

**A STUDY OF GREEN HUMAN RESOURCE MANAGEMENT  
PRACTICES AND ITS RELATIONSHIP WITH EMPLOYEE  
MOTIVATION, JOB SATISFACTION AND  
ORGANIZATIONAL COMMITMENT**

**UGC MAJOR RESEARCH PROJECT**

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**Final Report  
Submitted**

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## PREFACE

The work presented in this research project is concerned with presenting a systematic view of Green HRM. The major questions, which prompted the researcher to undertake the present research to accomplish these theoretical and practical objectives included:

*1. To identify the various Green HRM practices adopted by Indian industries under study 2. To identify the relationship between Green HRM practices with Employee Motivation, Job Satisfaction and Organizational Commitment. 3. To develop the model based on these factors and test goodness of fit for the same.* The study has been divided in to five chapters. **Chapter 1** deals with introduction of Human resource management, Corporate social Responsibility and GHRM. Chapter covers basic concepts of GHRM, GHRM practices adopted by Indian Firms and also why firms are adopting GHRM Practices. Basically chapter one is concept and growth oriented.

**Chapter 2** provides a detail context and relevance to the problem briefly discussing the findings of other related studies. Review of literature is an important step in the process of research. No scientific research can start abruptly. All scientific study stems out as a result of the consolidation of a host of knowledge already gathered by various pioneers in this field. In the light of the earlier researches the problem can be viewed in different perspectives. Keeping this in mind, the investigator has collected relevant research done on the topic under investigation. An attempt is made to highlight the procedure and findings of researchers conducted earlier that have a bearing on the present study. It also compares various studies done by different researchers and ultimately establishes the fact that Indian research literature suffers from a distinct big gap relating to a lack of in – depth studies. It further emphasizes on the fact that foreign researchers have been exploratory in nature whereas Indian researchers have been mainly the review of literature as far as management discipline is concerned.

**Chapter 3** presents a statement of the problem, indicating objectives and shows why it is worth studying Green HRM in Indian context and why it is important for the Indian organizations future to think about. It further presents methods of data collection and techniques of data analysis used in studying the problem and consists of description about the population of Delhi NCR; how the samples were selected from the populations, indicates the procedure followed in collecting the data, describes design and pre testing of the questionnaires / schedule, editing and codification of data and finally gives a brief account of the statistical techniques used to analyzed the data.

**Chapter 4** comprehensively discusses about the methodology, research design and data collection instruments employed to carry out this research work. This chapter examines the primary data collected from the personal interviews and survey. It also presents facts about in what manner the results derived from the surveys have been utilized in the process of refining the research model as proposed by the researcher in the literature review section by substantiating the traits of each variable, and then identifying them into constructs.

**Chapter 5** has been exclusively devoted to finding and analysis of data. In view of the outcome of this research work, a detailed discussion of the theoretical and practical implication is represented in this chapter. The results have been presented in different tables and relationships have been tested by formulating various hypotheses. Additionally, the researcher has also given some recommendations that can be adopted by the organizations. This chapter includes the conclusion drawn by the researcher from the findings and analysis, limitations of the study and also makes suggestions for industry and academia.

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## **LIST OF ABBREVIATIONS**

Following are the abbreviations which have been frequently used throughout the thesis while discussing, explaining, and analysing and interpretation of data.

<b>Abbreviations Used</b>	<b>Full Form</b>
<b>AGFI</b>	Adjusted Goodness-Of-Fit Index
<b>AMO</b>	Ability-Motivation-Opportunity
<b>AMOS</b>	Analysis of Moment Structures
<b>ATMs</b>	Automated Teller Machine
<b>AVE</b>	Average Variance Extracted
<b>CAGR</b>	Compound Annual Growth Rate
<b>CEO</b>	Chief Executive Officer
<b>CFA</b>	Confirmatory Factor Analysis
<b>CFI</b>	Comparative Fit Index
<b>CII</b>	Confederation of Indian Industry
<b>CIPD</b>	Chartered Institute of Personnel and Development
<b>CR</b>	Construct Reliability
<b>CRT</b>	Cathode Ray Tube
<b>CSR</b>	Corporate social responsibility
<b>DIPP</b>	Department of Industrial Policy and Promotion
<b>DV</b>	Dependent variable
<b>EFA</b>	Exploratory factor Analysis
<b>EHPK</b>	Electronic Hardware Technology Parks
<b>E-HRM</b>	Electronic Human Resource Management
<b>EM</b>	Environmental Management
<b>EMS</b>	Environmental Management system

<b>EM</b>	Employee Motivation
<b>EP</b>	Environmental Policy
<b>EU</b>	European Union
<b>EV</b>	Electric Vehicles
<b>FDI</b>	Foreign Direct Investment
<b>FMCG</b>	Fast Moving Consumer Goods
<b>GDP</b>	Gross Domestic Product
<b>GEI</b>	Green Employee Involvement
<b>GFI</b>	Goodness Of Fit Index
<b>GHP</b>	Good Hygienic Practices
<b>GHRM</b>	Green Human Resource Management
<b>GMP</b>	Good Manufacturing Practices
<b>GMV</b>	Gross Merchandise Value
<b>GOF</b>	Goodness of Fit
<b>GR</b>	Green Reward Management
<b>GRS</b>	Green Recruitment and Selection
<b>GTD</b>	Green Training and Development
<b>GVA</b>	Gross Value Added
<b>HACCP</b>	Hazard Analysis and Critical Control Points
<b>HR</b>	Human Resource
<b>HRM</b>	Human Resource Management
<b>IBM-SPSS</b>	International Business Machines- Statistical Package for the Social Science
<b>IDV</b>	Independent variable
<b>ISO</b>	International Standard FOR ORGANISATION
<b>IT</b>	Information Technologies

<b>JS</b>	Job Satisfaction
<b>KMO</b>	Kaiser-Meyer-Olkin
<b>KPI</b>	Key Performance Indicators
<b>LCD</b>	Liquid Crystal Display
<b>MLE</b>	Maximum Likelihood Estimation
<b>MSV</b>	Maximum Shared variance
<b>NASSCOM</b>	National Association of Software and Services Companies
<b>NCR</b>	National Capital Region
<b>NFC</b>	Near Field Communication
<b>NFI</b>	Normed Fit Index
<b>NGOs</b>	Non-government organizations
<b>OC</b>	Organizational Commitment
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>ONGC</b>	Oil and Natural Gas Company
<b>PCA</b>	Principal Components Analysis
<b>PLEXCONCIL</b>	Plastics Export Promotion Council
<b>PVC</b>	polyvinyl chloride
<b>RBI</b>	Reserve Bank of India
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>RoHS</b>	Restriction of Hazardous Substances
<b>SEM</b>	Structural Equation Modelling
<b>SEZs</b>	Special Economic Zones
<b>SHRM</b>	Sustainable Human Resource Management
<b>SIC</b>	Squared Interconstruct Correlations

<b>SMEs</b>	Small and Medium-Sized Enterprises
<b>SRHRM</b>	socially responsible HRM
<b>SRHRM</b>	Socially Responsible Human Resource Management
<b>TQM</b>	Total Quality Management
<b>TUC</b>	Trade Union Congress
<b>VIF</b>	Variable Inflation Factor
<b>WCED</b>	World Commission on Environment and Development
<b>WLB</b>	Work-life Balance



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# CHAPTER 1

## INTRODUCTION

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Today everyone is concerned with environmental issues as they influence all human activities. One business area where environmental issues have received a great deal of discussion is training of human resource for green organisations with the natural environment management and employees have already begun to modify their behaviour in an attempt to address society's new concerns.

This chapter deals with introduction of Human resource management, Corporate social Responsibility and Green Human Resource Management (GHRM). GHRM is a novel concept and indeed has a great potential to serve the individual, society and business. This Chapter seeks to provide a theoretical framework concerning environmental management and its evolution and the 'greening' of the functional and competitive dimensions of human resource management.

### **1.1 Introduction**

The United Nation's World Commission on Environment and Development (WCED) called for a report in the 1990's to investigate the condition of the world's resources. The report by Brundtland highlighted the importance of HRM to build a sustainable competitive advantage. It is acknowledged within the report that it is difficult to transform traditional policies, processes and practices without developing and converting the attitudes of an organization's workforce (Brundtland, 1987). The Brundtland report defines sustainable development as –“development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). This definition has become one of the most cited sustainability definitions within current environmental literature. The emotive sentiment generated from the findings of the report has motivated a number of contemporaneous interpretations of sustainability, as well as significantly influencing the emergence of contemporary management constructs within the green management domain (Dubois and Dubois, 2012; Johnson, 2006; Lis, 2012; Ones and Dilchert, 2012b).

Green HRM began its journey through the milieu of green management applications, in order to address the growing concern from corporate stakeholders (Roberts, 1992), in response to the negative impacts of organizational operations on the environment (Waddock, 2004). By embracing green management policies and strategies, and Green HRM practices and processes, firms are expected to receive direct and peripheral gains such as improved sales, productivity gains and competitive advantages (Wee and Quazi, 2005). In addition, advantageous employee behaviors (Shultz and Holbrook, 1999; Vandermerwe and Oliff, 1990) and increases in corporate efficiencies including improvements in water and energy usage and waste reduction (Klassen and McLaughlin, 1996), are likely to occur.

As it is employees who are the agents that implement organizational green policies, it is necessary for organizations to promote and ultimately seek to manage and change employee behavior so that they are aligned with organizational green goals (Anderton and Jack, 2011; Daily, Bishop and Govindarajulu, 2009; Ones and Dilchert, 2012a). Increasingly, organizations are considering the adoption of Green HRM practices, i.e. '*HRM aspects of green management*', to promote employee green behavior in the workplace (Renwick et al., 2013). However, despite increasing levels of academic literature conceptualizing the anticipated correlations between Green HRM and employee green workplace behavior (e.g. Jackson and Seo, 2010; Kumari, 2012; Renwick et al., 2013), this linkage has not yet been sufficiently empirically explored.

A number of studies, such as Jabbour and his colleagues (e.g. Jabbour and Santos, 2008; Jabbour, Santos and Nagano, 2008), along with papers published in a special issue of *Human Resource Management Journal*, 51(6), 2012, have examined the contributions of HRM practices to organizational environmental performance. A small number of empirical studies, such as Harvey et al. (2013) and Paillé et al. (2014), have revealed that Green HRM and HRM policies and practices are related to individual-level employee pro-environmental behavior. However, the Harvey et al. (2013) research is an undersized case study, with the extent of the sample limited in its ability to adequately validate the effect of Green HRM on employee green workplace behavior. The Paillé et al. (2014) study focused on general HRM, rather than Green HRM, so again it does not increase our understanding of the effects of



Green HRM on employee green workplace outcomes. Therefore, our understanding of the what, how, why and when of "Green HRM" influences employee green (or non-green) workplace behavior, remains largely unknown.

As highlighted by Dubois and Dubois (2012), the need for firms to engage with environmental sustainability strategies is due to three key pressures: declining resources, increasing pressures and expectations from multiple stakeholders and radical transparency from media, activists and NGOs. Dubois and Dubois (2012) add that when environmental sustainability policies, processes and practices are fully embedded in an organization *“it pervades the thinking and behavior of employees who then choose to go beyond compliance with new rules and norms to participate in innovating job-related changes in work processes, set-up, and product and service design”*.

However, the challenge for organizations is to get all employees on the same ‘green bandwagon’. Without a more targeted facilitation of HR policies, processes and practices, firms will most likely struggle to achieve their green goals and targets as highlighted within organizational sustainability agendas.

## **1.2 The Emergence of Green HRM**

This section deals with the emergence of Green HRM by describing the history of Green Movement, Corporate Social Responsibility and evolution of Human Resource Management.

### **1.2.1 The ‘Green Movement’**

From the early 1960’s through to the mid 1970’s, the social movement and a public advocacy agenda (i.e. civil rights, women’s rights and the environmental movement) were comprehensively established (Carroll and Shabana, 2010). This movement was spawned from social activists and scholars in response to the perception of corporate manipulation within the domains of environmental recklessness and political engagement (Waddock, 2004). From the advent of these socially motivated movements, arose an increased awareness by the public of the effects of environmental degradation caused by corporate operations. In addition, the establishment of a politically motivated

lobby group that began to counteract the perceived power that companies were exerting over public interest agendas (Jabbour and Santos, 2008; Vandermerwe and Oliff, 1990; Waddock, 2004). It is plausible to assume that it was these socially driven movements and ensuing environmental agendas that influenced multinational companies and domestic firms' willingness to respond with policies and practices designed to protect the environment, employees, consumers and the public. Since the emergence of these socially motivated factions, corporations have progressively responded by espousing environmentally targeted corporate policies that are integral to commercial planning. These revised agendas ultimately reflect business visions, strategies, policies and decisions (Waddock, 2004).

Despite observable progress in corporate attitudes toward environmental policy implementation due to the aforementioned activism, organizations are under constant pressure from a range of stakeholders both internal and external to the firm (Berry and Rondinelli, 1998; Jackson, Renwick, Jabbour and Muller-Camen, 2011; Teixeira, Jabbour and Jabbour, 2012). As a result, not only are firms seeking ways to reduce the direct impacts of their operational activities (example - excessive waste, energy usage) but also alternative ways of managing and building the capabilities of their human capital, encouraging and implementing corporate best practices and further improving operational efficiencies.

### **1.2.2 Corporate Social Responsibility**

Berry and Rondinelli (1998) and Lee (2009) claimed that by the late 1990's, firms had begun initiating pro-active and voluntary, socially responsible and environmentally sustainable related standards. The pursuance and development of these standards in both academic research and corporate policy agendas began emerging in response to the calls from social activist groups and the growing awareness and attitudes of the public toward corporate irresponsibility (Jabbour and Santos, 2008; Wilcox, 2006). As such, CSR was created. Corporate social responsibility is a multi-aspect construct that encompasses economic and non-economic (e.g. diversity) concerns (Lis, 2012; Ones and Dilchert, 2012b) and is defined by McWilliams, Siegel and Wright (2006) as ““situations where a

firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law”.

Mozes, Josman and Yaniv (2011) further defined CSR as “acknowledging the importance of economic performance, as well as the broad range of stakeholders, while also highlighting the need for balancing these factors with societal responsibility”.

