31 to 35, 15 were between 36-40; 15 were between 41 to 50 and 05 respondents above 50. Here it is noticeable that 20 (45.5%) respondents of below 25 years age were found unaware about 'Triple Bottom Line' reporting by corporates in their reports.

Graph 5.20

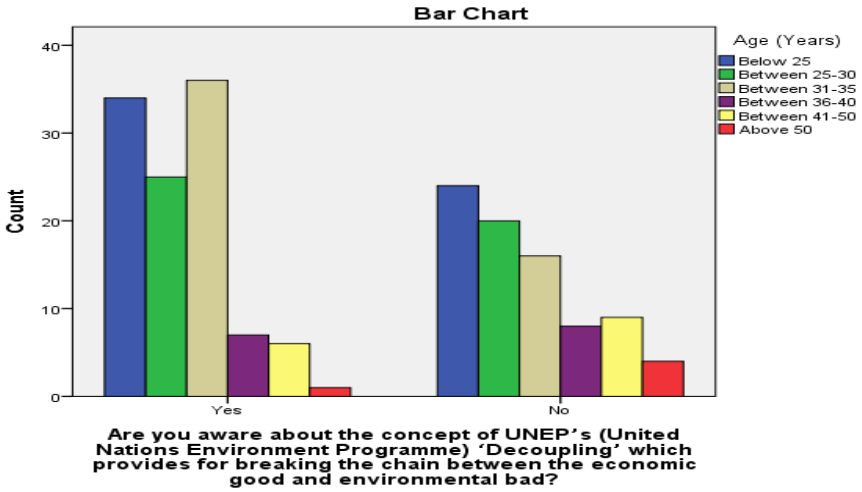
Gender wise response on awareness about UNEP's 'Decoupling'



Here it would be noteworthy that total 81 (42.64%) respondents were still not aware about the concept of UNEP's Decoupling which provides for breaking the chain between the economic good and environmental bad. It can be seen from above that 109 respondents (57.36%) were aware about the concept of UNEP's Decoupling. 78 Male (71.6%) and 31 Female (28.4%) have supported the statement.

Graph 5.21

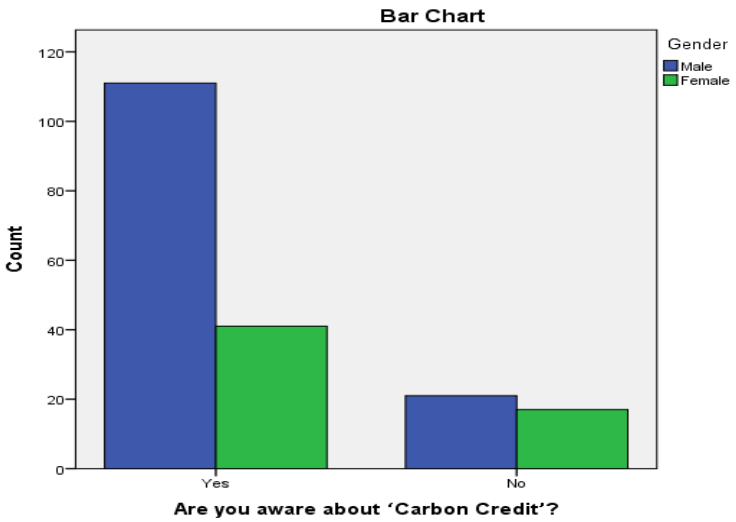
Age wise response on awareness about UNEP's 'Decoupling'



From total, 81 respondents who were not aware about the concept of UNEP's Decoupling, 24 respondents were below 25 years; 20 were between 25 to 30; 16 respondents were between 31 to 35, 08 were between 36 to 40; 09 were between 41 to 50 and 04 respondents were above 50. Here it is noticeable that 60 (74.10%) respondents of below 35 years age were found unaware about the concept of UNEP's Decoupling.

Graph 5.22

Gender wise response on awareness about Carbon credit

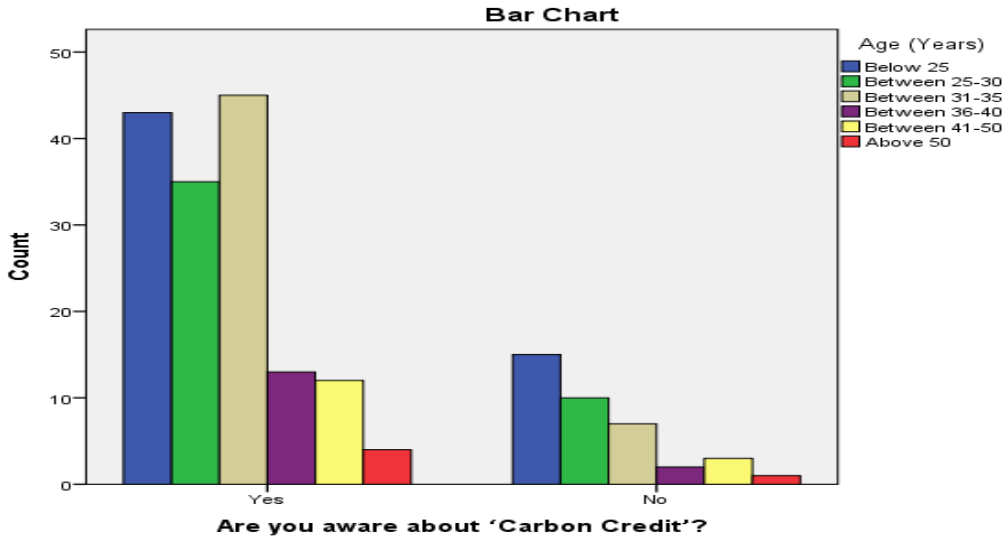


Here it would be noteworthy that total 152 respondents (80%) were aware about the concept of Carbon credit whereas 38 respondents (20%) were not aware about it.

It can be seen from above that 111 male respondents (73%) and 41 Female (27%) were aware about the concept of Carbon credit.

Graph 5.23

Age wise response on awareness about Carbon credit

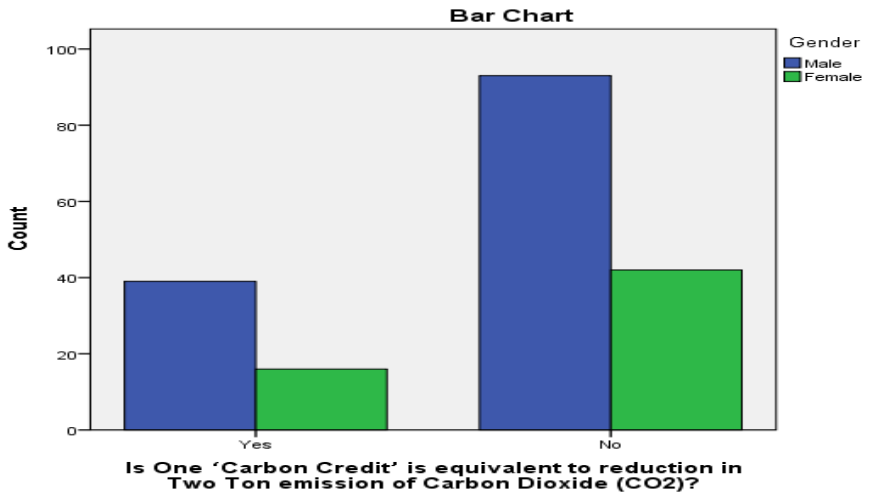


From total, 152 respondents who were aware about Carbon credit, 43 respondents were below 25 years; 35 were between 25 to 30; 45 respondents were between 31 to 35, 13 were between 36-40; 12 were between 41 to 50 and 04 respondents were above 50.

Here it is noticeable that 25 respondents (65.8%) of below 25 years age were found unaware about Carbon credit.

Graph 5.24

Gender wise response on awareness about measurement unit of Carbon credit



Here it would be noteworthy that total 135 respondents (71.05%) have declined that one carbon credit is equal to reduction in Two ton emission of CO2. Whereas 55 respondents (29.95%) endorsed the statement which implies that they are not aware about equivalent measure of one Carbon credit.

It is observed that 93 male respondents (68.9%) and 42 Female (31.1%) were aware about the measurement criteria of Carbon credit.

5.3.4.2. Evaluation of Salient features and Advantages of Environmental Accounting prevalent in the organisations

In this question respondents were asked to answer 7 statements regarding Salient features of Environmental Accounting and Advantages accruing from adoption of such accounting. These statements were evaluated on a 5-Likert scale ranging from Strongly Agree = 5 to Strongly Disagree = 1.

Table 5.9

Evaluation of salient Features and Advantages of Environmental Accounting

Selected criteria	N	Mean	SD
It helps in planning the Cost Control and/or Cost Reduction	190	3.70	1.044
It promotes designing several processes using the environment friendly technologies	190	3.31	1.009
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	190	3.62	1.056
It evaluates the Impact of entity's Project on surrounding environment	190	3.69	1.070

Accounting for environmental outlays and performance recording can help in implementing Environmental policies framed	190	3.43	1.051
Collection and recording of environmental costs can further endorse precise costing	190	3.39	1.006
Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	190	3.49	0.980

Above analysis depicts that with respect to salient features of Environmental accounting

- it helps in planning the Cost control and/or Cost reduction (Mean=3.70) followed by other salient feature
- it evaluates the Impact of entity's project on surrounding environment (Mean=3.69),
- identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources (Mean=3.62) and
- promotes designing several processes using environmental friendly technology (Mean= 3.31).

Respondents believe with the advantage emerging from adoption of Environmental accounting that

- reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development (Mean= 3.49) followed by another advantage of
- accounting for environmental outlays and performance recording can help in implementing Environmental policies framed (Mean= 3.43) and c
- collection and recording of environmental costs can further endorse precise costing (Mean= 3.39).