Corporate social responsibility is now recognized as a vital conduit between corporate strategy and social responsibility outcomes. It overtly demonstrates to employees, governments, stakeholders and communities, what are the firm’s values and policies and the organization’s strategic agenda (Garavan and McGuire, 2010; Manika, Wells, Gregory-Smith and Gentry, 2013; Rangarajan and Rahm, 2011).

While there have been a growing number of studies conducted on the effects of CSR policies on the financial performance of the firm (McGuire, Sundgren and Schneeweis, 1988; Pava and Krausz, 1996; Tsoutsoura, 2004), corporate competitiveness and sustainability (Marin, Rubio and Maya, 2012; Vilanova, Lozano and Arenas, 2009), according to Turker (2008) few studies had determined the effects of CSR on employee workplace outcomes. Consequently, Turker (2008) conducted a study on CSR and Organisational Commitment and identified that employees have a preference to work for organizations that are socially responsible. Corporate social responsibility was identified as a factor that shapes a company’s public image. As such, the level of an employee’s commitment to an organization was found to be dependent upon the perception and strength of the firm’s CSR policies that are aimed at supporting society, the environment and employees (Turker, 2008). Turker’s (2008) argument, which was later supported by Friedman (2009) and more recently by De Roeck and Delobbe (2012), states that an employee’s self-esteem and subsequent commitment is affected by the prestige and reputation of the firm, and community perceptions of what the organisation stands for. These employee perceptions are largely driven by the firm’s observable commitment to CSR and associated environmental and socially directed initiatives.

A study by Ellis (2008) attempted to establish a link between an employee’s social behavior and how they identify with their organisation. It was suggested that employee

values, social bonds and exchanges in the workplace, and individual attitudes toward CSR are likely to be key predictors of socially related behaviors. Therefore, Ellis (2008) concluded that management should encourage employees to actively participate and contribute to policy development and the execution of green programs.

A pro-active CSR platform positively contributes to building a strong corporate image because it demonstrates to employees and the community, the firm's commitment to socially responsible and environmentally sound business practices (Zutshi and Sohal, 2003) without the need for excessive regulatory impositions. As a result of this corporate pro-activism, stakeholders are expected to explicitly demonstrate their support via their individual purchasing power of company products and services. (Torugsa, O'Donohue and Hecker, 2013; Vaccaro and Echeverri, 2010; Zhang et al., 2008).

### **1.2.3 Human Resource Management**

Employees are being progressively recognised as valuable assets in organisations, through their contributions to firm performance (Luthans and Youssef, 2004; Zutshi and Sohal, 2003). Organisations need to diversify their strategies and invest in the people management side of their company, in order to tap into a value adding resource to boost a firm's competitive advantage (Luthans and Youssef, 2004). Leading executives Carly Fiorina, (former) Senior Executive of Hewlett-Packard, and Bill Gates of Microsoft (cited in Luthans and Youssef, 2004), claim that "the most magical and tangible and ultimately the most important ingredient in the transformed landscape is people" and "our most important asset walks out the door every night".

Since the mid 2000's, key academics and psychologists have been actively calling for pioneering research into how organisations can effectively promote and achieve pro-environmental attitudes and employee green behaviors (Jabbour, 2011; Jackson and Seo, 2010; Renwick, Redman and Maguire, 2008). Green HRM has been identified as a likely emancipator of such employee level outcomes. Despite these calls for studies into this newly established HRM related concept, there is still an absence of formalised HRM research that targets the role of HR and its latent influence over employee green related behaviors and attitudes aimed at achieving corporate

sustainability targets (Ehnert and Harry, 2012; Jabbour, 2011; Robertson and Barling, 2013). Human resource management is defined as “a set of distinct but interrelated activities, functions and processes that are directed at attracting, developing, and maintaining (or disposing of) a firm’s human resources” (Lado and Wilson, 1994).

It is widely accepted in the literature that a positive correlation exists between HRM practices and organizational performance (Ahmad and Schroeder, 2003; Chartered Institute of Personnel and Development (CIPD), 2001; Huselid, 1995). Buchan (2004) suggests for firms to achieve organizational objectives and desirable employee outcomes, that there needs to be a distinctive ‘fit’ and congruence between a corporation’s HRM approach and the characteristics of the organisation, as well as its values, ethics and priorities. The effectiveness of this association plays a key role in the implementation and accomplishment of CSR and EM directives (Carmona-Moreno, Cespedes-Lorente and Martinez-del-Rio, 2012; Govindarajulu and Daily, 2004; Jackson and Seo, 2010).

Jabbour and Santos (2008) claim that the value of HRM in the application of organizational sustainability policy is because:

- 1) The general functions of HR have the potential to advance sustainability within the scope of an organisation and its policies
- 2) Contemporary HRM and organisations pursuing sustainable operations, require the implementation of long term strategies and programs that extrapolate economic performance objectives
- 3) Sustainability is considered a ‘current’ paradigm of HRM and
- 4) Present day HRM needs to have effective processes in order to meet the demands of multiple stakeholders.

Renwick et al. (2008) support Jabbour and Santos’s (2008) claims that HRM and HR practitioners are best placed to lead and co-ordinate the introduction of green policies in organisations, because they are proficient in communicating with employees and expertly equipped in implementing cultural change processes. Cohen et al. (2010) state that there are few areas of organizational functionality that have the capabilities

to deliver the necessary people management outcomes of sustainability and environmentally friendly agendas than that of HRM.

Lee (2009) claims that HRM and green management initiatives and objectives require employees to be environmentally aware and highly trained in both technical and management skills, as corporations will be developing innovative environmental processes that will have considerable management implications. The role of HRM is to ensure that targeted training programs are developed and designed to increase the awareness of employees to the importance of environmental initiatives, as well as conducting training programs that develop technical, operational and management competencies (Daily and Huang, 2001). According to Lee (2009), implementing these developmental programs is essential if firms are to successfully cultivate environmental innovations.

Green HRM therefore, could be considered to be a component of green management, in that its policies, processes and activities are constructed from within a management strategy designed to achieve environmentally related outcomes. Lee (2009) suggests that the initiation of Green HRM was to address ways that firms can both improve environmental outcomes related to EM and CSR, but at the same time consider the financial and strategic opportunities that Green HRM offers (Lee, 2009). Human resource management's distinct approach to people management and the anticipated influence that people management strategies are likely to exert over general employee workplace behaviors (Daily and Huang, 2001; Ellis, 2008), are likely to be similarly experienced by organisations that implement Green HRM practices. Siegel (2009) supports this assertion and suggests that espousing green management and Green HRM provides firms with opportunities to maximise profits and implement practices that arouse employee engagement and encourage behavior that are placatory toward the environment.

Based on existing literature, a green management-based policy and related green processes and practices such as what would be advocated from within a Green HRM platform, is expected to increase the engagement of employees to embrace green initiatives. It could also potentially modify employee behavior and attitudes to recognise the significance and consequences of socially responsible and environmentally sustainable policies, processes and practices. Unfortunately,

notwithstanding the potential advantages and benefits of implementing Green HRM, its legitimate influence is still being debated (Harvey et al., 2013; Milliman, 2013; Steg, Bolderdijk, Keizer and Perlaviciute, 2014).

### **1.3 Defining Green HRM**

Yusliza Mohd Yusoff (2015) emphasized that since the concept of Green HRM is still unclear and needs to be developed, the study has done Qualitative-based research to gain deeper insights and understandings in this regard to developed broad conceptualizations of Green HRM. These broad conceptualizations were then categorized in to a narrower conceptualization by grouping the activities which entail shared concepts and result in the formation of only five parent conceptualizations - the E-HRM, Work-life Balance (WLB), Corporate Social Responsibility (CSR), Green Policies, and Extra Care Program.

According to Gill Mandip (2012) the focus on civilizing the operational efficiencies combined with up-gradation of technology have led ITC to be the only company in the world, of its size and variety, to achieve the milestone of being carbon positive, water positive and achieving almost 100% solid waste recycling. The “Three Leaves” rating awarded by Centre for Science and Environment, Green Tech Environment Excellence award, “Golden Peacock” award and “Solid Waste Recycling Positive”, “Excellent Water Efficient Unit” awards to name a few are testimonies to these efforts and achievement. The future of Green HRM appears promising for all the stakeholders of HRM. The employers and practitioners can establish the usefulness of linking employee involvement and contribution in environmental management programmes to improved organizational environmental performance, like with a specific focus on waste management recycling, creating green products. Unions and employees can help Employers to adopt Green HRM policies and practices that help safeguard and enhance worker health and well-being. The academicians can contribute by carrying further research in this area revealing additional data that can build a knowledge base on Green Management in general.

Aravamudha (2012) said Green HRM involves addressing the company carbon footprint by cutting down on usage of papers, reducing un-wanted travel. Green HRM is about the

holistic application of the concept of sustainability to organization and its workforce. It has been found out in various researches that HR department in many companies are increasingly greening their processes to gain competitive advantage over others.

As per Suhaimi Sudin (2011), research shows that green management initiatives has become an important factor in forward thinking businesses around the world. Researchers argued that employees must be inspired empowered and environmentally aware of greening in order to carryout green management initiatives. The paper focuses on development of a new model of strategic Green HRM which includes relationship between assessments based HR interventions, environmental management system, Green intellectual capital and corporate environmental citizenship.

According to Liu, (2010) business organizations play a key role in the problems of environmental management since they are part of our society and cannot be isolated from the environment, and in fact, they contribute most of the carbon footprints in the past

As per the survey done by Buck Consultants (2009), Greening of HR Survey examines the Types of environmentally friendly “green” initiatives that companies are utilizing involving their Workforce and human resource practices. The results confirm that companies are in-corporation And working towards integrating a number of green practices. While the study’s questions and Results are broad, they hint at several areas for HR practitioners to consider in the green space. Over half of the companies surveyed have incorporated environmental management into business operations and have a formal green pro-gram in place or plan to implement one in the next twelve months.

According to Candice Harris and Dr. Helen Tregidga (2008), many organizations have quickly to Jump onboard the Sustainability bandwagon, little appears to have been done to consider the role of, and effect on, the HR function and managers. How are HR managers defining and enacting Corporate Sustainability? All participants felt that HR function has a role in fostering environmental practices within an organization due to their role as stewards of value, and as skilled communicators in the organization. Findings indicated the HR man-agers espouse private moral



positions around concern for the environment; however environmental action in their personal lives appears limited.

According to Justin Victor (2008), one half of HR professionals indicated that their organization have a formal or informal environmental responsibility policy. Top Three green practices reported by HR professionals were encouraging employees to work more environment friendly, offering recycling programs and donating / discounting used furniture supplies.

John R. Rathgeber (2007) has said in his research that many business leaders are embracing Corporate Sustainability and Green Business practices as a way to improve their operations and enhance their competitiveness.

Stephen King (2004) stated that the future of HRM will be built on innovation and creativity, in nutshell innovation and creativity approaches were needed towards quality of life, environmental improvements through the healthy, sustainable, vibrant community theme. In summary it was said that money and support of employees can put HRM on the road to environmental Sustainability.

In summary, green management refers to the management of corporate interaction with, and impact upon, the environment (Lee and Ball, 2003), and it has gone beyond regulatory compliance and needs to include conceptual tools such as pollution prevention, product stewardship and corporate social responsibility (Hart, 2005; Pullman et al., 2009; Siegel, 2009).

According to Chad Holliday (2001), CEO DuPont says shrinking your environmental footprint is more than just the right thing to do, it also generates tremendous business value. This is the challenge of Sustainable growth and to meet it, the primary motivation for any company should be improved business performance of course, environmental societal benefits will follow.

Application of new technology could improve the environmental decline by developing, for example, the biotech products and by searching for alternative energy to reduce the use of finite natural resources. Therefore, organizations should put more effort into the research on new technology to minimize the impacts of environmental

destruction by creating products that are harmless and less pollution to environment (Liu, 2010; Ozen and Kusku, 2008).

Callenbach et al. (1993) argued that in order to take out green management, employee must be motivated, empowered and environmentally responsive of greening to be successful. To effectively implement green management initiatives and development environmental innovations, corporations require a high level of technical and management skills (Callenbach et. al., 1993; Renwick et al., 2008).

## **1.4 Existing Sustainability Frameworks**

Many frameworks are available to support sustainable workplaces in developing a sustainability strategy. Each organization should examine specific issues related to its industry, sector or geography to establish the optimum sustainability strategy. This section examines the characteristics of leading global frameworks for business sustainability, which have a direct connection to sustainable HRM, and distills these frameworks into common themes and performance requirements.

Most of these frameworks rest on a core set of principles and practices, which provide a foundation for the development of sustainable HRM (Hassel, A. (2008).

### **1.4.1 The United Nations Global Compact**

The United Nations Global Compact is a non-binding United Nations pact created by the United Nations in 1999, the Global Compact is a policy initiative that asks organizations to adhere to 10 universal principles underpinning responsible business practices. The principles cover human rights, labor standards, environmental stewardship and anticorruption. In committing to uphold these principles, organizations also commit to report annually on their progress in doing so. Using these principles as an umbrella framework of a corporate sustainability policy, HRM can develop a set of policies and processes that align with the principles and ensure they are manifested in the practices of the organization.

### **1.4.2 The Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises**

Designed to ensure that the operations of large organizations are in harmony with government policies and to enhance their contribution to sustainable development, the OECD guidelines are a comprehensive set of tools covering human rights, employment standards, bribery and corruption, environmental practices, community interaction, and more. The guidelines set out clear frameworks in which HR policies and practices can be developed ( OECD (2011). *OECD guidelines for multinational enterprises*).

### **1.4.3 International Standard ISO 26000**

ISO 26000 is a quality standard, though not for certification, that provides guidance on key themes of social responsibility across the broad spectrum of topics. It is intended for use by organizations of all sizes anywhere in the world, with particular attraction for small and medium-sized enterprises (SMEs), which may find other frameworks too cumbersome.

It contains principles of social and environmental responsibility as well as guidance for action and expectations for implementation (International Standard for Organization).

### **1.4.4 SA8000**

SA8000 is a certifiable standard focusing on the aspects of human rights and labor standards of business operations and prescribes both process and performance criteria. One of the earliest certification standards, used as early as 1998, it has been adopted by close to 2,500 facilities around the world with almost 1.5 million employees. SA8000 is often used as a tool for ensuring human rights in extended supply chains rather than being limited to direct employees. An important part of this standard is its focus not only on standards of performance but also on management systems that need to be put in place to ensure the proper outcomes (Social Accountability International. (2010).

## 1.5 Benefits of Adopting Green HRM Practices to Firms

Even though initially it may be difficult to initiate and implement the Green HRM practices at the first level, it can fulfil the prime objectives of an organization such as cost control, ensuring corporate social responsibility, talent acquisition and gaining competitive advantage over the rivals through environment consciousness and preservation of natural and ethical values. The usual reasons why a firm should adopt Green HRM practices are noted down below:

1. **Preservation of natural environment:** The elements of the environment which are not created by human beings are called the elements of natural environment like trees, forests, rivers, animals etc. Green HRM practices such as online advertising and recruitment which uses less paper, creating less carbon emission on the office space, training through electronic sources to reduce paper waste can keep the environment from loss or negatively affected.
2. **Ensure healthy working environment and raise employee morale:** Making the corporate space green with trees and plants, forbidding smoking on the office premises, using less paperwork (which makes an employee hectic), providing natural fruits and vegetables on HR meetings- all these can create a healthy and habitable working environment which in turn, can raise the speed and morale of the workers.
3. **Gain competitive advantage through ensuring corporate social responsibility (CSR):** Corporate social responsibility is now-a-days a part of company's core responsibilities which no company can ignore. Therefore, a firm can gain competitive advantage over its rivals by ensuring green management practices in a well-performed manner.
4. **Save cost:** Creating a sound working environment can reduce employee fatigue, absenteeism and turnover. The result is reduced cost. Again using less paper and disseminating and recording the information via online can reduce wastage and cost.

5. **Increase company image:** It is obvious that a company which has green management/HRM practices will have a higher image than a company which has not.
6. **Reduce intervention from the government and other law enforcing agencies:** Adoption of proper green management/HRM practices can reduce the chance of intervention by the central/local govt. and other law enforcing agencies.
7. **Develop eco-friendliness and environmental learning among the employees:** **Adoption** of Green HRM practices make the employees environment conscious and make them eco-friendly which makes them a good corporate citizen in environmental perspective.
8. **Stimulate innovation and growth:** Green HRM practices encourages new innovative ideas and practices that facilitates growth in quality and enhancement of methods and processes.

## 1.6 Green HRM Practices

In this section researcher has tried to describe various Green HRM Practices.]

### 1.6.1 Green Recruitment and Selection

Green recruitment means paper free recruitment process with minimal environment impact. Green recruiting is a system where the focus is given on importance of the environment and making it a major element within the organization. According to (Wehrmeyer, 1996) recruitment practices can support effective environmental management by making sure that new entrants are familiar with an organization environmental culture and are capable of maintaining its environmental values. The green recruiting is a system where the focus is given on importance of the environment and making it a major element within the organization. Complementing this the recruits are also enthusiastic and to some extent passionate about working for an environment friendly green company. Recruiting candidates with green bend of mind make it easy for firms to induct professionals who are aware with sustainable

processes and are already familiar with basics like recycling, conservation and creating more logical world. Through the statements we can conclude that green recruitment provides the employer with an opportunity to stand ahead of the crowd and further increase their chance of attracting the candidates and retain them after induction. Recently the green trend makes the recruitment as environmental friendly issues. The recruiting makes the employee green in achieving the environmental goals and how they perceive the job and parameters of sustainability as claimed. For example the recruiting can be done as paper less interviews, eco-friendly locations and also other practices in the recruitment portfolio. The recruiters can carry out the green policies as well as the corporate policies in the management in establishing green policies to achieve the goals of the company.

### **1.6.2 Green Training and Development**

The Green Training and Development is a practice that focuses on development of employee's skills, knowledge and attitudes. The Green Training and Development educate employees about environmental management and training should be given for the employees to educate also about energy, reduce waste, and diffuse environmental awareness in the organization. This Green Training and Development helps employees to provide opportunity to engage employees in environmental problem solving. The green training embrace different methods of conservation including waste management within an organization. Through this training session, it develops the eco-friendly managers so that employees under supervision can contact them without any hesitation.

### **1.6.3 Green Health and Safety Management**

The green health and safety management is really beyond the scope of traditional health and safety management function of HRM. It not only includes the traditional health and safety management but also some more aspects of environmental management of an organization. That is why nowadays many organizations are redesigning post of "health and safety manager" as "health, safety and environmental manager". This includes a wider job scope when compared with traditional post of health and safety manager in an organization. For example, it includes biodiversity

protection and community support initiatives etc. that include local environment and people. The key role of green health and safety management is to ensure a green workplace for all. Green workplace is defined as a workplace that is environmentally sensitive, resource efficient and socially responsible. At present there are companies where traditional health and safety function was extended to include environmental management/protection. These companies have continually endeavored to create various environmental related initiatives to reduce employee stress and occupational disease caused by hazardous work environment.

#### **1.6.4 Green Employee Discipline Management**

Wehrmeyer (1996) stated explicitly that green discipline management is a pre-requisite in corporate environmental management. In ensuring green employee behavior in the workplace, organizations may need green discipline management practices to achieve the environmental management objectives and strategies of the organization. In this context, some companies have realized “discipline management” as a tool to self-regulate employees in environmental protection activities of the organization. These firms have developed a clear set of rules and regulations which imposes/regulates employees to be concerned with environmental protection in line with environmental policy of the organizations. In such companies, if an employee violates environmental rules and regulations, disciplinary actions (warning, fining, suspension, etc.) are taken against him/her.

#### **1.6.5 Green Performance Appraisal**

Green human resource management ensures that the environmental targets set by the organizations are met. Performance management is an on-going process of communication between supervisor and an employee that occurs throughout the year in support of accomplishing the strategic objectives of the organization. Green performance management includes the issues related to policies of the organization and environmental responsibilities. Integration of environmental management into performance management system improves the quality and value of environmental performances. It acts as a safeguard to protect environmental management against any damage. Green performance management plays a very important role in the effectiveness of green management work over passage of time because they guide

employee performance to the environmental performances needed by the organization (Jabbour and Santos, 2008).

### **1.6.6 Green Compensation and Reward Management**

Compensation and reward management should recognize contributions in green management. Compensation packages should be customized to reward green skills acquisition and achievements by employees (Deshwal, 2015). Monetary- based, non monetary based and recognition- based rewards can be used for green achievements of employees. Monetary-based rewards for contributions in environment management can be allocated in the forms of salary increase, cash incentives and bonuses while non-monetary rewards may include sabbaticals, special leave and gifts to employees and their family members. Recognition-based awards can highlight green contributions of employees through wide publicity and public praise and appreciation of green efforts by CEO or top management executives.

### **1.6.7 Green Employee Relations**

Employee participation in Green initiatives increases the chances of better green management as it aligns employees' goals, capabilities, motivations, and perceptions with green management practices and systems. Involving employees in EM has been reported as improving EM systems such as efficient resource usage (Florida and Davison, 2001); reducing waste (May and Flannery, 1995); and reducing pollution from workplaces (Kitazawa and Sarkis, 2000). Several workers in their study concluded that individual empowerment positively influences productivity and performance, and facilitates self-control, individual thinking, and problem-solving skills (Renwick, 2008; Wee and Quazi, 2005). An important way in which employee involvement and participation can be encouraged within the organization is to seek entrepreneurs within the company who are socially or ecologically oriented known as eco-entrepreneurs (Mandip, 2012). Eco-friendly ideas should be welcomed from all employees irrespective of their designation which will encourage their interest in environmental issues and make best use of applying their skills. The HR staff needs to pressurize the management to create a participative work environment where the



employees are free to put up their ideas on green issues since they are the ones who in reality are responsible for implementing ethical corporate behavior in the day-to-day life of the organization. This means the achievement of green outcomes will largely depend on employees' willingness to collaborate (Collier and Esteban, 2007), as often, the best ideas come from the employees who work in that particular area (Casler, Gundlach, Persons, and Zivnuska, 2010).

### **1.6.8 Green Job Design and Analysis**

In general, job descriptions can be used to specify a number of environmental protection related task, duties and responsibilities (Wehrmeyer, 1996; Renwick et al, 2008 and 2013). These days, some companies have incorporated environmental and social tasks, duties and responsibilities as far as possible in each job in order to protect the environment. In some companies, each job description includes at least one duty related to environmental protection and also specifically includes environmental responsibilities whenever and wherever applicable. Job descriptions and person (job) specifications may include environmental, social, personal, and technical requirements of the organizations as far as possible. For example, environmental protection duties should be included, along with the allocation of environmental reporting roles and health and safety tasks (Crosbie and Knight, 1995; Wehrmeyer, 1996; North, 1997; Revill, 2000). In addition, some companies use teamwork and cross-functional teams as job design techniques to successfully manage the environmental issues of the company. Nowadays many companies have designed environmental concerned new jobs or positions in order to focus exclusively on environmental management aspects of the organizations. From the perspective of HRM, it is really a valuable initiation and practice to protect the environment. Moreover, some companies have involved in designing their existing jobs in a more environmentally friendly manner by incorporating environmental centered duties and responsibilities. These are some of the best Green HRM practices which can figure out under the functions called green job design and green job analysis.

**Grievance and Discipline:** In general terms, grievance and discipline in firms encourages internal environmental breaches. The need to raise grievances is seen in high risk operations (for their safety record), and in such cases disciplinary procedures are attached to environmental rules and duties where noncompliance occurs. Indeed,

expert legal opinion is that some firms may eventually move to ensure that environmental obligations are secured by including clauses in staff contracts to do so, i.e. that environmentally unfriendly behavior may constitute a breach of contract and therefore possible grounds for dismissal.

## 1.7 Advantages of Green Human Resource Management Practice

- **Green business decisions:** Employing a green workforce or employees who understand and practice environment-friendly practices helps the organization take business decisions that have a wider perspective and thereby adopting innovative strategies and techniques to arrive at an optimal solution solve environmental related issues.
- **Preferred employer of choice:** Green organizations are the most desired employers and any potential hire would like to be associated with such an employer so as to learn and add value to their profile. A Green workforce is a win-win situation for both the employer and the employee as it gives a competitive edge to both in the market.
- **Higher retention of employees:** A survey by SHRM (Society for Human Resources Management) Green Workplace Survey found out that green organizations have lesser attrition rates as compared to their non-sustainable counterparts. In the survey about 61% of the respondents working for an organization known to be an advocate for green human resource management practices said that they were "likely" or "very likely" to continue working in the present organization because of their green policy and practices
- **Better Sales:** Cone Communications, marketing, and public relations company in the year 2013 conducted a survey on the Green Gap Trend where about 71 % of Americans shoppers said they are conscious of the environment impact when they purchase a product. This survey finding is critical to the belief that companies that adhere to green practices can improve their sales and cut costs by achieving higher volume of sales

Today many organizations are bringing GHRM practices to their business and day-to-day operations in the global context and landscape. The innovations and research that organizations strive in achieving a sustainable green human resource management practice in their business would significantly contribute to the field of Human resources management (HRM) field in both academic and business sense.

## **1.8 Green HRM in India: Top 10 Indian Companies**

Following are the Indian companies exhibiting green GRM practices in India.

### **Wipro Technologies**

- There was a time when the Karnataka State Pollution Control Board indicted the IT solutions arm of Wipro Limited for dumping huge volumes of hazardous electronic waste in illegal recycling units in Bangalore.
- They extended their green mission to physical infrastructure and substitute CRT monitors with LCD monitors.
- The company also had a green testing lab, practiced a Carbon Disclosure Project (to report the internal carbon footprint), and reduced employee travel.
- Wipro was the first IT Company in India to launch eco-friendly desktops and notebook computers that adhered to the RoHS (restriction of hazardous substances) regulation specified by the European Union (EU).

### **Suzlon Energy:**

- The “Green Banking” initiative- Suzlon Energy has become the first Indian bank to take lead in harnessing wind energy by having a tie up with State Bank of India.
- The Suzlon One Earth Campus, the corporate headquarter of Suzlon at Hadapsar, Pune, India is the most energy efficient building built ever in India with insulated green roof, energy efficient – lighting system, construction time, renewable energy based hot water system, reduced landscape and building water requirement, recycle, reuse and recharge of water, waste management and waste

water treatment, health and energy of occupants, carpooling, zero waste management, green education etc. are policies practiced by the companies.

### **ITC Limited**

- ITC Ltd Sustainable Initiatives at ITC Green Products are Premium Business Paper. For the first time in India ITC has launched an environment friendly multipurpose paper 'Paperkraft Premium Business Paper', for office and home use using a new technology 'Ozone Treated Elemental Chlorine Free Technology' replacing Elemental Chlorine which was conventionally used in the bleaching process during paper manufacture.
- ITC's Green Leaf Threshing plant in Chirala is the first in India and among the first 10 units in the world to bag the Social Accountability (SA 8000) certification.

### **HCL Technologies**

HCL Technologies initiated the following practices:-

- "Go Green"- a multi-layered corporate program running campaigns to initiate individual action towards environmental issues. It has designed and developed a comprehensive Green Edge sustainability framework that caters to the specific needs of manufacturing industries.
- They are active members of India Council for Sustainable Development.
- First company in India to launch an Antimony and Beryllium Free laptop.
- The company extends its take-back service to customers for disposing off their equipment through HCL Green Bag Campaign, and recycling collected E-waste in an environment-friendly manner.

### **Tata Consultancy Services**

- TCS has been spotted 11th under Newsweek's annual rankings of the "World's Greenest Companies" with a Green Score of 80.4 globally.
- Its 16 facilities do composting, some have bio-digesters turning waste into kitchen fuel.

**Oil and Natural Gas Company (ONGC)**

- ONGC has been ranked 39th among the world's 105 largest listed companies in 'transparency in corporate reporting' by Transparency International making it the most transparent company in India. Project of Landscaping, designing of garden and greening of area in the campus of Jollygrant Airport, Dehradun is started. ONGC has many such initiatives towards Green HRM. Another one is Vadodara Movement with Indian Express.

**Idea Cellular**

Idea Cellular initiated the following practices:-

- 'Use Mobile, Save Paper' campaign
- Green Pledge campaign was initiated by Idea at various Indian cities, where thousands came forward and pledged to save paper and trees.

**IndusInd Bank**

Following practices have been initiated by IndusInd Bank:-

- The bank is running ATMs on solar power and has pioneered an eco-savvy change in the Indian banking sector.
- The bank is planning for more such initiatives in addressing the challenges of climate change.