Many respondents have recognized the salient features of Environmental accounting and identified the advantages emerging from applicability of Environmental accounting in organisations.

From the above table it is evident that Environmental accounting practices in organisation helps in planning the Cost control and/or Cost reduction of products or articles and reasonable relationship with clients on basis of 'Green products/ services' which can reflect the environmental friendly attitude in economic development of society.

5.3.4.3. Evaluation of Compliance with applicable Environmental Laws, Rules and Regulations to organisations

In this section respondents were asked to reply 6 Environmental Compliance issues on the basis of applicable Laws, Rules and Regulations. These statements were evaluated on a 5-Likert scale ranging from Strongly Agree = 5 to Strongly Disagree = 1.

Table 5.10

Evaluation of Compliance by entities with applicable Environmental Laws

Selected criteria	N	Mean	SD
Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies	190	3.71	0.864
Adoption of Environmental Calendar activities viz. creating environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.	190	4.10	1.241
Acceptance of the Information disclosures and Report submission requirements of Central Pollution Control Board (CPCB) and SPCB	190	3.63	0.691
Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting	190	3.63	0.861
Addressing the issues pertaining to National Environment Policy, 2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation	190	3.63	0.811
Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001	190	4.08	1.253

- From the above data it can be analyzed that majority respondents have observed the organisations adopting environmental calendar activities viz. create environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc. (Mean= 4.10).
- Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001(Mean=4.08).

Respondents have also observed

- Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies (Mean= 3.71) followed by
- Acceptance of the Information disclosures and report submission requirements of Central Pollution Control Board (CPCB) or State Pollution Control Board (SPCB) (Mean=3.63) and
- Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting (Mean= 3.63) and
- Addressing the issues pertaining to National Environment Policy, 2006 (NEP) viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation (Mean= 3.63)

The above analysis indicates that many Environmental compliance aspects in our country are still above average which is indicative of following environmental protection and preservation practices but, not at satisfying level.

5.3.4.4 Evaluation of Environmental Auditing practices in organisations

In this section respondents were asked to answer nineteen statements on Environmental auditing ranging from objectives of Environmental auditing, advantages of Environmental auditing and the reasons for non-adoption or minimal adoption of Environmental auditing practices. These statements were

evaluated on a 5-Likert scale ranging from Strongly Agree = 5 to Strongly Disagree = 1.

Table 5.11

Evaluation of Environmental auditing practices in organisations

Selected criteria	N	Mean	SD
As a replication of the belief that proficient environmental reporting is the basis of enduring profitability and decent economic progress	190	3.98	0.917
Improving competitiveness by making customers and society increasingly aware of environmental issues by addressing them	190	3.95	0.844
Updating personnel and clients about the entity's environmental work	190	3.92	0.850
Meeting demands of trade bodies viz. FICCI, ASSOCHAM, etc.	190	3.84	1.008
Acting as a significant tool in interactions with governmental authorities and other parties in the environmental field	190	3.99	0.793
Increase in the management awareness on environmental issues	190	3.91	0.721
Avoiding of fines for noncompliance	190	4.15	0.937
Assurance of financial accruals for environmental liabilities	190	4.07	0.864
Cost savings from waste minimization and avoiding environmental risks	190	4.17	0.825
Early identification of issues and problems before regulatory enforcement action	190	4.00	0.943
Bagging any prestigious Award or Certification from Government or Non-government agency/ies	190	3.93	0.951
Voluntary Nature of Environmental Auditing	190	4.10	0.807
Lack of Specific policy on such Emerging issues	190	4.33	0.809
Unawareness about the benefits of Environmental Auditing	190	4.10	0.739
Difficulty in measuring Cost-Benefit analysis from such practices	190	4.16	0.879
Absence of Environmental Auditing Standard	190	4.03	0.745
Lack of real will and commitment by the political wing/s towards addressing implementation of protective measures for conservation of environment	190	4.36	1.093
In wake of achieving short term gains by corporates, long term challenges to environment are ignored	190	3.98	0.690
Unlimited consumerism has emerged as a threat to environment	190	3.88	0.688

With respect to objectives of Environmental auditing, based on responses obtained and data compiled above it can be observed that-

- Environmental auditing is a significant tool in interaction with governmental authorities and other parties in the environmental field (Mean= 3.99) followed by
- replication of the belief that proficient environmental reporting is the basis of enduring profitability and decent economic progress (Mean= 3.98) and
- improving competitiveness by making customers and society increasingly aware of environmental issues by addressing them (Mean= 3.95).
- Updating personnel and clients about the entity's environmental work (Mean= 3.92)
- Meeting demands of trade bodies viz. FICCI, ASSOCHAM, etc. (Mean= 3.84)

Hence, in the wake of objectives of Environmental auditing the Mean score depicts that this tool/exercise carries general and specific cum useful objectives to the organisations in different ways.

With respect to advantages of Environmental auditing, based on replies obtained it can be observed that-

- Environmental auditing provide the advantage of Cost savings from waste minimization and avoiding environmental risks (Mean = 4.17),
- avoid fines for noncompliance (Mean= 4.15),
- assist in assurance of financial accruals for environmental liabilities (Mean= 4.07) followed by
- early identification of issues and problems before regulatory enforcement action (Mean= 4.00) and
- bagging any prestigious Award or Certification from Government or Non-government agency (Mean= 3.93) and
- increase in the management awareness on environmental issues (Mean= 3.91)

With regard to reasons for non-adoption or minimal adoption of Environmental auditing, based on replies obtained it can be observed that-

- Lack of real will and commitment by the political wing/s towards addressing implementation of protective measures for conservation of environment (Mean= 4.36)
- Lack of Specific policy on such Emerging issues (Mean= 4.33)
- Difficulty in measuring Cost-Benefit analysis from such practices (Mean= 4.16)
- Voluntary Nature of Environmental Auditing (Mean= 4.10)
- Unawareness about the benefits of Environmental Auditing (Mean= 4.10)
- Absence of Environmental Auditing Standard (Mean= 4.03)
- In wake of achieving short term gains by corporates, long term challenges to environment are ignored (Mean= 3.98)
- Unlimited consumerism has emerged as a threat to environment (Mean= 3.88)

With respect to reasons leading to non-adoption or minimal adoption of Environmental auditing practices at large, respondents have opined that there is Lack of real will and commitment by the political wing/s towards addressing implementation of protective measures for conservation of environment (Mean= 4.36) and lack of Specific policy on such Emerging issue (Mean= 4.33).

Difficulty in measuring Cost-Benefit analysis from such practice of Environmental audit (Mean= 4.16) has also been highlighted as one of the significant reason for non-adoption or less adoption of this practice.

5.3.4.5 Evaluation of overall Environmental criteria in organisations

In this section respondents were asked to answer 5 statements related to overall Environmental criteria, ranging from Accounting treatment of environmental liabilities, compliance with Environmental laws and reporting, application of Environmental Management System, development of facilities for treatment, storage or disposal of hazardous wastes and adoption of prevention and waste minimization programmes. These statements were evaluated on a 5-Likert scale ranging from Strongly Agree = 5 to Strongly Disagree = 1.

Table 5.12

Evaluation of Overall criteria

Selected criteria	N	Mean	SD
Whether entities provide Accounting treatment for environmental liabilities in the Financial statements?	190	1.77	0.727
Whether organisations comply with environmental laws and reporting requirements?	190	3.74	1.076
Whether entities apply the Environmental Management System (EMS) to manage environmental risks and protect environment?	190	4.19	0.608
Whether organisations develop facilities and programmes for the treatment, storage or disposal of hazardous wastes?	190	3.78	1.081
Whether entities adopt Prevention of pollution and waste minimization programmes?	190	4.06	1.165

It is observed that-

- entities apply the Environmental Management System (EMS) to manage environmental risks and protect environment (Mean= 4.19) followed by
- entities adopt Prevention of pollution and waste minimization programmes (Mean= 4.06) and
- organisations develop facilities and programmes for the treatment, storage or disposal of hazardous wastes (Mean= 3.78)
- organisations comply with environmental laws and reporting requirements (Mean= 3.74)

It is noteworthy here that Mean score of 1.77 only was found with respect to entities providing Accounting treatment for environmental liabilities in the Financial statements.

5.3.5. Factor Analysis

Of late, multivariate techniques have emerged as a powerful tool to analyse data represented in terms of many variables. The main reason being that a series of univariate analysis carried out separately for each variable may, at times, lead to incorrect interpretation of the result. This is so because univariate analysis does not consider the correlation or inter-dependence among the variables.

Multivariate techniques are largely empirical and deal with the reality; they possess the ability to analyze complex data. Accordingly in most of the applied and behavioral researches, we generally resort to multivariate analysis techniques for realistic results. Besides being a tool for analyzing the data, multivariate techniques also help in various types of decision-making.

5.3.5.1. Factor Analysis: Environmental Auditing

Table 5.13

KMO and Bartlett's Test for objectives of Environmental auditing

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.878
Bartlett's Test of Sphericity	Approx. Chi-Square	1392.718
	df	55
	Sig.	.000

In case of objectives of Environmental auditing and Advantages emerging from practice of Environmental Auditing by organisations in India, results showed that the KMO measure of sampling adequacy was 0.878, which indicated that the present data were suitable for Factor Analysis. Similarly, Bartlett's Test of sphericity (0.00) was significant ($p<.05$), indicating sufficient correlation exist between the criteria to proceed with the Factor Analysis.

Table 5.14

Total Variance Explained for objectives of Environmental auditing practice

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	6.089	55.354	55.354	6.089	55.354	55.354	4.178	37.980	37.980
2	1.308	11.892	67.246	1.308	11.892	67.246	3.219	29.266	67.246
3	0.888	8.023	75.269						
4	0.616	5.596	80.865						
5	0.500	4.545	85.410						
6	0.415	3.773	89.183						
7	0.353	3.208	92.391						
8	0.279	2.540	94.931						
9	0.245	2.227	97.158						
10	0.168	1.528	98.686						
11	0.145	1.314	100.00						

Extraction Method: Principal Component Analysis.

Graph 5.25

Scree plot for components of objectives of environmental auditing practice

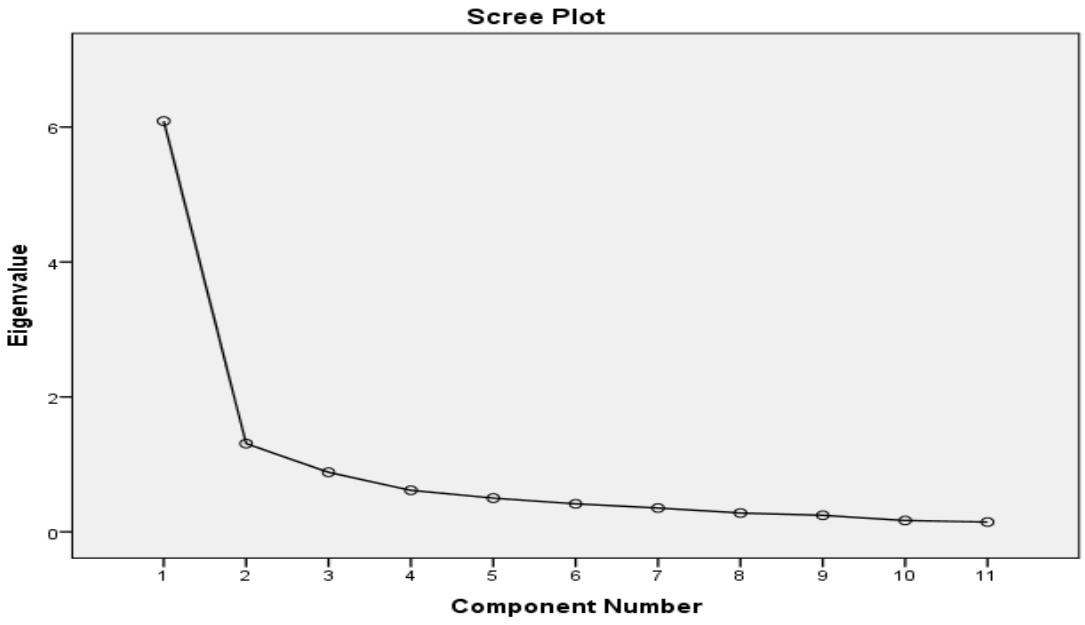


Table 5.15

Total Variance Explained for loadings of objectives of environmental auditing

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	6.089	55.354	55.354	6.089	55.354	55.354	4.178	37.980	37.980
2	1.308	11.892	67.246	1.308	11.892	67.246	3.219	29.266	67.246

Extraction Method: Principal Component Analysis.

The first two components (factors) in the initial solution have an Eigenvalues over 1 and it accounted for about 67 per cent of the observed variations in the reasons for Objects of Environmental Auditing system and Advantages emerging from practice therefrom. According to Kaiser Criterion, only the first two factors should be used because subsequent Eigenvalues are all less than 1.

Table 5.16

Communalities and Rotated Component Matrix of organisation's Objectives of Environmental Auditing practice and Advantages emerging therefrom

Sr. No	Selected Criteria	Communalities Extraction	Rotated Component	
			1	2
01	As a replication of the belief that proficient environmental reporting is the basis of enduring profitability and decent economic progress	.679	.361	.741
02	Improving competitiveness by making customers and society increasingly aware of environmental issues by addressing them	.703	.252	.799
03	Updating personnel and clients about the entity's environmental work	.546	.303	.674
04	Meeting demands of trade bodies viz. FICCI, ASSOCHAM, etc.	.717	.479	.698
05	Acting as a significant tool in interactions with governmental	.648	.100	.799

	authorities and other parties in the environmental field			
06	Increase in the management awareness on environmental issues	.684	.784	.263
07	Avoiding of fines for noncompliance	.662	.766	.275
08	Assurance of financial accruals for environmental liabilities	.555	.678	.308
09	Cost savings from waste minimization and avoiding environmental risks	.691	.814	.171
10	Early identification of issues and problems before regulatory enforcement action	.696	.793	.258
11	Bagging any prestigious Award or Certification from Government or Non-government agency/ies	.817	.837	.341

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

A Rotation converged in 3 iterations.

All the extracted communalities are acceptable and all criteria are fit for the factor solution as their extraction values are large enough.

Factor loadings were used to measure correlation between criteria and the factors. A factor loading close to 1 indicates a strong correlation between a criteria and factor, while a loading closer to zero indicated weak correlation. The factors are rotated with the use of Varimax with Kaiser Normalization rotation method. Principle Component Analysis (PCA) method is used for factor extraction and consider only those factors for interpretation purpose whose values are greater than 0.6.

From the above table it becomes clear that how much different criteria were correlated with two components. The criteria 6 (Increase in the management awareness on environmental issues), criteria 7 (Avoiding of fines for noncompliance), criteria 8 (Assurance of financial accruals for environmental

liabilities), criteria 9 (Cost savings from waste minimization and avoiding environmental risks), criteria 10 (Early identification of issues and problems before regulatory enforcement action) and criteria 11 (Bagging any prestigious Award or Certification from Government or Non-government agency/ies) were more correlated with component 1.

Criteria 1 (As a replication of the belief that proficient environmental reporting is the basis of enduring profitability and decent economic progress), criteria 2 (Improving competitiveness by making customers and society increasingly aware of environmental issues by addressing them), criteria 3 (Updating personnel and clients about the entity's environmental work), criteria 4 (Meeting demands of trade bodies viz. FICCI, ASSOCHAM, etc.) and criteria 5 (Acting as a significant tool in interactions with governmental authorities and other parties in the environmental field) were more correlated with component 2.

5.3.5.2 Factor Analysis: Non-Adoption of Environmental Auditing

Table 5.17

KMO and Bartlett's Test on reasons for non-adoption of environmental auditing practice

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	839.228
	df	28
	Sig.	.000

In case of Reasons for Non-adoption of Environmental Auditing by organisations in India, results showed that the KMO measure of sampling adequacy was 0.857, which indicated that the present data were suitable for Factor Analysis. Similarly, Bartlett's Test of sphericity (0.00) was significant ($p<.05$), indicating sufficient correlation exist between the criteria to proceed with the Factor Analysis.

Table 5.18

Total Variance Explained on reasons for non-adoption of environmental auditing

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	4.587	57.333	57.333	4.587	57.333	57.333	3.166	39.579	39.579
2	1.104	13.806	71.139	1.104	13.806	71.139	2.525	31.560	71.139
3	0.628	7.847	78.985						
4	0.468	5.850	84.836						
5	0.404	5.055	89.891						
6	0.336	4.197	94.088						
7	0.284	3.550	97.639						
8	0.189	2.361	100.00						

Extraction Method: Principal Component Analysis

Graph 5.26

Reasons for non-adoption of environmental auditing practice

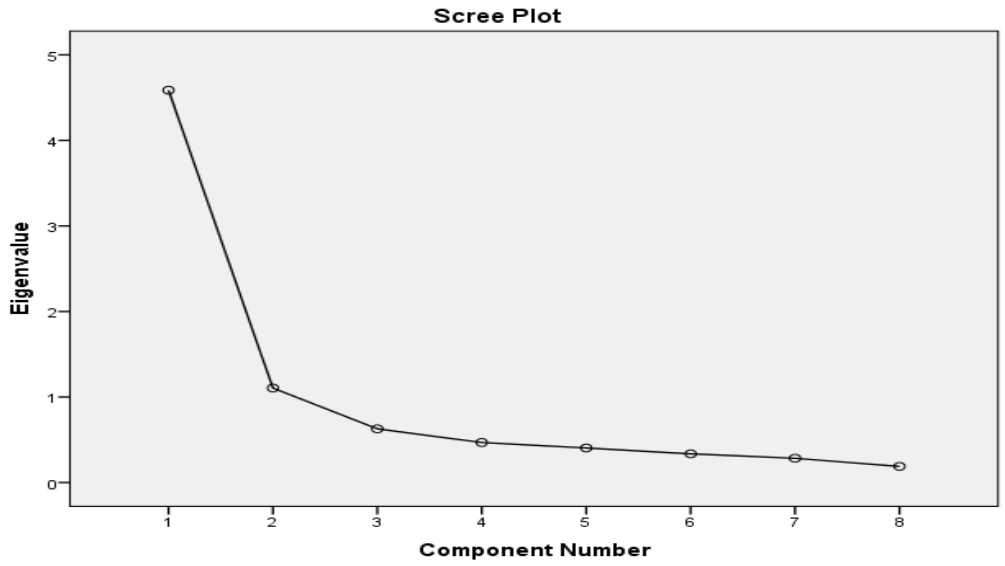


Table 5.19
Total Variance Explained for loadings on reasons for non-adoption of environmental auditing

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	4.587	57.333	57.333	4.587	57.333	57.333	3.166	39.579	39.579
2	1.104	13.806	71.139	1.104	13.806	71.139	2.525	31.560	71.139

Extraction Method: Principal Component Analysis.

The first two components (factors) in the initial solution have an Eigenvalues over 1 and it accounted for about 71 per cent of the observed variations in the Reasons or factors for Non-adoption of Environmental Auditing system.

According to Kaiser Criterion, only the first two factors should be used because subsequent Eigenvalues are all less than 1.