**Tamil Nadu Newsprint and Papers Limited (TNPL)**

- TNPL has installed its own power generating facility to make it 100% self-sufficient through the installation of 61.18 MW Power Generating equipment, viz. TG Sets, installed at the paper mill site. The surplus power generated is being exported to the State Grid. TNPL also generates green power through the 18 MW wind farm installed at Devarkulam and Perungudi of Tirunelveli district. The entire power generated at the wind farm is being exported to the State Grid.

- The innovative bio – methanation project: This project contributes to the sustainable development in terms of generating in-house renewable energy and reducing green – house gases.

### **Tata Metaliks Limited**

Tata Metaliks Limited initiated the following practices:-

- Every day is Environment Day
- According to the company's policy, working on Saturdays at the corporate office is discouraged.
- Lights are also switched off during the day with the entire office depending on sunlight.

## **1.9 Employee Motivation**

The term motivation has its origins in the Latin word *movere*, which means movement (Steers, Mowday & Shapiro, 2004). In general, motivation can be described as something intangible, a trigger/drive inside a person that stimulates that person to specific actions or to certain behaviour. This indicates a constant movement, thus motivation is always directed towards something or away from something. So employees continually seek or/and are encouraged to become better, faster etc. This implies that there is no final goal in motivation, making it a moving target that is never reached. This might be good for the productivity at a workplace, but in a long-term perspective, it can be difficult to motivate employees as their demands for 'reward/motivation' continuously grow.

Despite a long history and strong research traditions in the field of work motivation, a more generally agreed and coherent definition of motivation is lacking to this day (Pinder, 1984). As the literature review reveals, there are almost as many definitions of motivation present as the number of researchers that conducted research within the field. Pinder (1984) points out possible reasons for the variance in definitions of motivation. Since motivation is a complex and multifaceted subject there are many definitions present that reflect different aspects of motivation. Furthermore, there is are a number of different

philosophical orientations regarding the nature of human beings and this contributes to further variance in perception and definition of motivation.

### **1.9.1 Significance of Employee Motivation**

The performance of any organization and its continuity depends on their key assets, employees, as well as the capabilities of the managers to be able to create a motivating environment for their people. On the other hand, it is a challenge for the managers to keep their people and employees motivated and satisfied. Thus, why every manager has to be aware about the needs and requirements their employee and what they are looking for.

The main objective and concern of most of the organizations is to make the benefit from people who are feeling positively toward the work and motivate unsatisfied employees in order to end up with a win-win situation for both the company and workers.

Urichuck (2002) stated that motivated employee will increase the capability of the organization to achieve its mission, goals and objectives. It will also engage all to build a strong organizational culture. Also, motivated employees will feel as having a strategic partnership with the organization and their commitments and loyalty will increase from day to day (Anne, 1994). Also, Buttner and Moore (1997), based on their research about “Happy Employees Make Productive Employees” found that when employee attitudes improved by 5%, customer satisfaction jumped by 1.3%, and the revenue increased by 5%. So, motivated employees usually produce more than others and hence the customer satisfaction increases.

Motivated employees can impact a company's bottom line and make the workplace somewhere employees look forward to interact with instead of just a place to “pick up a paycheck” (Nandanwar , Surnis, Nandanwar 2010). Furthermore, A well-motivated organization for sure will have more motivated employees and hence they will be more productive and this will lead to extreme cost savings (Urichuck, 2002). In addition, satisfied employees positively impact corporate culture, resulting in many intangible but equally important returns (Yongsun, Barbara, Christy, 2002). They also

sees that people, who were motivated by sending them to foreign countries in order to live and work, are seen as valuable resource as they give more than usual when they return.

Mansoor (2008) also sees that motivation is about creating the environment where employees will be motivated and hence work with their full effort. So, organizations should motivate their employees to enhance competitive advantages and reach the firms vision and mission (Philip, Yu-Fang, Liang-Chih, 2007).

## **1.10 Job Satisfaction**

Job Satisfaction or Employee satisfaction is utmost important in any organization be it small or large. It plays a significant role in defining organizational success. Every organization develops strategies that strengthen the work environment and increase the employees' morale to enhance employees' performance and productivity, which ultimately results in high profits, customer satisfaction as well as customer retention.

The reason behind having satisfied employees is somewhat elementary. Satisfied employees are preferred because they simply make a work environment and organizational climate better (Rue & Byars, 1989). There are many different practices that an organization can perform to create a better and more effective work environment; these practices can directly affect employee satisfaction. Some ideas that managers are the most concerned about, are: attracting the most qualified workers and utilizing the human capital within the organization (Hoerr, 1989). The following points will show the importance of employee satisfaction.

### **1.10.1 Significance of Job Satisfaction**

There is little doubt that great employees are an organization's number one resource. Keeping workers happy helps strengthen a company in many ways. Employee Satisfaction has a great impact upon the performance of an employee. (Judge, Thoresan, Bono., & Patton, 2001) conducted an extensive meta-analysis about the relationship between these two critical organizational factors and concluded true correlation between employee satisfaction and employee performance. Performance of the job by an employee also requires that his expectations and aspirations in terms of rewards, consideration and fulfilment of his needs etc. can be met. If these are



fulfilled, he/she will be satisfied with the outcome of job performance and greater employee satisfaction would generally motivate the employees in performing their tasks more efficiently and that results in increasing company's productivity.

There is a casual relationship between employee satisfaction and employee morale. Michigan Psychologist Norman R. F. Maier states that "Job Satisfaction was shown to be important by demonstrating that morale index was definitely higher among employees who were satisfied than among those who were dissatisfied" (Norman, 1925).

Satisfied employees cultivate positive mental attitude which is beneficial to the society as a whole. A happy human on the job is also happy away from the job. Dissatisfaction with one's job may have especially volatile spill over effect on many other things such as family life, leisure activities etc. Happiness is after all the heart of human life which spins off to the society in general. The dissatisfied employees take more "Mental health days off i.e. days off not due to illness or personal reason." The time thus being a non-renewal resource, the ultimate sufferer is the organization (Breaugh, 1981).

Employee satisfaction plays a very vital role on the performance of an organization. It is essential to know as to how employees can be retained through making them satisfied and motivated to achieve extraordinary results. Target and achievement depend on employee satisfaction and in turn contribute for organizational success and growth enhances the productivity and increases the quality of work (Johns, 2002).

### **1.11 Organisational Commitment**

According to Mowday, Steers and Porter's (1979) definition, Organisational Commitment entails three factors: 1) a strong belief in and acceptance of the organisation's goals and values, 2) a willingness to exert considerable effort on behalf of the organisation and 3) a strong desire to maintain membership in the organisation.

Meyer and Allen (1991) defined Organisational Commitment as reflecting three broad themes: Affective, Continuance, and Normative. Thus, commitment is viewed as reflecting an affective orientation toward the organisation, recognition of the costs

associated with leaving the organisation, and a moral obligation to remain with the organisation.

Subsequently, many definitions have been proposed for the commitment concept, but a recurring strand seems to be the idea of a psychological bond - an intrinsic attachment or identification of a person with something outside of oneself (Firestone & Pennell, 1993).

O'Reilly (1989) defines Organisational Commitment as “an individual’s psychological bond to the organisation, including a sense of job involvement, loyalty and belief in the values of the organisation”. Organisational Commitment from this point of view is characterised by employee’s acceptance of organisational goals and their willingness to exert effort on behalf of the organisation (Miller & Lee, 2001).

Chow (1994) defined Organisational Commitment as the degree to which employees identify with their organisation and the managerial goals, and show a willingness to invest effort, participate in decision making and internalise organisational values. According to Meyer and Herscovitch (2001) Organisational Commitment can be conceived as a binding force that is experienced as a mindset or as a psychological state that leads an individual towards a particular course of action, while according to Zangaro (2001), employees are regarded as committed to an organisation if they willingly continue their association with the organisation and devote considerable effort to achieving organisational goals.

Cohen (2003) states that commitment is a force that binds an individual to a course of action of relevance to one or more targets. This general description of commitment relates to the definition of Organisational Commitment by Arnold (2005) namely that it is “the relative strength of an individual’s identification with and involvement in the organisation”.

### **1.11.1 Significance of Organisational Commitment**

When the employee is committed to an organization, there can be seen many positive outcomes for individual as well as for the organization itself. One benefit that it has for the employee is that it has potential to influence employee’s well-being (Meyer

and Herscovitch 2001). In addition, it has shown to increase employee's Job Satisfaction (Vandenberg and Lance 1992 in Shahid and Azhar 2013). Organization can benefit of committed employees in variety of ways. In a wide scale they have the potential to influence organization's effectiveness (Meyer and Herscovitch 2001). Employees are less likely to leave the organization reducing the turnover (Allen and Meyer 1990). Equally important, Shahid and Azhar (2013) state that committed employees can often make things work even without very good systems and are key for higher productivity in the organizations.

Organisational Commitment should result in improved relationships and performance of the organization (Rylander 2003). Especially affective Organisational Commitment has been shown to correlate positively with the measures of organizational performance (Wright, Gardner, Moynihan and Allen 2005). In their study Wright et al. used six 21 measures of performance. Those were workers compensation, quality, shrinkage, productivity, operating expenses and profitability. There was strong correlation between all of these measures of organizational performance and affective Organisational Commitment. (Wright et al. 2005) However, there has to be more research conducted to be certain about the causality of these two. In other words, there are some doubts about which one is causing the other one to happen (Mayer 2012).

After conducting meta-analysis of the studies conducted on Organisational Commitment Mathieu and Zajac (1990) found consequences of Organisational Commitment to be related to job performance and withdrawal behavior, such as intention to search for alternatives, intention to leave and turnover (Mathieu and Zajac 1990). Therefore, not only employees will manage their work better but also they are less likely to leave the organization.

Chapter one provides the introduction to Green HRM its practices, Employee Motivation, Job Satisfaction, and employee commitment. Chapter one also presents the benefits of adopting Green Human Resource Management practices. The following chapter discusses the literature review on Green HRM practices and various theories proposed by the researchers on Employee Motivation, Job Satisfaction, and employee commitment.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

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Review of literature is an important step in the process of research. No scientific research can start abruptly. All scientific study stems out as a result of the consolidation of a host of knowledge already gathered by various pioneers in that field. In the light of the earlier researches the problem can be viewed in different perspectives. Keeping this in mind, the investigator has collected relevant research done on the topic under study. An attempt is made to highlight the procedure and findings of researches conducted earlier that have a bearing on the present study.

#### **2.1 Introduction**

Despite a growing body of research, which has added to the nomological net of GHRM, the concept and its defining idiom remains somewhat vague. Different terms have been used to discuss the environmental consequences of HRM, with Green HRM examined as part of a strategic HRM focus that targets employees green behaviors. However, to date the fundamental task of evaluating and clearly defining the contemporary management construct it has been neglected, and it remains rather ambiguous as to how GHRM fits into the broad concepts of EM, CSR and strategic HRM, or how GHRM differs from sustainable HRM or socially responsible HRM (SRHRM). Moreover, current literature has thus far failed to clarify the motivation, impact and consequences of implementing GHRM.

Scholars have sought to clarify and define GHRM by reviewing and applying analogous constructs from contemporary literature such as EM, HRM, Sustainable HRM (Cohen et al., 2010; Ehnert, 2009), SRHRM (Shen, 2011; Shen and Benson, 2014), and CSR (Jackson et al., 2011; Kramar, 2014; Renwick et al., 2013). Exactly what constitutes GHRM is still in dispute, although there is a generalizability clearly identified within the literature, with environmental sustainability found to be a key component of the construct (Dubois and Dubois, 2012; Kramar, 2013).

While the environmental implications of HRM have been widely discussed in the literature (Daily and Huang, 2001), there is no clear-cut definition of the term GHRM. Some researchers have used the term without explicitly defining the concept (see for example Jackson et al., 2011) with other researchers using it interchangeably with sustainable and strategic HRM (Jackson and Seo, 2010; Lis, 2012). Among those scholars that have sought to explicitly define the term, the definitions range from general, 'HRM aspects of environmental management' (Renwick et al., 2013), to more specific interpretations such as "use of HRM policies, philosophies and practices to promote the sustainable use of resources and prevent harm arising from environmental concerns within business organizations" (Zoogah, 2011).

GHRM is unlike other contemporary management constructs. Human resource management focuses on general people management strategies (Shen, 2011), CSR focuses on the moral and ethical basis of corporate social policy (Dahlsrud, 2006) and EM's key goal is to reduce environmental impacts through integrating business and environmental practices (Cramer, 1998; Ormazabal and Sarriegi, 2012). However, the application of GHRM is aimed at developing processes and activities designed to influence employee skills, knowledge, motivations and behaviors to achieve organizational environmental objectives and green goals (Prathima. M and Misra, 2012; Renwick et al., 2013).

The definition from Zoogah (2011) restricts the application of GHRM to business organizations, which limits the scope of the concept and its potential application. In order to effectively define GHRM, there are several things that should be considered such as what, how, and why. Specifically, what are the attributes that make up GHRM how do organizations aim to achieve desirable outcomes through the application of GHRM, and why would organizations engage with green strategies, and adopt GHRM?

The literature acknowledges that GHRM falls somewhere between sustainable and strategic HRM, with Ehnert and Harry (2012) claiming there are two arguments that support the importance of sustainability to HRM. Firstly, the relationship of an organization to both its economic and social environment is inextricably linked to the

macro level societal and ecological sustainability debate. As such, the role of HR is to develop the social discourse on the importance of sustainability, in order to contribute to corporate sustainability policy and strategic development (Ehnert and Harry, 2012).

Secondly, from a micro perspective, HRM is conjointly linked to individual and internal organizational elements such as scarce resources, employee behaviors, aging workforces and work-related health issues. Having a HRM system that fosters sustainability, allows firms to address the aforementioned issues while retaining a high quality workforce (Ehnert and Harry, 2012).

In addition to the academic literature, Taj (2011) offers subjective opinions of how GHRM is definitively viewed from a business executive's perspective. Ashok Ramachandran, HR Director of Vodafone Essar Ltd. claims that 'Green human resources could very well imply using every employee touch point/interface to promote sustainable practices and increase employee awareness. GHRM reflects the way an organisation chooses to drive and increase employee commitments and awareness on the issues of sustainability' (Taj, 2011).