Table 5.20
Communalities and Rotated Component Matrix of reasons leading to non-adoption of environmental auditing practice

Sr. No	Selected Criteria	Communalities Extraction	Rotated Component	
			1	2
01	Voluntary Nature of Environmental Auditing	0.687	.803	.207
02	Lack of Specific policy on such Emerging issues	0.779	.078	.879
03	Unawareness about the benefits of Environmental Auditing	0.767	.875	.043
04	Difficulty in measuring Cost-Benefit analysis from such practices	0.837	.292	.867
05	Absence of Environmental Auditing Standard	0.713	.736	.415
06	Lack of real will and commitment by the political wing/s towards addressing implementation of	0.743	.568	.648

	protective measures for conservation of environment			
07	In wake of achieving short term gains by corporates , long term challenges to environment are ignored	0.686	.742	.368
08	Unlimited consumerism has emerged as a threat to environment	0.478	.500	.478

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 3 iterations.

All the extracted communalities are acceptable and all criteria are fit for the factor solution as their extraction values are large enough.

Factor loadings were used to measure correlation between criteria and the factors. A factor loading close to 1 indicates a strong correlation between a criteria and factor, while a loading closer to zero indicated weak correlation. The factors are rotated with the use of Varimax with Kaiser Normalization rotation method. Principle Component Analysis (PCA) method is used for factor extraction and consider only those factors for interpretation purpose whose values are greater than 0.6.

From the above table it becomes clear that how much different criteria were correlated with two components. The criteria 1 (Voluntary Nature of Environmental Auditing), criteria 3 (Unawareness about the benefits of Environmental Auditing), criteria 5 (Absence of Environmental Auditing Standard) and criteria 7 (In wake of achieving short term gains by corporates , long term challenges to environment are ignored) were more correlated with component 1.

Criteria 2 (Lack of Specific policy on such Emerging issues), criteria 4 (Difficulty in measuring Cost-Benefit analysis from such practices) and criteria 6 (Lack of real will and commitment by the political wing/s towards addressing

implementation of protective measures for conservation of environment) were more correlated with component 2.

5.3.6 Hypothesis Testing: Chi Square Test

Here, analysis is made between the demographic variables and some environmental attributes to establish whether there is some dependency or the two classifications are independent. Hypothesis testing is performed as under:

Ho1 = There is no significant influence of Gender on awareness about various threats to environment.

Table 5.21

Crosstab - Gender * awareness about threats to environment

Count

		Gender		
		Male	Female	Total
Are you aware about various threats to planet Earth's Environment?	Yes	121	56	177
	No	11	2	13
Total		132	58	190

Table 5.22

Chi-Square Tests Gender * awareness about threats to environment

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.509[a]	1	.219		
Continuity Correction[b]	.840	1	.360		
Likelihood Ratio	1.699	1	.192		
Fisher's Exact Test				.350	.182
Linear-by-Linear Association	1.501	1	.221		
N of Valid Cases	190				

a. 1 cell (25.0%) have expected count less than 5. The minimum expected count is 3.97.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .219 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on understanding awareness of various threats to environment.

- 121 Male and 56 Female are aware about various threats to environment.

Ho2 = There is no significant influence of Gender on awareness that environmental issues and concerns play any role in Accounting.

Table 5.23

Crosstab Gender * awareness on role of environmental issues in accounting

Count

		Gender		
		Male	Female	Total
Are you aware that environmental issues and concerns play any role in Accounting?	Yes	116	51	167
	No	16	7	23
Total		132	58	190

Table 5.24

Chi-Square Tests Gender * awareness on role of environmental issues in accounting

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.000[a]	1	.992		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.000	1	.992		
Fisher's Exact Test				1.000	.600
Linear-by-Linear Association	.000	1	.992		
N of Valid Cases	190				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.02.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .992 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on awareness that environmental issues and concerns play any role in Accounting.
- 116 Male and 51 Female are aware about environmental issues and concerns which can play any role in Accounting.

Ho3 = There is no significant influence of Gender on awareness of 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.

Table 5.25

Crosstab - Gender * awareness on Triple bottom line reporting

Count

		Gender		
		Male	Female	Total
Are you aware of 'Triple Bottom Line' Reporting? i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports	Yes	105	41	146
	No	27	17	44
Total		132	58	190

Table 5.26

Chi-Square Tests Gender * awareness on role of environmental issues in accounting

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.776[a]	1	.183		
Continuity Correction[b]	1.313	1	.252		
Likelihood Ratio	1.725	1	.189		
Fisher's Exact Test				.195	.127
Linear-by-Linear Association	1.767	1	.184		
N of Valid Cases	190				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.43.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .183 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on awareness about 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.
- 105 Male and 41 Female are aware about various threats to environment.

Ho4 = There is no significant influence of Gender on awareness about 'Carbon Credit'

Table 5.27

Crosstab Gender * awareness about carbon credit

Count

		Gender		
		Male	Female	Total
Are you aware about 'Carbon Credit'?	Yes	111	41	152
	No	21	17	38
Total		132	58	190

Table 5.28

Chi-Square Tests Gender * awareness about carbon credit

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.523[a]	1	.033		
Continuity Correction[b]	3.724	1	.054		
Likelihood Ratio	4.310	1	.038		
Fisher's Exact Test				.048	.029
Linear-by-Linear Association	4.499	1	.034		
N of Valid Cases	190				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.60.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .033 which is less than 0.05.It proves that null hypothesis is rejected.
- This means the chi-square test shows that there is significant influence of Gender on awareness of 'Carbon credit'.
- 111 Male and 41 Female are aware about various threats to environment.

Ho5 = There is no significant influence of Gender on greater 'environmental awareness' which is necessary in the society to minimize the 'impact' on the planet Earth.

Table 5.29

Crosstab Gender * environmental awareness to minimize impact

Count

		Gender		
		Male	Female	Total
Do you think that more 'environmental awareness' is necessary in the society to minimise the 'impact' on the planet Earth?	Yes	131	56	187
	No	1	2	3
Total		132	58	190

Table 5.30

Chi-Square Tests Gender * environmental awareness to minimize impact

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.877[a]	1	.171		
Continuity Correction[b]	.545	1	.460		
Likelihood Ratio	1.685	1	.194		
Fisher's Exact Test				.221	.221
Linear-by-Linear Association	1.867	1	.172		
N of Valid Cases	190				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .92.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .171 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on greater 'environmental awareness' which is necessary in the society to minimize the 'impact' on the planet Earth.
- 131 Male and 56 Female are aware about various threats to environment.

Ho6 = There is no significant influence of Gender on agreement with treatment of environmental costs as Expense with no future advantage(s).

Table 5.31

Crosstab Gender * treatment of environmental cost

Count

		Gender		
		Male	Female	Total
Do you agree with treatment of environmental costs as Expense with no future advantage(s)?	Yes	28	10	38
	No	104	48	152
Total		132	58	190

Table 5.32

Chi-Square Tests Gender * treatment of environmental cost

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.397[a]	1	.529		
Continuity Correction[b]	.188	1	.665		
Likelihood Ratio	.406	1	.524		
Fisher's Exact Test				.694	.337
Linear-by-Linear Association	.395	1	.530		
N of Valid Cases	190				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.60.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .529 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on agreement with treatment of environmental costs as Expense with any future advantage.
- 104 Male and 48 Female are opined that they do not agree with treatment of environmental costs as Expense with any future advantage.

Ho7 = There is no significant influence of Gender on observation about Capitalizing environmental costs incurred in preventing air or water pollution and land contamination.

Table 5.33

Crosstab Gender * capitalization of environmental cost

Count

		Gender		
		Male	Female	Total
Do you observe Capitalizing environmental costs incurred in preventing air or water pollution and land contamination?	Yes	109	54	163
	No	23	4	27
Total		132	58	190

Table 5.34

Chi-Square Tests Gender * capitalization of environmental cost

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.663[a]	1	.056		
Continuity Correction[b]	2.851	1	.091		
Likelihood Ratio	4.107	1	.043		
Fisher's Exact Test				.071	.041
Linear-by-Linear Association	3.644	1	.056		
N of Valid Cases	190				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.24.

b. Computed only for a 2x2 table

- The above table reveals that the Pearson Chi square value is .056 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Gender on observation about Capitalizing environmental costs incurred in preventing the air or water pollution and land contamination.
- 109 Male and 24 Female have observed that there is Capitalization of environmental costs incurred in preventing the air or water pollution and land contamination.

Ho8 = There is no significant influence of Age on awareness about various threats to planet Earth's Environment.

Table 5.35

Crosstab Age * awareness about threats to environmental

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
1.1Are you aware about various threats to planet Earth's Environment?	Yes	55	42	47	14	15	4	177
	No	3	3	5	1	0	1	13
Total		58	45	52	15	15	5	190

Table 5.36

Chi-Square Tests Age * awareness about threats to environmental

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.344[a]	5	.647
Likelihood Ratio	3.894	5	.565
Linear-by-Linear Association	.166	1	.684
N of Valid Cases	190		

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .34.

- The above table reveals that the Pearson Chi square value is .647 which is more than 0.05.It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Age on awareness about various threats to planet Earth's Environment.
- 55 respondents were below 25 years, 42 between 25 to 30 years, 47 between 31 to 35 and 29 between 36 to 50 years who are aware about various threats to environment.

Ho9 = There is no significant influence of Age on belief that 'Environment' is important concern in present day world.

Table 5.37

Crosstab Age * belief that environment is important concern

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Do you believe that 'Environment' is important concern in present day world?	Yes	49	45	52	14	15	5	180
	No	9	0	0	1	0	0	10
Total		58	45	52	15	15	5	190

Table 5.38

Chi-Square Tests Age * belief that environment is important concern

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.790[a]	5	.002
Likelihood Ratio	20.942	5	.001
Linear-by-Linear Association	7.933	1	.005
N of Valid Cases	190		

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .26.

- The above table reveals that the Pearson Chi square value is .002 which is less than 0.05.It proves that null hypothesis is rejected.
- This means the chi-square test shows that there is significant influence of Age on belief that 'Environment' is important concern in present day world.
- 49 respondents were below 25 years, 45 between 25 to 30 years, 52 between 31 to 35 and 29 between 36 to 50 years who believe that 'Environment' is important concern in present day world.