Anjana Nath, Regional Head of HR in Fortis Healthcare Ltd. suggests that "GHRM can be defined as environmentally friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement. Human resources plays a key role as it creates awareness amongst employees and builds engagement, which in turn, helps organisations to operate in an environmentally sustainable fashion" (Taj, 2011).

Jyorden T. Misra, Managing Director Spearhead InterSearch, believes that 'Eco-consciousness or the colour 'green' is rapidly emerging in every dimension of our lives and workplaces are increasingly displaying an organised response to this challenge by bringing in 'professional consciousness' at an institutional level as well as individual employee level. Green HRM is one, which involves two essential elements: environmentally friendly HR practices and the preservation of knowledge capital. The HR of the organisation plays a major role in making environmental responsibility a part of an organisation's mission statement' (Taj, 2011).

Business perspectives provide a pragmatic view of the role of the GHRM concept in today's corporate world, with these perspectives not considered formal definitions of GHRM. Instead, these corporate worldviews on GHRM adds to the body of knowledge regarding the existence, acceptance and role of GHRM in today's workplace. The above perspectives encompass the key components of current academic definitions, including sustainability, preserving knowledge capital, employee commitment and organizational and individual level engagement.

Analogous concepts that are synergistically linked to GHRM are sustainable HRM and Socially Responsible Human Resource Management (SRHRM) (Kramar, 2014; Shen and Benson, 2014). Kramar (2014) states that the term 'sustainable HRM' has not been clearly defined, but encompasses several terms that link sustainability with HRM. The terms exploited within the sustainable HRM construct are: sustainable work systems; HR sustainability; sustainable management of HR; sustainable leadership and sustainable organizations (Kramar, 2014). The overriding correlations between these sustainability terms, according to Kramar (2014), is that they acknowledge both explicitly and implicitly the social and human outcomes of a sustainable approach to HRM. A key outcome of sustainable HRM is that it should contribute to developing an organization's human and social capital. Using this dialogue, the clear delineation between GHRM and sustainable HRM, is that GHRM specifically targets green organizational outcomes including encouraging employee green behaviors and attitudes rather than general employee developmental outcomes as highlighted in sustainable HRM.

While the SRHRM concept is not explicitly seeking to promote employee green workplace behavior, SRHRM does have some concordance with the GHRM concept. Shen and Benson (2014) define SRHRM quite simply as: "corporate social responsibility (CSR) directed at employees".

Socially responsible human resource management promotes above average salaries and working conditions, specific CSR training, and performance and appraisal, and remuneration should consider the social contributions made by employees (Shen and Benson, 2014). Comparing both GHRM and SRHRM, the key differences between

the two constructs, is that GHRM has specific environmental and green targeted objectives, whereas SRHRM has socially responsible outcomes including workplace equality and pollution prevention without an exclusive employee green behavioral or green goal focus (Royle, 2005).

As Renwick et al. (2013) have established, GHRM has been augmented to enhance the green behaviors, attitudes and capabilities of employees, to motivate workers to think green, and to provide opportunities for employees to build knowledge and skills associated with environmental sustainability. Taking into consideration the previous discourse, as well as current definitions of GHRM and analogous concepts, this thesis defines GHRM as ‘HRM strategies, policies, processes and activities that aim at generating positive environmentally associated outcomes for an organisation’.

The underlying goals of GHRM using existing definitions, is to identify and implement appropriate green associated practices designed to change the way companies’ actions and decisions affect the environment. This can be done by way of increasing operational efficiencies, using energy and water resources responsibly and changing employee attitudes to understand, embrace and acknowledge the importance of responsible green related behaviors. However, based on the above discussions, and the current undefined nature of the GHRM construct, the extent literature is considered to be somewhat inconclusive. Ongoing debates on how best to define GHRM continue, with little clarity in regards to its actual application or veritable workplace consequences.

## **2.2 The Role of Human Resource Management in Greening the Firm**

Today, “being green” has become a norm (Margaretha and Saragih, 2013); greening is a holistic process aimed at smarter energy usage, low costs, low wastage using sustainable resources or recyclable materials for end results that are products, targets, etc. (Jafri, 2012). A Green Workplace is environmentally sensitive, resource efficient and socially responsible (Sathyapriya et al., 2013). In addition, it incorporates a virtual workplace and green buildings. A Green Workplace could have one or more of the following components: written environmental policy, specific targets for



improving EP, publication of environmental reports, EMS, environmental purchasing policy, environmental training and education, fossil fuel use reducing policy and policy of reducing the use of the unsustainable product (Ramus, 2002). Google is leading the way publicizing their environmental record and in its environmental practices (Kaur, 2013).

Over the last three decades, organization's relationship with the environment has been largely defined by environmental regulations. How organizations, primarily in developed countries, respond to the demands of environmental law has determined their relationship with the environment (Aragon-Correa and Sharma, 2003). Past research had developed various classifications for the relationship between business and the natural environment (Jabbour and Santos, 2006; Aragon-Correa and Sharma, 2003; Staffelbach et al., 2012). In general, "corporate strategies for managing the natural environment can be classified along a continuum that ranges from reactive to proactive" (Aragon-Correa and Sharma, 2003).

Jabbour and Santos (2006) classified environmental strategies into three types:

- (1) Functional specialization of environmental dimension (or reactive stage); occurs when the area of EM created is strongly linked to the need of meeting legislative demands and with an isolated position within an organization;
- (2) Internal integration of environmental dimension (or preventive stage); occurs when the organizational areas' involvement in EM increases; however, the environmental dimension is not considered systematically strategic;
- (3) External integration of the environmental variable (or proactive stage); occurs when all the areas of a company are designed to explore competitive advantages systematically by using principles and tools of EM.

The evolution of EM throughout these stages depends on the contributions of HRM (Fernández et al., 2003). Obviously, proactive stage requires a huge amount of effort for training and restructuring the employees through HRM function involvement, since the company aims for a better and deeper understanding of the environmental issues.

Staffelbach et al. (2012) described the HR functions roles that can support the organization greening. These are:

- (1) Strategic partner who understands the business model and gather the relevant stakeholders (including employees, customers, shareholders, and society) together and encourage the dialogue between them, also shares with the managers' strategies, the value of human resources and the consequences of managing people effectively.
- (2) Innovator who enables the organization to develop the learning culture, guiding and directing people and does not just copy what others are doing and contributes special knowledge on environmental aspects to the initiative;
- (3) Collaborator who brings specific competencies of each function together to make a win-win situation understands how to build win-win situations, cooperates and supports and works task-oriented across internal and external organizational constraints.
- (4) Change Facilitator who manage and supervises the implementation of the initiative and is aware of the need for change and creates favorable conditions in the organization for it, helps leading changes in strategy and energizes others for the desired change.

Opatha and Arulrajah (2014) mentioned four roles for an employee to become a green employee; which are: a preservationist, conservationist, non-polluter, and maker. The preservationist is the one who protect the natural environment from harm loss, or negative change and keep it in its original; Conservationist is the one who treat natural environment very carefully and use it at the minimum level in order to let it last as long as possible so that future generations will be able to utilize it.

Non-polluter, is the guardian who stops any behaviors and outcomes that could endanger the planet/earth where humans and non-humans are living through preventing from (or minimizing) contaminating the water, air, atmosphere, etc. through unpleasant and poisonous substances and wastes. Maker is the employee who

intentionally builds parks and places which have plants, trees, and grass. A Green employee is a nature-lover or an eco-activist (Opatha and Arulrajah, 2014).

In the area of environmental affairs, HRM practices can aid in balancing corporate values, financial goals and environmental strategy and in ensuring that employees implement this balanced strategy consistently across the organization (Cohen et al., 2012). The responsibility of the present generations, HR managers is to create awareness amongst the youngsters and among the people working for the organization about the GHRM (Shaikh, 2012). Through being an advocator; HR managers should initiate the environmental sustainability concept and employee's involvement in environmental-friendly activities in the organization, and guidelines to managers in terms of gaining full staff co-operation towards implementing environmental policies which means HR needs to nurture supporters and create networks of problem-solvers willing to act to change the current status quo (Mandip, 2012).

It's important to include greener activities in every step of HRM activities; once it becomes a daily activity then it will be treated as a culture. Similarly, Jabbour and Santos (2008b) also stated that superior Environmental Policy (EP) outcome requires HRM practices that support the whole implementation and maintenance of Environmental Management System (EMS) in the organizations, where supportive HRM practices such as top management support, environmental training, empowerment, and rewards are likely to be critical to the successful implementation of policies and initiatives associated with an EMS (Daily and Huang, 2001; Govindarajulu and Daily, 2004). The development of products with lower environmental impact requires the support of HRM (Govindarajulu and Daily, 2004; Jabbour et al., 2008); many research support the idea that companies which pay attention to the greening of human factors may be more productive, thus gaining a competitive advantage (Jackson and Seo, 2010; Paille et al., 2013b), in contrast with other organization that is not using full range of GHRM will have potential limitation in the effectiveness of total environmental improvement (Renwick et al., 2012).

To build a green organization, the organization, and HRM must increase efficiencies in organizational hierarchies, perform more virtualized work or eliminate unnecessary time spent in the office and optimizing the use of company resources, including travel, etc. Also, companies that are supporting greener options include telecommuting, flexible work schedules (Sathyapriya et al., 2013). In GHRM, researchers have asserted the importance through all the functions of HRM ranging from of staffing, job analysis, environmental training and communication, participation, empowerment, recognition and compensation, the performance of EM programs, performance appraisal and use of technology (Paille et al., 2014; Kapil, 2015a; Renwick et al., 2008).

Against this backdrop, it can be assumed that GHRM is all about the holistic application of the concept of sustainability to the organization and its workforce. It involves green actions focused on increasing efficiency within processes, reducing and eliminating environmental waste, and revamping HR products, tools, and procedures resulting in greater efficiency and lower costs. The results included: electronic filing, ride sharing, job sharing, teleconferencing and virtual interviews, recycling, telecommuting, online training, and developing more energy-efficient office spaces (Sharma, 2015). In fact, GHRM promotes various Green processes and practices in different HR functions. Some of the practices concerning Green management in which HR is actively involved have been described below.

### **2.3 Green HRM practices**

To meet the demands and environmental objectives of company executives and other stakeholders, HR managers need to ensure that the firm's proposed GHRM strategies and programs address key environmental objectives by:

- Positively responding to emerging societal and social trends
- Delivering on its sustainable targets
- Developing a process whereby an employee's green performance can be accurately assessed

- Keeping abreast of constantly changing environmentally related government policies, programs and legislation
- Promptly responding to regulatory requirements and stakeholder concerns
- Influencing corporate and public policy agendas (where possible) and
- Meeting organizational sustainability goals (Garavan and McGuire, 2010; Jackson and Seo, 2010; Renwick et al., 2013).

Despite the claims of the importance of employees to a firm's performance and organizational outcomes, most organizations have ignored the contributions and the potential of key HRM practices to achieve a firm's green goals (Carmona-Moreno et al., 2012; Luthans and Youssef, 2004). According to Muster and Schrader (2011), it is important for organizations to transform green aspirations and mere good intentions to genuine organizational policy and workplace behavior reform, if organizations expect to improve the firm's environmental performance. Put succinctly, Wehrmeyer (1996) states that, 'if a company is to adopt an environmentally-aware approach to its activities, the employees are the key to its success or failure'.

Hallahan (2000) suggests that the Ability-Motivation-Opportunity (AMO) framework can explain how the objectives of HRM and potentially GHRM, are derived through the implementation of HR activities and practices. The AMO framework suggests that individual's process information through three specific factors: ability, motivation and opportunity (Boselie, Dietz and Boon, 2005). Ability refers to the skills that an individual uses to process the message; motivation serves to heighten the interest of the individual to process a particular message, and opportunity focuses on the executional factors of the message being broadcast from the organization (Hallahan, 2000). Put simply, HR practitioners must make the GHRM message:

- 1) Simple enough to tap into individual cognitive abilities
- 2) Attractive enough to encourage individual Employee Motivation and
- 3) Unmistakably structured so that the message optimizes the likelihood of the message being successfully processed (Hallahan, 2000).

A study by Lee (2009) was conducted to explore the process of green management adoption by firms, with some interesting findings in regards to how employees perceived the effects of organizational green initiatives on workplace related tasks.

Lee's study of some Korean small-medium enterprises (SME) in the manufacturing sector, found that employees had negative attitudes toward green management initiatives. This was largely due to the perception that green initiatives would be a higher impost on their time and result in higher personal workloads. To address these perceptions, management responded by introducing a number of HRM processes and practices involving specific environmental training and knowledge building activities that highlighted the importance of green programs and their benefits to the firm, as well as demonstrating that employee workloads would not be adversely affected (Lee, 2009). At the completion of the environmentally related workplace training, results showed a significant improvement in employee attitudes and behavior toward green management initiatives.

Lee (2009) study goes some way to demonstrate what Hallahan (2000) highlighted in an earlier study. Using targeted GHRM training, firms could overtly demonstrate that there would be no increase to workloads or personal time and succinctly explain the benefits of green strategies. This approach can transform the mindsets of the employees resulting in positive engagement and improvements in employee behaviors and attitudes toward the firm's green agenda. However, further empirical evidence is needed to validate these findings across industries, nations and cultures. In addition, researchers need to explicitly explore the application and effects of GHRM processes, practices and activities on organizational outcomes.

Dubois and Dubois (2012) also support the argument that HRM is key to implementing a successful GHRM agenda. Embedding environmental sustainability programs into an organization requires HR managers to be "design architects for the varied HRM systems, policies and activities that are needed to prepare employees to engage and contribute meaningfully to the accomplishment of environmental sustainability goals".

Carmona-Moreno et al. (2012) support Dubois and Dubois (2012) and suggest that HRM facilitates the achievement of environmental objectives through targeted GHRM practices and activities including appropriate rewards systems, targeted recruitment and training and promotional opportunities. Essentially, these claims support the AMO framework as put forward by Hallahan (2000).

Renwick et al. (2013) analyzed the separate literatures of EM and HRM and constructed a list of GHRM activities (see Table 2.2). However, this list of GHRM

activities and practices is not considered exhaustive. This recent list did not include exploring the reasons why employees exit the firm, as first highlighted by Renwick et al. (2008). Understanding if employees exit the firm because the firm is ‘not green enough’, as an example, could facilitate organizations to embrace green management and GHRM so as to maintain a high quality and highly skilled workforce. The Renwick et al. (2013) list includes the HR activities discussed in this study: recruitment and selection; training and development; performance management and rewards and compensation, which are considered to be the key HRM practices most likely to advance employee green workplace behaviors.

Opatha and Arulrajha (2014) summarized the basic Green HR functions. See Table 2.1.

**Table 2.1: Some HRM Functions and Ways of Making them Green**

HRM function	Green policies, procedures, or practices
Job Analysis	To include environmental dimension as a duty in job description. <ul style="list-style-type: none"> <li>To include green competencies as a special component in job specification.</li> </ul> To include environmental dimension as a duty in job description. <ul style="list-style-type: none"> <li>To include green competencies as a special component in job specification.</li> <li>To include environmental dimension as a duty in job description.</li> <li>To include green competencies as a special component in job specification.</li> </ul>
Recruitment	<ul style="list-style-type: none"> <li>To include environmental criteria in the recruitment messages.</li> <li>To communicate the employer’s concern about greening through recruitment efforts.</li> </ul>
Selection	<ul style="list-style-type: none"> <li>To select applicants who are sufficiently aware of greening to fill job vacancies.</li> <li>To select applicants who have been engaging in greening as consumers under their private life domain.</li> </ul>
Induction	<ul style="list-style-type: none"> <li>To make new employees familiar with greening efforts of the organization</li> <li>To develop induction programs showing green citizenship behaviour of current employees.</li> </ul>
Training	<ul style="list-style-type: none"> <li>To impart right knowledge and skills about greening (the four green roles) to each employee through a training program exclusively designed for greening.</li> <li>To do training needs analyses to identify green training needs of employees.</li> </ul>
Performance evaluation	<ul style="list-style-type: none"> <li>To evaluate employee’s job performance according to green-related criteria.</li> <li>To include a separate component for progress on greening in the performance feedback interview</li> </ul>
Rewards management	<ul style="list-style-type: none"> <li>To give financial incentives to employees for their good green performance of job.</li> <li>To give non-financial rewards such as praises and recognitions to employees for their greening.</li> </ul>
Discipline management	<ul style="list-style-type: none"> <li>To formulate and publish rules of conduct relating to greening.</li> <li>To develop a progressive disciplinary system to punish employees who violate the rules of green conduct.</li> </ul>

Source: Opatha and Arulrajha (2014)

- To formulate and publish rules of conduct relating to greening.
- To develop a progressive disciplinary system to punish employees who violate the rules of green conduct

In order to implement an effective green corporate culture, it is important to promote a great deal of technical and management skills among all employees of the organization. It would be ideal to have effective human resource management practices including stringent recruitment strategies, appraisal and reward systems which include environmental awareness and implementation in their evaluation process and training and empowerment programs, which will enable the development of relevant set of skills and competencies amongst the employees of “pro green” firms.

### **2.3.1 Green Recruitment and Selection**

In general, environment concerned companies have their own environmental policy framework. In materializing the established environmental policies, companies need environmentally oriented workforce. In creating environmental oriented workforce, companies have two options: First is focusing on green recruitment. Second is providing required environmental protection related awareness, education, training and development to the existing workforce. The first option is more proactive and cost effective than the second option. Hence, searching best green recruitment practices is important to organizations. In the recruitment context, what some companies are doing is that they integrate corporate environmental policy and strategies with the recruitment policy of the company. A survey by the British Carbon Trust confirms that most of the employees (more than 75%) considering working for an organisation perceived it as important that they have an active environmental policy to reduce carbon emissions (Clarke, 2006).

On the other hand, potential employees also search and want to work in the environmental concerned organizations. In United Kingdom environmental issues have an impact on organizations' recruitment efforts, and according to a survey high-achieving graduates judge the environmental performance and reputation of a company as a criterion for decision-making when applying for job vacancies



(Wehrmeyer, 1996; Oates, 1996). The Chartered Institute of Personnel and Development (CIPD) believe in that becoming a green employer may improve employer branding, company image and is a useful way to attract potential employees who have environmental orientation (CIPD, 2007).

Attracting environmentally aware talent might be facilitated by pro-active branding of the organization as a high-quality “green employer of choice” (Renwick et al, 2008; Jackson et al, 2011). Increasingly, firms are beginning to recognize that gaining a reputation as a green employer is an effective way to attract new talent (Phillips, 2007; Stringer, 2009). Really, environmentally responsible employers can attract talent that they needed to implement corporate environmental management initiatives and ultimately it contributes to achieve organization's environmental goals.

As already established, few studies exist that have empirically tested HRM practices within the parameters of GHRM. However, to provide some level of perspective, there are a few available EM and CSR related studies, which suggest that employees are attracted to firms who have a strong environmental and CSR image (Backhaus, Stone and Heiner, 2002; Jones, Willness and Madey, 2013). In addition, organisations that have a green strategic focus and a strong CSR reputation are able to use this as a form of organizational leverage during recruitment and selection processes. Bansal and Roth (2000), Kane (2011) and Renwick et al. (2013) support this assumption and claim that firms can procure a competitive advantage by using their socially responsible green reputations. This is because employees with high levels of skills, abilities and education are unambiguously attracted to working for ethically diligent and environmentally responsible organisations.

In the selection context, when making selection for the job vacancies some companies consider candidates' environmental concern and interest as selection criteria. When interviewing candidates or evaluating them for selection, environmental-related questions are asked by those companies (Crosbie and Knight, 1995; Wehrmeyer, 1996; North, 1997; Revill, 2000). Really, these are some of the good green selection practices any organisation can adopt to select environmental friendly people in addition to the normal selection criteria relating to the specific duties of the job being concerned. Table 4 shows a list of the existing HRM practices under the green selection.

### 2.3.2 Green Training and Development

Of all the HRM and GHRM activities highlighted in the literature so far, training has been identified as a crucial factor to achieving organizational green outcomes (Cantor, Morrow and Montabon, 2012; Madsen and Ulhoi, 2001; Teixeira et al., 2012). Lee (2009), Renwick et al. (2013) and the Trade Union Congress (TUC) (2014) suggest that Green Training and Development programs are likely to:

- Increase knowledge, expertise and skills
- Induce an employee's emotional involvement in green initiatives through increased awareness of the effects of poor behavior and attitudes toward the environment
- Develop high level skills and attitudes for managers and supervisors and
- Tap into an employee's implied environmental knowledge.

Training and development is related with improvement or advancement of the job or job holder's responsibility. Training is the best way of getting something new and new idea, concept and Knowledge. Training is the provision of getting the skilled knowledge and skills whatever to increase the level of responsibility. Training provides the general guidelines to employees for doing the work or accomplishing the organizational objectives. Training is a systematic process of changing the behavior, knowledge and/or motivation of present employees to improve the match between employee characteristics and employment requirement. Training is the process by which employees learn skills, techniques, information and behaviors needed to do their specific tasks or jobs. According to M. Armstrong- "Training is the systematic development of knowledge, skill and attitudes required by an individual to perform adequately a given task or job". Training is socialize the workers to the introduction of the organization and objectives of the organization. There is positive relationship between the employee's performance recognize and evaluation and training and motivation.

Training is focusing on fixing a specific issue (Doyle, 1997). Training is anything offering learning experience highly related with motivation and Motivation is highly related with the production and productivity of the organization. When the workers

get the training and the potentiality of worker is getting increased day by day. Training is related with the production and productivity and Organisational Commitment. Human resource management regards training and development as a function concerned with organizational activity aimed at bettering the job performance of individuals and groups in organizational settings. Training and development can be described as "an educational process which involves the sharpening of skills, concepts, changing of attitude and gaining more knowledge to enhance the performance of employees" (Kashmir Observer. Retrieved 2016).

The field has gone by several names, including "Human Resource Development", "Human Capital Development" and "Learning and Development". And when the training is provided to the employees the ultimate benefits goes the employers or the organization such as increasing the production and productivity, less supervision, More Job Satisfaction and less turnover with low absenteeism and also it helps the skill development of the employees.

No studies have implicitly explored the effects of GHRM training and development practices on employee workplace outcomes. However, there are notable papers that highlight the importance of training to organizational green outcomes (Paillé et al., 2014; Renwick et al., 2013; Teixeira et al., 2012). A recent study by Cantor et al. (2012) confirmed the findings by Sarkis, Gonzalez-Torre and Adenso-Diaz (2010), which found that organisations that support targeted HR training programs encourage employees to engage with EM initiatives. To support these claims, Cantor et al. (2012) suggests that POS increases an employee's perception of the firm's commitment to their individual development, which then results in the exhibition of employee green behaviors.

In step with EM and green management (Dwyer, 2009; Lee, 2009), employee training and development related studies, Huffman et al. (2009) and Paillé et al. (2014) claim that organisations need to have specialised environmental training and development programs to achieve desirable green outcomes. Govindarajulu and Daily (2004) state that insufficient or unsatisfactory training will likely result in employees who are unwilling and/or unable to participate in organizational environmental efforts. Firms

need to provide adequate resources and technical assistance necessary to implement green programs and initiatives. Despite the optimistic conjecture of the anticipated effects of green training, surprisingly, these claims have not been empirically tested within the GHRM domain.

Consistent with the literature (Lawrence and Morell, 1995; Lee, 2009; Paillé et al., 2014) and the GHRM practices as highlighted by Renwick et al. (2013), it is concluded that for firms to benefit from GHRM, organizational training and development processes should be designed to:

- Develop programs that build the technical and management capabilities and skills of employees associated with green management
- Ensure that employees acknowledge their ability (or inability) to undertake required tasks. If the employee is adequately trained, this should positively affect individual motivation, engagement and drive to achieve organizational green goals. Conversely, if an employee has not received adequate training they are less likely to be motivated to achieve the organisation's green goals
- Develop employee knowledge about the effects of individual behavior on the environment to induce an employee's emotional involvement, engagement and contribution to organizational green initiatives
- Increase the green knowledge of leaders, managers and supervisors as they are effective messengers of organizational policies to frontline employees and by having managers and supervisors overtly display green behaviors, this demonstrates to employees what are the behaviors and attitudes desired by the organisation, and what is expected of employees in the workplace.

### **2.3.3 Green Reward Management**

Renwick et al. (2013) have identified a range of GHRM activities related to employee rewards and compensation that are expected to positively contribute toward the achievement of green goals. In particular, Renwick et al. (2013) claim that firms need to:

- Reward employees for making suggestions for environmental improvements
- Encourage skills development and reward employees with skills-based pay

- Monetarily reward managers for meeting EM based KPIs and
- Recognise employee efforts with monetary and/or non-monetary awards including incentives such as gifts and time off work.

While no empirical research has been conducted on the effects of GHRM and rewards and incentives, green management studies have edified researchers on the potential benefits of pursuing such a strategy. Merriman and Sen (2012) suggest that pay incentives increase a manager's propensity to enact environmental initiatives, with direct incentives having more impact than indirect incentives that were associated with complementarity. However, incentive effects were undermined by saliently held social norms that managers expressed toward the environment. In other words, if managers already held strong views for environmental protection, the less effect an incentive would have on their decisions to display green behavior. Merriman and Sen (2012) concluded that larger incentives could outweigh the value of social norms in directing managers to behave more sustainably.

Ramus (2001) claims that despite evidence of praise and rewards positively influencing green organizational outcomes, few organisations have managed to achieve sustainability objectives, primarily due to a lack of motivation and support from management and supervisors. Similar findings were established in a recent study by

Harvey et al. (2013), which found that pilots were dissuaded to achieve green goals because of the lack of support from airport ground staff. Govindarajulu and Daily (2004) suggest that rewards can be used to systematically motivate employees to exhibit desirable green behaviors. However, organisations have failed to capitalise on green performance opportunities because firms have not tailored reward systems that fits the needs of individual employees, nor have they rewarded or recognised employees for innovative green initiatives beyond formalised KPI requirements.

Cantor et al. (2012) found in their study of supply chain employees that employees did not perceive merely the presence of rewards for environmental behavior as a signal that the organisation was supportive of environmental initiatives. Rather, the study found that if employees perceive there to be a lack of legitimacy from the firm to actually

reward employees for green behaviors, then this implies that the organisation does not appreciate nor formally acknowledge the efforts of employees to achieve organizational green goals or demonstrate green behaviors (Cantor et al., 2012). As such, until organisations explicitly endorse rewards to employees for demonstrating green behaviors, then rewards do not accurately signal the intent of the organisation.

The above studies have demonstrated that rewards and compensation can have a positive effect on organizational green performance, under certain circumstances. However, the literature is limited in its ability to apply these assumptions to frontline, production or shop-floor workers. No identified studies were found that have explored rewards and compensation outcomes specific to GHRM, to these particular groups of employees. Frontline workers could provide a valuable insight and a measurable pathway between corporate environmental strategies and green workplace outcomes, as they often make up a large percentage of an organisation's workforce. In the future, firms will need to be genuine and transparent and implement new approaches to rewarding and compensating employees such as:

- Managers providing subordinates with open and verbal feedback in regards to successfully achieving individual employee green associated KPIs
- Overtly demonstrating the firm's commitment to environmental initiatives through the implementation of rewards and benefits
- Rewarding employees with pay and promotional opportunities when they undertake green skills-based development
- Tailoring green rewards to fit the needs of the individual employee (i.e. non-monetary or gifts)
- Rewarding employees for innovative initiatives, such as having a company 'green' suggestion box
- Acknowledging, both publicly and privately, an employee's contribution to improving environmental processes and

- Ensuring that managers and supervisors are supportive of employee efforts to improve the green performance of the firm and to achieve personal and organizational green goals.

Existing green management, CSR and GHRM literature has established limited empirical support for a relationship between GHRM and employee green workplace behaviors (Cherian and Jacob, 2013; Harvey et al., 2013; Jabbour, 2011). However, literature pertaining to GHRM *and* employee non-green workplace behaviors is noticeably absent. The HRM behavioral (Jiang et al., 2012) literature suggests that HRM practices are likely to influence employee behaviors through different social and psychological processes using the Ability-Motivation-Opportunity (AMO) model. By providing employees with the skills (abilities), motivation and opportunity to contribute to organizational goals, which are initiated and developed through HR practices, this maximises the likelihood that employees will perform tasks as desired by the organisation. Using the logic as proposed by Jiang et al. (2012), GHRM will positively influence employee workplace behaviors both within and beyond the parameters of the green domain, through motivational social and psychological processes.