Ho10 = There is no significant influence of Age on awareness that environmental issues and concerns play any role in Accounting.

Table 5.39

Crosstab Age * awareness that environmental issues play any role in accounting

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Are you aware that environmental issues and concerns play any role in Accounting?	Yes	53	40	49	10	14	1	167
	No	5	5	3	5	1	4	23
Total		58	45	52	15	15	5	190

Table 5.40

Chi-Square Tests Age * awareness that environmental issues play any role in accounting

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.098[a]	5	.000
Likelihood Ratio	20.379	5	.001
Linear-by-Linear Association	7.170	1	.007
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .61.

- The above table reveals that the Pearson Chi square value is .000 which is less than 0.05.It proves that null hypothesis is rejected.
- This means the chi-square test shows that there is significant influence of Age on awareness that environmental issues and concerns play any role in Accounting.
- 53 respondents were below 25 years, 40 between 25 to 30 years, 49 between 31 to 35 and 24 between 36 to 50 years who believe that environmental issues and concerns play any role in Accounting.

Ho11 = There is no significant influence of Age on belief that Environmental pillar is important for Sustainable Development.

Table 5.41

Crosstab Age * awareness that environmental pillar is important

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Whether Environmental pillar is important for Sustainable Development?	Yes	55	45	52	15	15	5	187
	No	3	0	0	0	0	0	3
Total		58	45	52	15	15	5	190

Table 5.42

Chi-Square Tests Age * awareness that environmental pillar is important

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.937[a]	5	.225
Likelihood Ratio	7.230	5	.204
Linear-by-Linear Association	3.618	1	.057
N of Valid Cases	190		

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is .08.

- The above table reveals that the Pearson Chi square value is .225 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Age on belief that Environmental pillar is important for Sustainable Development.

- 55 respondents were below 25 years, 45 between 25 to 30 years, 52 between 31 to 35 and 30 between 36 to 50 years who believe that Environmental pillar is important for Sustainable Development.

Ho12 = There is no significant influence of Age on awareness about 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.

Table 5.43

Crosstab Age * awareness about Triple bottom line reporting

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Are you aware about 'Triple Bottom Line' Reporting? i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports	Yes	38	33	47	12	13	3	146
	No	20	12	5	3	2	2	44
Total		58	45	52	15	15	5	190

Table 5.44

Chi-Square Tests Age* awareness about Triple bottom line reporting

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.545[a]	5	.042
Likelihood Ratio	12.286	5	.031
Linear-by-Linear Association	3.968	1	.046
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 1.16.

- The above table reveals that the Pearson Chi square value is .042 which is less than 0.05.It proves that null hypothesis is rejected.
- This means the chi-square test shows that there is significant influence of Age on awareness about 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.
- 38 respondents were below 25 years, 33 between 25 to 30 years, 47 between 31 to 35 and 25 between 36 to 50 years who are aware about 'Triple Bottom

Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.

Ho13 = There is no significant influence of Age on awareness about 'Carbon Credit'.

Table 5.45

Crosstab Age * awareness on carbon credit

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Are you aware about 'Carbon Credit'?	Yes	43	35	45	13	12	4	152
	No	15	10	7	2	3	1	38
Total		58	45	52	15	15	5	190

Table 5.46

Chi-Square Tests Age * awareness on carbon credit

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.191[a]	5	.671
Likelihood Ratio	3.289	5	.655
Linear-by-Linear Association	1.402	1	.236
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 1.00.

- The above table reveals that the Pearson Chi square value is .671 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Age on awareness about 'Carbon Credit'.

- 43 respondents were below 25 years, 35 between 25 to 30 years, 45 between 31 to 35 and 25 between 36 to 50 years who are aware about 'Carbon Credit'.

Ho14 = There is no significant influence of Age on observation about Capitalizing environmental costs incurred in preventing air or water pollution and land contamination.

Table 5.47

Crosstab Chi-Square Tests Age * observation of capitalization of environmental costs

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Do you observe Capitalizing environmental costs incurred in preventing air or water pollution and land contamination?	Yes	51	40	42	12	14	4	163
	No	7	5	10	3	1	1	27
Total		58	45	52	15	15	5	190

Table 5.48

Chi-Square Tests Age * observation of capitalization of environmental costs

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.898[a]	5	.716
Likelihood Ratio	2.937	5	.710
Linear-by-Linear Association	.267	1	.605
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .71.

- The above table reveals that the Pearson Chi square value is .716 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Age on observation about Capitalizing environmental costs incurred in preventing the air or water pollution and land contamination.

- 51 respondents were below 25 years, 40 between 25 to 30 years, 42 between 31 to 35 and 26 between 36 to 50 years who are observe Capitalization of environmental costs incurred in preventing the air or water pollution and land contamination.

Ho15 = There is no significant influence of Age on key areas of Audit viz. Transport, Waste management, Eco-consumerism and Community awareness.

Table 5.49

Crosstab Age * observation of key areas of audit

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Transport, Waste management, Eco-consumerism and Community awareness	Yes	24	11	7	3	5	1	51
	No	34	34	45	12	10	4	139
Total		58	45	52	15	15	5	190

Table 5.50

Chi-Square Tests Age * observation of key areas of audit

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.913[a]	5	.036
Likelihood Ratio	12.115	5	.033
Linear-by-Linear Association	3.725	1	.054
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is 1.34.

- The above table reveals that the Pearson Chi square value is .036 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Age on observation of various types of Audit viz. Transport, Waste management, Eco-consumerism and Community awareness.

- 24 respondents were below 25 years, 11 between 25 to 30 years, 07 between 31 to 35 and 08 between 36 to 50 years who are observe various types of Audit viz. Transport, Waste management, Eco-consumerism and Community awareness.

Ho16 = There is no significant influence of Age on observation of type of Audit viz. Waste Disposal-Treatment Storage & Disposal Facility audit, Waste Transport audit, Water audit, Energy audit, Material Balance audit, Environmental Review, Due Diligence audit.

Table 5.51

Crosstab Age * observation of type of audit

Count

		Age (Years)						
		Below 25	Between 25-30	Between 31-35	Between 36-40	Between 41-50	Above 50	Total
Waste Disposal-Treatment Storage & Disposal Facility audit, Waste Transport audit, Water audit, Energy audit, Material Balance audit, Environmental Review, Due Diligence audit, etc.	Yes	11	7	10	2	3	3	36
	No	47	38	42	13	12	2	154
Total		58	45	52	15	15	5	190

Table 5.52

Chi-Square Tests Age * observation of type of audit

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.146[a]	5	.292
Likelihood Ratio	4.794	5	.441
Linear-by-Linear Association	.961	1	.327
N of Valid Cases	190		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .95.

- The above table reveals that the Pearson Chi square value is .292 which is more than 0.05. It proves that null hypothesis is accepted.
- This means the chi-square test shows that there is no significant influence of Age on observation of type of Audit viz. Waste Disposal-Treatment Storage & Disposal Facility audit, Waste Transport audit, Water audit,

Energy audit, Material Balance audit, Environmental Review, Due Diligence audit.

- 47 respondents were below 25 years, 38 between 25 to 30 years, 42 between 31 to 35 and 25 between 36 to 50 years have not observed various types of Audit viz. Transport, Waste management, Eco-consumerism and Community awareness.

Ho17 = There is no significant influence of Graduation on awareness about various threats to planet Earth's Environment.

Table 5.53

Crosstab Graduation* awareness of threats to environment

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
1.1Are you aware about various threats to planet Earth's Environment?	Yes	116	5	31	7	6	2	10	177
	No	8	2	1	0	0	0	2	13
Total		124	7	32	7	6	2	12	190

Table 5.54

Chi-Square Tests Graduation* awareness of threats to environment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.828[a]	6	.184
Likelihood Ratio	7.408	6	.285
Linear-by-Linear Association	.165	1	.685
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .14.

- The above table reveals that the Pearson Chi square value is .184 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Graduation on awareness of various threats to planet Earth's environment.

- 116 Commerce, 5 Arts, 31 Business Administration, 7 Science and 6 Engineering Graduates are aware about various threats to environment.

Ho18 = There is no significant influence of Graduation on awareness about environmental issues and concerns which can play any role in Accounting.

Table 5.55

Crosstab Graduation* awareness about environmental issues and role in accounting

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Are you aware that environmental issues and concerns play any role in Accounting?	Yes	113	7	28	4	3	1	11	167
	No	11	0	4	3	3	1	1	23
Total		124	7	32	7	6	2	12	190

Table 5.56

Chi-Square Tests Graduation* awareness about environmental issues and role in accounting

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.367[a]	6	.004
Likelihood Ratio	14.292	6	.027
Linear-by-Linear Association	4.218	1	.040
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .24.

- The above table reveals that the Pearson Chi square value is .004 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Graduation on awareness about environmental issues and concerns which can play any role in Accounting.

- 113 Commerce, 7 Arts, 28 Business Administration, 4 Science and 3 Engineering Graduates are aware about environmental issues and concerns which can play any role in Accounting.

Ho19 = There is no significant influence of Graduation on belief that 'Global Warming' is becoming the real 'Warning' to the mankind.

Table 5.57

Crosstab Graduation* belief that global warming is real warning

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Whether 'Global Warming' is becoming the real 'Warning' to the mankind?	Yes	106	6	30	6	6	1	11	166
	No	18	1	2	1	0	1	1	24
Total		124	7	32	7	6	2	12	190

Table 5.58

Chi-Square Tests Graduation* belief that global warming is real warning

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.214[a]	6	.517
Likelihood Ratio	5.313	6	.504
Linear-by-Linear Association	.572	1	.450
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .25.

- The above table reveals that the Pearson Chi square value is .517 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Graduation on belief that 'Global Warming' is becoming the real 'Warning' to the mankind.

- 106 Commerce, 6 Arts, 30 Business Administration, 6 Science and 6 Engineering Graduates believe that 'Global Warming' is becoming the real 'Warning' to the mankind.

Ho20 = There is no significant influence of Graduation on awareness about 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports.

Table 5.59

Crosstab Graduation* awareness about Triple bottom line reporting

Count

		Graduation							Total
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	
Are you aware about 'Triple Bottom Line' Reporting? i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports	Yes	100	2	28	5	5	1	5	146
	No	24	5	4	2	1	1	7	44
Total		124	7	32	7	6	2	12	190

Table 5.60

Chi-Square Tests Graduation* awareness about Triple bottom line reporting

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.627[a]	6	.001
Likelihood Ratio	18.453	6	.005
Linear-by-Linear Association	5.722	1	.017
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .46.

- The above table reveals that the Pearson Chi square value is .001 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Graduation on understanding to Triple Bottom Line Reporting.

- 100 Commerce, 2 Arts, 28 Business Administration, 5 Science and 5 Engineering Graduates are aware about Triple Bottom Line Reporting in the corporates.

Ho21 = There is no significant influence of Graduation on awareness about 'Carbon credit'.

Table 5.61

Crosstab Graduation* awareness about carbon credit

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Are you aware about 'Carbon Credit'?	Yes	104	4	29	3	5	1	6	152
	No	20	3	3	4	1	1	6	38
Total		124	7	32	7	6	2	12	190

Table 5.62

Chi-Square Tests Graduation* awareness about carbon credit

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.657[a]	6	.003
Likelihood Ratio	16.737	6	.010
Linear-by-Linear Association	7.606	1	.006
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .40.

- The above table reveals that the Pearson Chi square value is .003 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Graduation on awareness of Carbon credit.

- 104 Commerce, 4 Arts, 29 Business Administration, 3 Science and 5 Engineering Graduates were found aware about 'Carbon credit'.

Ho22 = There is no significant influence of Graduation on observation about Capitalizing environmental costs incurred in preventing air or water pollution and land contamination.

Table 5.63

Crosstab Graduation* awareness about observation of capitalization of environmental costs

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Do you observe Capitalizing environmental costs incurred in preventing air or water pollution and land contamination?	Yes	110	5	29	5	2	1	11	163
	No	14	2	3	2	4	1	1	27
Total		124	7	32	7	6	2	12	190

Table 5.64

Chi-Square Tests Graduation* awareness about observation of capitalization of environmental costs

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.833[a]	6	.003
Likelihood Ratio	13.942	6	.030
Linear-by-Linear Association	2.370	1	.124
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .28.

- The above table reveals that the Pearson Chi square value is .003 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Graduation on observation about Capitalizing environmental costs incurred in preventing the air or water pollution and land contamination.

- 110 Commerce, 5 Arts, 29 Business Administration, 5 Science and 2 Engineering Graduates found Capitalization of environmental costs incurred in preventing the air or water pollution and land contamination.

Ho23 = There is no significant influence of Graduation on agreement with Amortization of environmental costs within 5 years.

Table 5.65

Crosstab Graduation* awareness about amortization of environmental costs

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Do you agree with Amortisation of environmental costs within 5 years?	Yes	114	5	30	5	3	1	9	167
	No	10	2	2	2	3	1	3	23
Total		124	7	32	7	6	2	12	190

Table 5.66

Chi-Square Tests Graduation* awareness about amortization of environmental costs

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.174[a]	6	.004
Likelihood Ratio	14.401	6	.025
Linear-by-Linear Association	8.706	1	.003
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .24.

- The above table reveals that the Pearson Chi square value is .004 which is less than 0.05.It proves that null hypothesis is rejected.

- This means the chi-square test shows that there is significant influence of Graduation on agreement with Amortization of environmental costs within 5 years.

- 114 Commerce, 5 Arts, 30 Business Administration, 5 Science and 3 Engineering Graduates were agreed on Amortization of environmental costs within 5 years.

Ho24 = There is no significant influence of Graduation on finding the type of audit viz. Nature conservation, Renewable Energy, Land use planning, Eco construction.

Table 5.67

Crosstab Graduation* awareness about key areas of audit

Count

		Graduation							
		B. Com	B. A.	B. B. A. / B. B. S.	B. Sc.	B. E.	Others	Not Responded	Total
Nature conservation, Renewable Energy, Land use planning, Eco construction, etc.	Yes	108	5	28	7	6	1	12	167
	No	16	2	4	0	0	1	0	23
Total		124	7	32	7	6	2	12	190

Table 5.68

Chi-Square Tests Graduation* awareness about key areas of audit

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.005[a]	6	.238
Likelihood Ratio	9.598	6	.143
Linear-by-Linear Association	1.320	1	.251
N of Valid Cases	190		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is .24.

- The above table reveals that the Pearson Chi square value is .238 which is more than 0.05.It proves that null hypothesis is accepted.

- This means the chi-square test shows that there is no significant influence of Graduation on coming across the type of audit viz. Nature conservation, Renewable Energy, Land use planning, Eco construction

- 108 Commerce, 5 Arts, 28 Business Administration, 7 Science and 6 Engineering Graduates came across the type of audit viz. Nature conservation, Renewable Energy, Land use planning, Eco construction

5.3.7 Hypothesis Testing: ANOVA Analysis

Analysis of variance (abbreviated as ANOVA) is an extremely useful technique concerning researches in the fields of economics, biology, education, psychology, sociology, business/industry and in researches of several other disciplines. This technique is used when multiple sample cases are involved. As the significance of the difference between the means of two samples can be judged through either *z*-test or the *t*-test, but the difficulty arises when we happen to examine the significance of the difference amongst more than two sample means at the same time. The ANOVA technique enables to perform this simultaneous test and as such is considered to be an important tool of analysis in the hands of a researcher. Using this technique, one can draw inferences about whether the samples have been drawn from populations having the same mean.

ANOVA Tables are used to test hypotheses about the population means. When the null hypothesis of equal means is true, the two mean squares estimate the same quantity (error variance), and should be of approximately equal magnitude. In other words their ratio should be close to 1.

It is a statistical method used to test differences between two or more means. Here, inferences are made by analyzing variance. t-statistic is used for testing for testing whether two population means are equal. The analysis of variance of test may be taken as an extension of t-test for the case of more than two population means.

In the following section an attempt is made to analyze and identify any difference between mean values exists between the demographic aspects of respondents and Environmental Accounting, Environmental Compliance and Environmental Auditing practices followed in India are analyzed. Some inferences have been drawn out from it.

5.3.7.1. One way ANOVA analysis for Environmental Accounting and Demographic aspects

5.3.7.1.1. One way ANOVA analysis for Environmental Accounting and Gender of respondents

Ho25 = There is no significant difference between gender of the respondents and features of Environmental Accounting as well as advantages emerging from such practice and an alternative hypothesis is at least one mean different from other.

Table 5.69 ANOVA

Analysis for environmental accounting and Gender of respondents

		Sum of Squares	df	Mean Square	F	Sig.
It helps in planning the Cost Control and/or Cost Reduction	Between Groups	.322	1	.322	.294	.588
	Within Groups	205.578	188	1.094		
	Total	205.900	189			
It promotes designing several processes using the environment friendly technologies	Between Groups	.549	1	.549	.539	.464
	Within Groups	191.745	188	1.020		
	Total	192.295	189			
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	Between Groups	.013	1	.013	.011	.915
	Within Groups	210.940	188	1.122		
	Total	210.953	189			
It evaluates the Impact of entity's Project on surrounding environment	Between Groups	.012	1	.012	.011	.918
	Within Groups	216.282	188	1.150		
	Total	216.295	189			
Accounting for environmental outlays and performance recording can help in implementing Environmental policies framed	Between Groups	.903	1	.903	.817	.367
	Within Groups	207.708	188	1.105		
	Total	208.611	189			
Collection and recording of environmental costs can further endorse precise costing	Between Groups	.004	1	.004	.004	.949
	Within Groups	191.175	188	1.017		
	Total	191.179	189			
Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	Between Groups	.002	1	.002	.002	.961
	Within Groups	181.492	188	.965		
	Total	181.495	189			

- The above ANOVA statistics reveal that on the opinion regarding features of Environmental Accounting as well as advantages emerging from such practice, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be inferred that no significant difference is noted between gender of the respondents and features of Environmental Accounting as well as advantages emerging from such practice.

5.3.7.1.2. One way ANOVA analysis for Environmental Accounting and Age Group of respondents

Ho26 = There is no significant difference between Age group of the respondents and features of Environmental Accounting as well as advantages emerging from such practice and an alternative hypothesis is at least one mean different from other.

Table 5.70

ANOVA analysis for environmental accounting and Age group of respondents

		Sum of Squares	df	Mean Square	F	Sig.
It helps in planning the Cost Control and/or Cost Reduction	Between Groups	9.754	5	1.951	1.830	.109
	Within Groups	196.146	184	1.066		
	Total	205.900	189			
It promotes designing several processes using the environment friendly technologies	Between Groups	3.547	5	.709	.692	.630
	Within Groups	188.748	184	1.026		
	Total	192.295	189			
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	Between Groups	6.380	5	1.276	1.148	.337
	Within Groups	204.573	184	1.112		
	Total	210.953	189			
It evaluates the Impact of entity's Project on surrounding environment	Between Groups	3.718	5	.744	.644	.667
	Within Groups	212.577	184	1.155		
	Total	216.295	189			
Accounting for environmental outlays and performance recording can help in implementing Environmental policies framed	Between Groups	2.395	5	.479	.427	.829
	Within Groups	206.215	184	1.121		
	Total	208.611	189			
Collection and recording of environmental costs can further endorse precise costing	Between Groups	2.524	5	.505	.492	.782
	Within Groups	188.655	184	1.025		
	Total	191.179	189			

Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	Between Groups	6.252	5	1.250	1.313	.260
	Within Groups	175.243	184	.952		
	Total	181.495	189			

- The above ANOVA statistics reveal that on the opinion regarding Features of Environmental Accounting and Advantages emerging from such practice, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be inferred that there is no significant difference between Age group of the respondents and features of Environmental Accounting as well as advantages emerging from such practice.