Given the potentiality these assumptions have for general and green management research, and the practical applications and implications this has for GHRM, it is surprising that few researchers have not sought to explore a range of organizational or employee consequences of GHRM. Notwithstanding the assumptions of Jiang et al. (2012), Bowen and Ostroff (2004) and other GHRM reviews such as Renwick et al. (2013), whether GHRM does, in reality, influence green and non-green behavior through mediating or moderating pathways, has not yet been confirmed. This is due to a lack of supporting theory based empirical research to back up these speculative assumptions. Exploring these links and tackling the deficiencies in the current GHRM research as highlighted above, aims to be addressed during the course of this research.

#### **2.3.4 Green Employee Involvement**

Employee relations are that aspect of HRM which is concerned with establishing amicable employer– employee relationship. The relationship facilitates motivation and morale of the employees as well as, increases the productivity. Basically,

employee relations involve employee participation and empowerment activities. It also helps prevent and resolve problems arisen at workplace that may affect the work. In fact, positive employee relations are an intangible and enduring asset and a source of competitive advantage for any organization.

Employee participation in Green initiatives increases the chances of better green management as it aligns employees' goals, capabilities, motivations, and perceptions with green management practices and systems. Involving employees in EM has been reported as improving EM systems such as efficient resource usage (Florida and Davison, 2001); reducing waste (May and Flannery, 1995); and reducing pollution from workplaces (Kitazawa and Sarkis, 2000). Several workers in their study concluded that individual empowerment positively influences productivity and performance, and facilitates self-control, individual thinking, and problem-solving skills (Renwick, 2008; Wee and Quazi, 2005).

An important way in which employee involvement and participation can be encouraged within the organization is to seek entrepreneurs within the company who are socially or ecologically oriented known as eco-entrepreneurs (Mandip, 2012). Eco-friendly ideas should be welcomed from all employees irrespective of their designation which will encourage their interest in environmental issues and make best use of applying their skills. The HR staff needs to pressurize the management to create a participative work environment where the employees are free to put up their ideas on green issues since they are the ones who in reality are responsible for implementing ethical corporate behavior in the day-to-day life of the organization. This means the achievement of green outcomes will largely depend on employees' willingness to collaborate (Collier and Esteban, 2007), as often, the best ideas come from the employees who work in that particular area (Casler, Gundlach, Persons, and Zivnuska, 2010).

The scope of employee relations should be broadened by initiating a suggestion scheme within the organization, wherein each and every employee from top most to the lowest level gets an opportunity to contribute to the scheme. This practice will help in creating greater awareness on green issues besides, new ideas for eco-friendly



practices may crop up from different sources. IBM UK has an action-team program. This gives grants to encourage employees and their families to get involved in local environmental projects (Wehrmeyer, 1996). Other firm policies that support employee eco-initiatives and supervisors who support employee environmental actions have been seen in firm practice in the US and Europe, where at GE Plastics in the Netherlands, Lucent Technologies in Pennsylvania, and Nestle Oy in Finland, supportive behaviors from supervisors toward employees in EM are seen to encourage employees to produce possible solutions to environmental problems (Ramus, 2001).

Other benefits of employee involvement are improvement in employee and organizational health and safety, as well as development of eco-friendly staff. We propose that keeping the policies in place, long-term trust among the management and employees will be built which will provide an opportunity to the employees to express their personal ideas at workplace and help to create a climate conducive to green management practices and systems.

Renwick et al, (2008 and 2013) suggested certain green employee relations and union management practices. They include employee involvement and participation in green suggestion schemes and problem-solving circles, staff independence to form and experiment with green ideas, integrating employee involvement and participation into maintenance (cleaning), employee help-line for guidance in green matters, tailoring Green Employee Involvement schemes to industry/company standards, increasing line/supervisory support behaviors in environmental management, union-management negotiating to reach green workplace agreements, training of union representatives in respect of environmental management aspects, encouraging employees to use green forms of transport, set-up of low carbon chiefs (including CEO and Board) to increase action in environmental management, and introducing green whistle-blowing and help-lines.

## **2.4 Theories and Models of HRM**

This section discusses various models and theories of GHRM.

### **2.4.1 Sustainability in Human Resources Management**

Today's approaches using the notion of sustainability in HRM and HR-related literature deal with one or more origins of sustainability described previously. Prior research linking sustainability and problems relevant for HRM can be traced in the literature on Strategic HRM, Corporate Social Responsibility, Sustainable Work Systems as well as Sustainable HRM (Mazur, 2013). The approaches identified in this literature differ with regard to the origin of their understanding of sustainability, their objectives, focus, and theoretical foundations (Ehnert, 2006). One of the most interesting attempts to capture the complexity of the concept of Sustainable Human Resource Management (SHRM) is De Prins' holistic model consisting of four approaches to Sustainable HRM.

De Prins (2011) argues Sustainable HRM focuses on optimally utilizing and respecting human workforces within the organization, in which an explicit relationship is built between an organization's strategic policies and its environment. Long-term vision and integration with an organization's strategy and CSR-policy are key. Sustainability transported to the business level is referred to as Corporate Sustainability. Even though Corporate Sustainability used to put most emphasis on the effects businesses have on the environment, while Corporate Social Responsibility also incorporated a social dimension, their separate paths have been noted to grow into convergence.

De Prins distinguishes four approaches to the concept, of which the first, second and fourth are exhibited in concrete policies; sociological, psychological, strategic human resource management and green approaches.

### **2.4.2 The Sociological Approach to SHRM as Exemplified by Diversity Management**

Diversity has been an evolving concept. Many writers define diversity as any significant difference that distinguishes one individual from another description that encompasses a broad range of overt and hidden qualities. Generally, researchers organize diversity characteristics into four areas: personality (traits, skills and abilities), internal (gender, race, ethnicity, I.Q., sexual orientation), external (culture,

nationality, religion, marital or parental status), and organizational (position, department, union/non-union). The trend in defining diversity seems to favor a broad definition, one that goes beyond the visible differences. One of the first researchers to use this inclusive definition, R. Roosevelt Thomas, Jr., was crucial in moving diversity thinking beyond narrow categories. He argued that to manage diversity successfully, organizations must recognize that race and gender are only two of many diversity factors. Managers and leaders must expand their perspective on diversity to include a variety of other dimensions (Thomas, 1992). Workplace diversity management, in his model, is also inclusive, defined as a “comprehensive managerial process for developing an environment that works for all employees” (Thomas, 1992). This general definition also enables all staff to feel included, permitting them to connect and fortify relationships that enable employees to deal with more potentially volatile issues that may later arise.

Creating and applying effective diversity management concepts is one of the main challenges in modern organizations (Mazur, 2009). Comprehensive diversity management is a strategic approach and attitude towards understanding differences in organizations and teams.

Diversity strategies use diversity as a strategic resource for complex problem solving (Aretz, Hansen, 2003). By planning and implementing corporate organizational practices in leadership and team work, potential advantages of diversity can be maximized and disadvantages, like conflict potential, are minimized. This is achieved by increasing “the ability of all employees to contribute to organizational goals and to achieve their full potential unhindered by group identities such as gender, race, nationality, age, and departmental affiliation” (Cox, 1993). In light of this, implementing strategy-oriented diversity measures will not only raise the acceptance towards diversity but also increase the acceptance and appreciation of new perspectives (Aretz, Hansen, 2003). Strategic diversity measures act on various levels: on a “surface-level” (Harrison et al., 1998) and a “deep-level”. Aspects at the surface-level-age, ethnicity, or physical abilities- are highly visible, easy to control, to measure, and to explicate. In contrast, the deep-level characteristics “values” or “attitudes” are only expressed through behavior and behavioral patterns in

communication situations (Harrison et al., 2002). A more detailed category system was developed by Aretz and Hansen (2003). They describe several diversity dimensions and connected management measures based on four systems:

- The social system describes the aspects of ethnicity and gender. Connected measures are aiming at building trust and strengthening equality;
- The organizational system provides measures for managing different age and ability levels;
- The cultural system contains aspects like ideologies or persuasions which are reflected in the corporate vision, mission, and values within a company. This system level is best managed by clearly defining diversity management concepts and actions which are communicated to all employees. Promoting a culture that values critical dialogue, creating awareness for the connection between diversity and complexity, or measures to overcome stereotypes may be included in such concepts and actions;
- the fourth system - the psychological system - is characterized by aspects like education, personality as well as the work style and mindset of people.

These characteristics can be directly linked to leadership practices within the organization. Consequently, leading persons are responsible for implementing and monitoring diversity processes, for clarifying requirements within this processes, and for taking needed measures. Successful implementations of adequate diversity management concepts can lead to higher creativity, better problem solving, and higher system flexibility. Heterogeneous teams may generate more creative and innovative solutions and higher employee satisfaction due to intense and effective collaboration. Still, inefficient diversity management could trigger negative impacts and lead to manifestation of stereotypes, communication issues, and consequently lower efficiency and effectiveness. As organizations and teams are both systems that are depending on individuals working towards a common vision or goal, diversity management should not only be a focus on a management level but also on a project management level.

Diversity means dissimilarity, variety, and individuality that emerges from various differences between people. Diversity of individual abilities, experiences,

competencies, and qualifications of human resources builds a success factor in organizations, which enables entrepreneurial strategies of increasing flexibility and continuous learning. Managing Diversity is more than a pro-gram. It is an attitude and a new understanding of how enterprises function and how to manage human resources in a sustainable way.

### **2.4.3 The Psychological Approach to SHRM as Exemplified by Work-Life Balance**

Work-life balance is about creating and maintaining supportive and healthy work environments, which will enable employees to keep balance between work and personal responsibilities and thus strengthen employee loyalty and productivity. Numerous studies have been conducted on work-life balance. According to a study (Lowe, 2000; Lowe, Schellenberg, 2001), 1 in 4 employees experience high levels of conflict between work and family, based on work-to-family interference and caregiver strain. If role overload is included, then close to 60 percent of employees surveyed experience work-family conflict. Of all the job factors that influence work-life conflict, the amount of time spent at work seems to be the strongest and most consistent predictor. The higher levels of work-to-family conflict reported by managers or professionals often are a function of their longer work hours. Other reasons include: job security, support from one's supervisor, support from coworkers, work demands or overload, work-role conflict, work-role ambiguity, job dissatisfaction, and extensive use of communication technology that blurs the boundaries between home and work (Higgins, Duxbury, 2005). Today's workers have many competing responsibilities such as work, children, housework, volunteering, spouse and elderly parent care and this places stress on individuals, families and the communities in which they reside. Work-life conflict is a serious problem that impacts workers, their employers and communities. It seems that this problem is increasing over time due to high female labor force participation rates, increasing numbers of single parent families, the pre-dominance of the dual-earner family and emerging trends such as elder care. It is further exasperated with globalization, aging population, and historically low unemployment.

Long work hours and highly stressful jobs not only hamper employees' ability to harmonize work and family life but also are associated with health risks, such as

increased smoking and alcohol consumption, weight gain and depression. Work-life conflict has been associated with numerous physical and mental health implications. Women are more likely than men to report high levels of role overload and caregiver strain (Duxbury, Higgins, 2009). This is because women devote more hours per week than men to non-work activities such as childcare, elder care and are more likely to have primary responsibility for unpaid labour such as domestic work. Furthermore, other studies show that women also experience less spousal support for their careers than their male counterparts. Although women report higher levels of work-family conflict than do men, the numbers of work-life conflict reported by men is increasing. Work-life conflict has negative implications on family life. Employees, especially the younger generation who are faced with long hours, the expectations of 24/7 connection and increasing pressure of globalization are beginning to demand changes from their employers. Also, people in the elderly employee segment are working longer now than in the past and are demanding different work arrangements to accommodate their life style needs.

Employers are becoming progressively aware of the cost implications associated with over-worked employees such as: operating and productivity costs, absenteeism, punctuality, commitment and performance. There are five main reasons why companies participate in work life balance programs: high return on investment, recruitment and retention of employees, legislation, costs and union regulations. There are a wide variety of practices currently being used to help employees achieve work-life balance. Some work-life balance programs help employees handle stress and otherwise cope more effectively while other programs help to reduce the absolute stress levels by rebalancing work life. A growing number of employers have implemented wellness programs or pay for their employees' gym membership as part of a benefits package. Some companies invite fitness trainers or yoga instructors into the office to hold lunchtime sessions. Some companies undertake initiatives to improve employees' healthy eating habits. Others offer stress management programs which include stretching, yoga, counseling, as well as bringing in Registered Massage Therapists to work. Many employers are offering longer vacation times than the mandatory 2 or 3 weeks per year imposed by legislation. Additionally, some

companies will offer “flex” days. Interestingly, sick days tend to go down once some is “entitled” to three weeks or more a year of holidays. Human resources policies that can be used to increase work-life balance include implementing time off in lieu of overtime pay arrangements, providing a limited number of days of paid leave per year for child care, elder care or personal problems, or having policies around weekend and evening use of laptops.

There are some issues that arise when employees have flexible work hours such as lack of facetime with other staff and not being as available to clients; these issues can be solved by ensuring employees discuss scheduling with supervisor and let clients and other employees know their hours of availability. Sometimes in order to accommodate workers need for work life balance, firms may need to reduce the amount of work given to each employee. To accomplish this, employers can hire new people, reduce time spent in job-related travel, allow for job sharing, or reevaluate the work itself and how it is structured and organized with work process improvements and/or reengineering of work. Flexible scheduling is the benefit valued most by employees. However, increased flexibility, if implemented without conditions and used to facilitate business ends without provision for worker consent, could compromise instead of enhance work life balance.

#### **2.4.4 The Strategic Approach to SHRM as a Source of Sustained Competitive Advantage**

In Strategic HRM literature, attention centres on the resource-based view of the firm as a means to explain how people (human resources), as well as HRM practices, can provide a sustained competitive advantage. Organizations achieve a sustained competitive advantage by implementing value-enhancing strategies that differentiate them from their competitors and are difficult for competitors to duplicate. The resource-based view asserts that an organization’s competitive advantage and thus its success depends on its supply and effective use of resources. If resources are valuable, rare, non-substitutable, and inimitable, they are considered as important and strategic and enable the organization to gain a sustained competitive advantage (Barney, 1991). Wright and McMahan (1992) thus argue that human resources have the potential to be sources of sustained competitive advantage,

though they also note that to do so, the employees must be both highly skilled and motivated - that is, a high-quality workforce.