5.3.7.1.3. One way ANOVA analysis for Environmental Accounting and Graduation of respondents

Ho27 = There is no significant difference between Graduation of the respondents and features of Environmental Accounting as well as advantages emerging from such practice and an alternative hypothesis is at least one mean different from other.

Table 5.71

ANOVA analysis for environmental accounting and Graduation group of respondents

		Sum of Squares	df	Mean Square	F	Sig.
It helps in planning the Cost Control and/or Cost Reduction	Between Groups	8.063	6	1.344	1.243	.286
	Within Groups	197.837	183	1.081		
	Total	205.900	189			
It promotes designing several processes using the environment friendly technologies	Between Groups	2.727	6	.455	.439	.852
	Within Groups	189.567	183	1.036		
	Total	192.295	189			
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	Between Groups	1.778	6	.296	.259	.955
	Within Groups	209.174	183	1.143		
	Total	210.953	189			
It evaluates the Impact of entity's Project on surrounding environment	Between Groups	2.301	6	.383	.328	.922
	Within Groups	213.994	183	1.169		
	Total	216.295	189			
Accounting for environmental outlays and performance recording	Between Groups	5.612	6	.935	.843	.538
	Within Groups	202.999	183	1.109		

can help in implementing Environmental policies framed	Total	208.611	189			
Collection and recording of environmental costs can further endorse precise costing	Between Groups	7.431	6	1.239	1.234	.291
	Within Groups	183.748	183	1.004		
	Total	191.179	189			
Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	Between Groups	6.035	6	1.006	1.049	.395
	Within Groups	175.460	183	.959		
	Total	181.495	189			

- The above ANOVA statistics reveal that on the opinion regarding features of Environmental Accounting and advantages emerging from such practice, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be inferred that there is no significant difference between Graduation of the respondents and features of Environmental Accounting as well as advantages emerging from such practice.

5.3.7.1.4. One way ANOVA analysis for Environmental Accounting and Post-Graduation of respondents

Ho28 = There is no significant difference between Post-graduation of the respondents and features of Environmental Accounting as well as advantages emerging from such practice and an alternative hypothesis is at least one mean different from other.

Table 5.72

ANOVA analysis for environmental accounting and Post-Graduation group of respondents

		Sum of Squares	df	Mean Square	F	Sig.
It helps in planning the Cost Control and/or Cost Reduction	Between Groups	6.397	5	1.279	1.180	.321
	Within Groups	199.503	184	1.084		
	Total	205.900	189			
It promotes designing several processes using the environment friendly technologies	Between Groups	.968	5	.194	.186	.968
	Within Groups	191.327	184	1.040		
	Total	192.295	189			
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	Between Groups	2.721	5	.544	.481	.790
	Within Groups	208.232	184	1.132		
	Total	210.953	189			
It evaluates the Impact of entity's	Between Groups	3.309	5	.662	.572	.722

Project on surrounding environment	Within Groups	212.986	184	1.158		
	Total	216.295	189			
Accounting for environmental outlays and performance recording can help in implementing Environmental policies framed	Between Groups	7.198	5	1.440	1.315	.259
	Within Groups	201.413	184	1.095		
	Total	208.611	189			
Collection and recording of environmental costs can further endorse precise costing	Between Groups	11.708	5	2.342	2.401	.039
	Within Groups	179.471	184	.975		
	Total	191.179	189			
Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	Between Groups	5.807	5	1.161	1.216	.303
	Within Groups	175.688	184	.955		
	Total	181.495	189			

- The above ANOVA statistics reveal that on the opinion regarding features of Environmental Accounting and advantages emerging, in all observations null hypothesis fails to reject (Sig. value>0.05) except statement no. 6.
- So, it can be inferred that respondents from different Post-graduation backgrounds have agreed that owing to Features of Environmental Accounting some Advantages emerge.
- Respondents from different Post-graduation backgrounds have not agreed that due to features of Environmental Accounting, collection and recording of environmental costs can further endorse precise costing.

5.3.7.1.5. One way ANOVA analysis for Environmental Accounting and Professional Course

Ho29 = There is no significant difference between Professional Qualification of the respondents and features of Environmental Accounting as well as advantages emerging from such practice and an alternative hypothesis is at least one mean different from other.

Table 5.73

ANOVA analysis for environmental accounting and Professional course of respondents

		Sum of Squares	df	Mean Square	F	Sig.
It helps in planning the Cost Control and/or Cost Reduction	Between Groups	1.184	5	.237	.213	.957
	Within Groups	204.716	184	1.113		
	Total	205.900	189			
It promotes designing several processes using the environment friendly technologies	Between Groups	1.931	5	.386	.373	.867
	Within Groups	190.364	184	1.035		
	Total	192.295	189			
It identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources	Between Groups	2.767	5	.553	.489	.784
	Within Groups	208.186	184	1.131		
	Total	210.953	189			
It evaluates the Impact of entity's Project on surrounding environment	Between Groups	.715	5	.143	.122	.987
	Within Groups	215.580	184	1.172		
	Total	216.295	189			
Accounting for environmental outlays and performance recording can help in implementing Environmental policies framed	Between Groups	1.065	5	.213	.189	.967
	Within Groups	207.545	184	1.128		
	Total	208.611	189			
Collection and recording of environmental costs can further endorse precise costing	Between Groups	2.759	5	.552	.539	.747
	Within Groups	188.420	184	1.024		
	Total	191.179	189			
Reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development	Between Groups	1.155	5	.231	.236	.946
	Within Groups	180.340	184	.980		
	Total	181.495	189			

- The above ANOVA statistics reveal that on the opinion regarding features of Environmental Accounting as well as Advantages emerging from such practice, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be inferred that there is no significant difference between Professional Qualification of the respondents and features of Environmental Accounting as well as advantages emerging.

5.3.7.2. One way ANOVA analysis for Environmental Compliance and Demographic aspects

5.3.7.2.1. One way ANOVA analysis for Environmental Compliance and Gender of respondents

Ho30 = There is no significant difference between Gender of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations and an alternative hypothesis is at least one mean different from other.

Table 5.74

ANOVA analysis for environmental compliance and Gender of respondents

		Sum of Squares	df	Mean Square	F	Sig.
Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies	Between Groups	.256	1	.256	.341	.560
	Within Groups	140.823	188	.749		
	Total	141.079	189			
Adoption of Environmental Calendar activities viz. creating environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.	Between Groups	.080	1	.080	.052	.820
	Within Groups	291.020	188	1.548		
	Total	291.100	189			
Acceptance of the Information disclosures and Report submission requirements of Central Pollution Control Board (CPCB) and SPCB	Between Groups	.532	1	.532	1.116	.292
	Within Groups	89.678	188	.477		
	Total	90.211	189			
Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting	Between Groups	.139	1	.139	.187	.666
	Within Groups	140.071	188	.745		
	Total	140.211	189			
Addressing the issues pertaining to National Environment Policy,	Between Groups	.046	1	.046	.070	.791
	Within Groups	124.164	188	.660		

2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation	Total	124.211	189			
Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001	Between Groups	1.176	1	1.176	.748	.388
	Within Groups	295.476	188	1.572		
	Total	296.653	189			

- The above ANOVA statistics reveal that regarding observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be stated that there is no significant difference between Gender of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations.

5.3.7.2.2. One way ANOVA analysis for Environmental Compliance and Age Group of respondents

Ho31 = There is no significant difference between Age group of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations and an alternative hypothesis is at least one mean different from other.

Table 5.75

ANOVA analysis for environmental compliance and Age group of respondents

		Sum of Squares	df	Mean Square	F	Sig.
Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies	Between Groups	2.432	5	.486	.645	.665
	Within Groups	138.647	184	.754		
	Total	141.079	189			
Adoption of Environmental Calendar activities viz. creating	Between Groups	17.364	5	3.473	2.334	.044
	Within Groups	273.736	184	1.488		

environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.	Total	291.100	189			
Acceptance of the Information disclosures and Report submission requirements of Central Pollution Control Board (CPCB) and SPCB	Between Groups	4.688	5	.938	2.017	.078
	Within Groups	85.523	184	.465		
	Total	90.211	189			
Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting	Between Groups	7.453	5	1.491	2.066	.072
	Within Groups	132.758	184	.722		
	Total	140.211	189			
Addressing the issues pertaining to National Environment Policy, 2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation	Between Groups	8.338	5	1.668	2.648	.024
	Within Groups	115.873	184	.630		
	Total	124.211	189			
Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001	Between Groups	9.780	5	1.956	1.255	.286
	Within Groups	286.873	184	1. 559		
	Total	296.653	189			

- The above ANOVA statistics reveal that regarding different age groups and observation on compliance of applicable Environmental Laws, Rules and Regulations by the entities, in majority observations null hypothesis fails to reject (Sig. value>0.05) except statement no. 2 and 4.
- So, it can be inferred that respondents of different Age group have opined that all organizations do not observe adoption of Environmental Calendar activities viz. creating environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.
- Respondents of different Age groups have opined that all organizations do not address the issues pertaining to National Environment Policy 2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation, etc.

5.3.7.2.3. One way ANOVA analysis for Environmental Compliance and Graduation of respondents

Ho32 = There is no significant difference between Graduation of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations and an alternative hypothesis is at least one mean different from other.

Table 5.76

ANOVA analysis for environmental compliance and Graduation of respondents

		Sum of Squares	df	Mean Square	F	Sig.
Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies	Between Groups	10.275	6	1.712	2.396	.030
	Within Groups	130.804	183	.715		
	Total	141.079	189			
Adoption of Environmental Calendar activities viz. creating environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.	Between Groups	17.655	6	2.942	1.969	.072
	Within Groups	273.445	183	1.494		
	Total	291.100	189			
Acceptance of the Information disclosures and Report submission requirements of Central Pollution Control Board (CPCB) and SPCB	Between Groups	3.489	6	.582	1.227	.294
	Within Groups	86.721	183	.474		
	Total	90.211	189			
Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting	Between Groups	3.310	6	.552	.737	.620
	Within Groups	136.900	183	.748		
	Total	140.211	189			
Addressing the issues pertaining to National Environment Policy,	Between Groups	6.020	6	1.003	1.553	.163
	Within Groups	118.191	183	.646		

2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation	Total	124.211	189			
Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001	Between Groups	14.789	6	2.465	1.600	.149
	Within Groups	281.863	183	1.540		
	Total	296.653	189			

- The above ANOVA statistics reveal that regarding observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations, in majority observations null hypothesis fails to reject (Sig. value>0.05) except statement no. 1. So, it can be inferred that there is no significant difference between Graduation of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations.

5.3.7.2.4. One way ANOVA analysis for Environmental Compliance and Professional Qualification of respondents

Ho33 = There is no significant difference between Professional Qualification of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations and an alternative hypothesis is at least one mean different from other.

Table 5.77

ANOVA environmental compliance and Professional qualification of respondents

		Sum of Squares	df	Mean Square	F	Sig.
Compliance with provisions of- Water Act, 1974; Air Act, 1981, Environment Protection Act, 1986; Hazardous Wastes Management Rules, 1989; Wildlife Protection Act, 1972 and Forest Conservation Act, 1980 as applicable to companies	Between Groups	.714	5	.143	.187	.967
	Within Groups	140.365	184	.763		
	Total	141.079	189			
Adoption of Environmental Calendar activities viz. creating	Between Groups	1.090	5	.218	.138	.983
	Within Groups	290.010	184	1.576		

environmental awareness by celebrating 5th June as World Environment Day, 22nd April as Earth Day, 21st March as World Forestry Day, etc.	Total	291.100	189			
Acceptance of the Information disclosures and Report submission requirements of Central Pollution Control Board (CPCB) and SPCB	Between Groups	.900	5	.180	.371	.868
	Within Groups	89.310	184	.485		
	Total	90.211	189			
Embracing the Global Reporting Initiative (GRI) disclosure requirements in Environmental Reporting	Between Groups	1.878	5	.376	.500	.776
	Within Groups	138.333	184	.752		
	Total	140.211	189			
Addressing the issues pertaining to National Environment Policy, 2006 viz. Pollution Abatement, adoption of Clean Technologies and innovations, Biodiversity, Traditional Knowledge and Cultural Heritage Conservation	Between Groups	.925	5	.185	.276	.926
	Within Groups	123.286	184	.670		
	Total	124.211	189			
Adoption of the Environmental Management System (EMS) and Policy as well as Plans as per ISO 14001	Between Groups	1.543	5	.309	.192	.965
	Within Groups	295.110	184	1.604		
	Total	296.653	189			

- The above ANOVA statistics reveal that on the opinion regarding observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations, in all observations null hypothesis fails to reject (Sig. value>0.05). So, it can be stated that there is no significant difference between Professional Qualification of the respondents and observation on compliance of applicable Environmental Laws, Rules and Regulations by the organizations.

5.4. Findings and Conclusions

- It is observed that the majority (69.5%) of respondents were Male and rest represent Female (30.5%).
- It is found that 30.5% respondents were below 25 years and 23.7 % between 25-30 years and 27.4% respondents were between 31-35 years. Only 2.6% respondents were above 50 years.
- It is found that 65.3% respondents have done Graduation from Commerce, 16.8% have done Business Administration studies, 3.7% have pursued graduation from Arts and Science each. Respondents from engineering field have found 3.2%.
- Among all the respondents with Professional Qualifications, maximum respondents were Chartered Accountants (24.7%) followed by Company Secretary and Cost and Management Accountant. Other professionally qualified respondents were Management consultants, Environmental consultants and Chartered engineers.
- Out of the twelve statements considered for evaluation of the Environmental aspects on general awareness and contemporary issues;
    - whether One 'Carbon Credit' is equivalent to reduction in Two Ton emission of Carbon Dioxide (CO2) (mean value = 1.71) was cited as the important contemporary issue,
    - followed by the concept of UNEP's (United Nations Environment Programme) 'Decoupling' which provides for breaking the chain between the economic good and environmental bad (mean value = 1.43),
    - followed by 'Triple Bottom Line' Reporting i.e. Reporting covering the Profit (economic), People (social) and Planet (environment) aspects incorporated by Corporates in their reports (mean value = 1.23) and
    - awareness about 'Carbon Credit' (mean value = 1.20).
- Almost all the respondents responded on average one plus but 'Carbon Credit' and 'Decoupling' were given more importance. The above presented result provides evidence that even contemporary issues on environmental front are appealing to respondents.

- Out of Total 190 respondents, 177 respondents (Male=121 and Female=56, so 68.4% and 31.60% respectively) were aware about various threats to planet Earth's environment. 13 respondents (Male= 11 and Female= 02) were found unaware of such threats.
- From total, 177 respondents who were aware about various threats to environment, 116 were B. Com.; 05 were B. A.; 31 B. B. A.; 07 B. Sc.; 06 B. E. and 02 others. So, 65.5 percent graduates responding about awareness were from Commerce stream, 17.5 percent from Business Administration/ Studies and 7.4% were from Science and Engineering field. Total 13 respondents who were unaware about various threats to environment, 08 were from Commerce discipline.
- From total, 167 respondents who believe that environmental issue play role in accounting, 53 were below 25 years; 40 between 25 to 30; 49 between 31 to 35, 10 between 36-40; 14 between 41 to 50 and 01 above 50. Hence, it is evident that in total 85.03% respondents who believe that environmental issue play role in accounting are below 35 years of age. And 14.97% respondents were above 36 years.
- From total, 166 respondents who believe that 'Global warming' is becoming the real 'warning' to mankind, 50 respondents were below 25 years; 39 respondents were between 25 to 30; 46 respondents were between 31 to 35, 15 were between 36-40; 13 respondents between 41 to 50 and 03 were above 50. Hence, it is evident that in total 46.3% respondents who believe that 'Global warming' is becoming the real 'warning' to mankind, are above 31 years of age.
- From total, 187 respondents who believe that environmental pillar is important for sustainable development, 55 respondents were below 25 years; 45 respondents were between 25 to 30; 52 respondents were between 31 to 35, 15 were between 36-40; 15 were between 41 to 50 and 05 respondents were above 50. Hence, it is noticeable that in total 46.5 percent respondents believe that environmental pillar is important for sustainable development, are above 31 years of age.
- It can be seen from above that 146 respondents (76.84%) were aware about 'Triple Bottom Line' Reporting by corporates in their reports. 105 Male

(71.0%) and 41 Female (28.1%) have supported above. Here it would be noteworthy that total 44 respondents were still not aware about the 'Triple Bottom Line' Reporting by corporates in their reports.

- From total, 146 respondents who were aware about 'Triple Bottom Line' reporting by corporates in their reports, 58 respondents were below 25 years; 45 were between 25 to 30; 52 respondents were between 31 to 35, 15 were between 36-40; 15 were between 41 to 50 and 05 respondents above 50. Here it is noticeable that 20 (45.5%) respondents of below 25 years age were found unaware about 'Triple Bottom Line' reporting by corporates in their reports.
- Here it would be noteworthy that total 81 (42.64%) respondents were still not aware about the concept of UNEP's Decoupling which provides for breaking the chain between the economic good and environmental bad. It can be seen from above that 109 respondents (57.36%) were aware about the concept of UNEP's Decoupling. 78 Male (71.6%) and 31 Female (28.4%) have supported above.
- It is noticeable that 60 (74.10%) respondents of below 35 years age were found unaware about the concept of UNEP's Decoupling.
- It would be noteworthy that total 152 respondents (80%) were aware about the concept of Carbon credit whereas 38 respondents (20%) were not aware about it.
- Here it is noticeable that 25 respondents (65.8%) of below 25 years age were found unaware about Carbon credit.
- It would be noteworthy that total 135 respondents (71.05%) have declined that one carbon credit is equal to reduction in Two ton emission of CO2.
- Analysis depicts that with respect to salient feature of Environmental accounting
    - it helps in planning the Cost control and/or Cost reduction (Mean=3.70) followed by other salient feature
    - it evaluates the Impact of entity's project on surrounding environment (Mean=3.69),
    - identifies the evaluation of Investments vis-à-vis savings on consumption or usage of resources (Mean=3.62) and

- promotes designing several processes using environmental friendly technology (Mean= 3.31).

- Many respondents have recognized the salient features of Environmental Accounting and identified the advantages emerging from applicability of Environmental accounting in organisations. It is evident from the responses that Environmental accounting practices in organisations helps in planning the Cost control and/or Cost reduction of products or articles and maintaining reasonable relationship with clients on basis of 'Green products/ services' can reflect the environmental friendly attitude in economic development of society.
- With respect to reasons leading to Non-adoption or minimal adoption of Environmental auditing practices at large, respondents have opined that there is Lack of real will and commitment by the political wing/s towards addressing implementation of protective measures for conservation of environment (Mean= 4.36) and lack of Specific policy on such Emerging issue (Mean= 4.33). Difficulty in measuring Cost-Benefit analysis from such practices (Mean= 4.16) has also been highlighted by respondents.

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