Other research offers evidence that HRM can contribute to a sustained competitive advantage by establishing suitable HRM practices to create and develop a high quality workforce (Lado, Wilson, 1994; Delery, Doty, 1996). Although Wright et al. (1994) posit that most HRM practices can be imitated and/or substituted, such that they might not be a source of sustained competitive advantage, Lado and Wilson (1994) refute this claim and assert instead that it is difficult to imitate HRM practices. Because they often are firm specific and reflect the organization's particular circumstances, HRM practices are not easily transferable from one organization to another.

This view seems well established in current Strategic HRM literature. Consequently, human resources and their management by organizations likely are important sources of competitive advantage, and it becomes crucial to identify ways to attract, develop, and retain high-quality employees. Increasing employer attractiveness through "Green" HRM

Potential employees' positive perceptions of an organization's reputation influence their desire to pursue employment with the organization. Turban and Cable (2003) shows that organizations with better reputations attracts a larger pool of job seekers and then can select employees from an applicant pool that includes more high-quality employees. Support for a prediction that Sustainable HRM positively influences employer attractiveness also appears corporate social responsibility (CSR) literature. CSR pertains to some organization's voluntary environmental activities in its business operations and in interactions with stakeholders. A few studies note a positive association between CSR and employer attractiveness; for example, Greening and Turban (2000) show that applicants are more likely to seek employment with environmentally responsible organizations.

Thus an employer brand contains multiple facets, all of which should express what the organization, as an employer, represents. By establishing an employer brand, organizations aim to provide a unique employment offering that positively differentiates them from competitors. If they can create an image as a green place to



work, they likely can attract and retain a skilled and motivated workforce (Moroko, Uncles, 2008). Turban and Cable (2003) shows that potential employees are willing to accept lower salary to pursue employment with organizations that have an environmentally positive reputation.

Finally, the organization's employer brand image reflects the perceptions of existing and potential employees, so an employee perspective must be adopted to effectively position an employer brand. As argued previously, a substance-oriented understanding of Sustainable HRM indicates that organizations themselves should secure the long-term supply and "reproduction" of their human resources and not rely on supply from labor markets. From an employee's perspective, this securing involves investments in the human resource base, to create value for existing and potential employees, and therefore enhances the organization's attractiveness as an employer. Including Sustainable HRM in the employer brand thus might be a promising route to employer attractiveness. Sustainable HRM also enhances the organization's ability to attract and retain high-quality employees.

## **2.5 Green Human Resource Management, Employee Motivation, Job Satisfaction and Organisational Commitment**

This section attempts to review literature on GHRM, Employee Motivation, Job Satisfaction and Organisational Commitment

### **2.5.1 GHRM and Employee Motivation**

The term motivation represents "those psychological processes that cause the arousal, direction and persistence of voluntary actions that are goal oriented" (Mitchell, 1982). Motivation as defined by Robbins (1993) is the "willingness to exert high levels of effort towards organizational goals, conditioned by effort's ability to satisfy some individual need". The effectiveness of even highly skilled employees will be limited if they are not motivated to perform, however, and HRM practices can affect Employee Motivation by encouraging them to work both harder and smarter. HRM departments use need theories that attempt to address those factors that increase motivation.

Jabbar and Abid (2014) investigated the factors that motivate employees towards organizations environmental performance. By adopting Green human resource management practices (GHRM), firms can play a pivotal role in promoting environment related concerns. In this study, investigation has done on the factors that trigger the employees to be involved in GHRM practices. The 178 respondents (employees) of the firms that use GHRM practices have taken for research. Convenient Sampling was used for data collection. The result of the study reveals that HRM practices influence Employee Motivation to become involved in environmental performance of the organization. The study also found that employees are more motivated through monetary rewards rather than non-monetary. Supervisors support also enhances the morale of employee to take initiatives towards environmental sustainability. Furthermore, rewards have positive impact on employees' motivation towards eco-initiatives.

### **2.5.2 GHRM and Job Satisfaction**

The concept of employee satisfaction is a multi-dimensional and inter disciplinary term that has been attracted the attention of researchers and practitioners from different disciplines such as psychology, human resource management, organizational behavior, TQM and so forth. In literature, there are a large number of studies that analyse the term from many different perspectives and its relationship with various organizational variables (Lund, 2003). However there is no universal definition of employee satisfaction that exposes all these dimensions at the same time (Bernal, *et. al*, 2005). Most of the definitions emphasize the importance of employees' job-related perceptions that link the expectations of them and what they receive in return. Some researchers focus on the overall Job Satisfaction or even life satisfaction of employees (Judge, *et. al*, 2005) whereas some others underline a variety of satisfaction facets such as satisfaction with pay, promotion, supervisor, or co-workers. For example, Locke, *et. al*. (1969) describes Job Satisfaction a pleasurable or positive emotional state resulting from the appraisal of one's job and job experiences. According to this, employee satisfaction is a "function of the perceived relationship between what one wants from one's job and what one perceives it as offering" (Locke, 1969).

Judge, *et. al.*, (1993), on the other hand, mentions that employee satisfaction is positively correlated with motivation, job involvement, organizational citizenship behavior, Organisational Commitment, life satisfaction, mental health, and job performance, and negatively related to absenteeism, turnover, and perceived stress and identify it as the degree to which a person feels satisfied by his/her job. Cranny, *et. al.*, (1992), suggests that employee satisfaction encompasses a lot of different facets. Hence overall employee satisfaction describes a person's overall affective reaction to the set of work and work-related factors whereas the facets of Job Satisfaction involve workers' feelings toward different dimensions of the work and work environment. In contrast, Rousseau (1978) identified three components of employee satisfaction: they are characteristics of the organization, job task factors, and personal characteristics.

According to Rousseau's identification the characterization of the organization and the job task factors can be regarded as work factors in Job Satisfaction, while personal characteristics can be regarded as non-work factors of Job Satisfaction (Hagihara, *et. al.*, 1998).

HR practices and Job Satisfaction are studied widely in different parts of the world. It is assumed that HR practices are closely associated with Job Satisfaction (Ting, 1997). Because many scholars and practitioners believe that sound HR practices result in better level of Job Satisfaction which ultimately improves organizational performance (Appelbaum, Bailey, Berg and Kalleberg, 2000). Steijn (2004) found that HRM practices had positive effect on Job Satisfaction of the employees of Dutch public sector whereas individual characteristics such as age, gender, and education had insignificant effect on Job Satisfaction. Gould-William (2003) showed that use of specific HR practices in local government organizations in the United Kingdom (UK) was associated with a greater degree of Job Satisfaction, workplace trust, commitment, effort, and perceived organizational performance.

Job Satisfaction is the content and commitment an employee has with his job and the sense of accomplishment they receive from it (Kalleberg, 1997). Satisfied employees are more willing and encouraged for playing an active role in green programs.

Satisfied employees feel responsible about the environment and show greater commitment to green initiatives and help in enhancing environmental performance (Ahmad, 2015). Satisfied employees tend to seek more interest in their tasks in comparison to those who are less satisfied with the work they do. This states that Job Satisfaction will force employees to involve in green policies and reduce the damages made to the environment (Fernandez, Junquera and Ordiz, 2003). GHRM creates platform where workforce experiences high Job Satisfaction and being better engaged which will result in high productivity. GHRM can be used to reduce cost, better efficiencies, to reduce carbon foot prints, to make green awareness among the employees and initiate green work life balance. (Nijhawan, 2014) Responsibilities of HR department are not limited to manage, develop and retaining employees in the organization but also to recruit right person at right job, train them, retain and develop them as per requirement and current trends in industry. GHRM has extended boundaries of conventional HRM practices towards more sustainable and environmental strategies.

### **2.5.2.1 Models of Job Satisfaction**

Following section discusses various models of Job Satisfaction.

#### **Affect Theory**

Edwin A. Locke's Range of Affect Theory (1976) is arguably the most famous Job Satisfaction model. The main premise of this theory is that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job. Further, the theory states that how much one values a given facet of work (e.g. the degree of autonomy in a position) moderates how satisfied/dissatisfied one becomes when expectations are/aren't met. When a person values a particular facet of a job, his satisfaction is more greatly impacted both positively (when expectations are met) and negatively (when expectations are not met), compared to one who doesn't value that facet. To illustrate, if Employee A values autonomy in the workplace and Employee B is indifferent about autonomy, then Employee A would be more satisfied in a position that offers a high degree of autonomy and less satisfied in a position with little or no

autonomy compared to Employee B. This theory also states that too much of a particular facet will produce stronger feelings of dissatisfaction the more a worker values that facet.

### **Dispositional Theory**

Another well-known Job Satisfaction theory is the Dispositional Theory. It is a very general theory that suggests that people have innate dispositions that cause them to have tendencies toward a certain level of satisfaction, regardless of one's job. This approach became a notable explanation of Job Satisfaction in light of evidence that Job Satisfaction tends to be stable over time and across careers and jobs. Research also indicates that identical twins have similar levels of Job Satisfaction.

A significant model that narrowed the scope of the Dispositional Theory was the Core Self-evaluations Model, proposed by Timothy A. Judge in 1998. Judge argued that there are four Core Self-evaluations that determine one's disposition towards Job Satisfaction: self-esteem, general self-efficacy, locus of control, and neuroticism. This model states that higher levels of self-esteem (the value one places on his/her self) and general self-efficacy (the belief in one's own competence) lead to higher work satisfaction. Having an internal locus of control (believing one has control over her/his own life, as opposed to outside forces having control) leads to higher Job Satisfaction. Finally, lower levels of neuroticism lead to higher Job Satisfaction.

### **Two-Factor Theory (Motivator-Hygiene Theory)**

Frederick Herzberg's two factor theory (also known as Motivator Hygiene Theory) attempts to explain satisfaction and motivation in the workplace. This theory states that satisfaction and dissatisfaction are driven by different factors – motivation and hygiene factors, respectively. An employee's motivation to work is continually related to Job Satisfaction of a subordinate. Motivation can be seen as an inner force that drives individuals to attain personal and organization goals (Hoskinson, Porter, and Wrench). Motivating factors are those aspects of the job that make people want to perform, and provide people with satisfaction, for example achievement in work, recognition, promotion opportunities. These motivating factors are considered to be intrinsic to the job, or the work carried out. Hygiene factors include aspects of the

working environment such as pay, company policies, supervisory practices, and other working conditions. While Herzberg's model has stimulated much research, researchers have been unable to reliably empirically prove the model, with Hackman and Oldham suggesting that Herzberg's original formulation of the model may have been a methodological artifact. Furthermore, the theory does not consider individual differences, conversely predicting all employees will react in an identical manner to changes in motivating/hygiene factors. Finally, the model has been criticised in that it does not specify how motivating/hygiene factors are to be measured.

### **2.5.3 GHRM and Organisational Commitment**

Commitment is defined generally as the relative strength of an individual's identification with and involvement in a particular organization. It can be characterized by at least three related dimensions: "a strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain membership in the organization" (Mowday et al., 1979). Further developing the concept, Meyer and Allen (1984, 1991, and 1997) identified three salient dimensions of employee commitment: affective, continuance and normative. Affective commitment describes an individual's desire to stay with the organization given her/his emotional attachment to, and identification with the organization (Meyer and Allen, 1984, 1991). A high level of affective commitment has been found to be related to low employee turnover, low absenteeism and improved job performance (Meyer et al., 2002). Continuance commitment describes an individual's need to remain with the organization resulting from her/his recognition of the costs (tenure, pay, benefits, vesting of pensions and family commitment, etc.) associated with leaving the organization (Meyer and Allen, 1984, 1991). In contrast, normative commitment reflects an individual's feeling of obligation to maintain organizational membership because he/she believes it is morally right to be loyal to, and stay in, the organization.

Several researchers have examined the relationships between HRM practices and Organisational Commitment. For example, in an individual-level analysis, Paul and Anantharaman's (2004) study of software professionals showed that HRM practices had a significant positive relationship with Organisational Commitment. HRM

systems have also been found to relate to commitment in samples of frontline employees from car rental, retail, and hospitality organizations in South America (Browning, 2006). Payne and Huffman (2005) found in a longitudinal study that Organisational Commitment mediated the relationship between mentoring, an HRM practice in the organization studied, and employee turnover over time. In a unit-level study, Wright, Gardner, and Moynihan (2003) found a positive relationship between HRM practices and Organisational Commitment in a study of 50 business units from a large food service corporation.

Kim (2009) investigated how employees of the hotel industry perceived green practices. The Data was collected from 220 employees working in eight green certified hotels in Orlando where results found that performance levels of green practices implemented by hotels were lower than the importance levels of those same green practices as perceived by hotel employees. The study also reveals that there is positive correlation between Organisational Commitment and green practices.

## **2.6 Conclusions**

Many recent green management studies (see Jabbour, 2011; Kramar, 2014; Siegel, 2009) have highlighted the importance of HRM to the achievement of green objectives, with Angel del Brio et al. (2007) suggesting that management involvement and Employee Motivation has a significant effect on the achievement of an environmental action-based competitive advantage. However, current literary exploration of GHRM has thus far been largely limited to conceptualisation. Scattered empirical studies have demonstrated some positive effects of green management and HRM on a range of organizational areas including encouraging desirable employee behaviors and improving attitudes and motivations so that organisations can achieve organizational goals (Daily, Bishop and Steiner, 2007; Jiang et al., 2012), including environmental goals (Daily et al., 2012; Daily and Huang, 2001; Govindarajulu and Daily, 2004). It is expected that GHRM would likely elicit similar organizational outcomes.

Upon reviewing the literature in relation to GHRM and associated concepts, it is clear that several key authors and studies have considered the potentiality of GHRM to

positively impact a range of functions of HRM. However, a critical review of the research reveals that while these studies provide insights, or identify potential links between GHRM and functions of HRM, it remains unclear as to how and why GHRM influences Green Recruitment and Selection, Green Training and Development, Green Reward Management and Green Employee Involvement. Moreover, whether GHRM policies and processes designed to encourage green behaviors have any impact on these HRM Functions desired by the firm is yet to be established.

This study aims to empirically explore and determine the accuracy of these assertions, with this literature review playing a pivotal role toward the development of a conceptual model that will enable an exploration of how and why GHRM influences other HRM Functions. The next chapter will outline the theoretical model developed during the course of this research work, as well as incorporating the identified mediating (Job Satisfaction and Employee Motivation) variables within the resulting hypotheses.



## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

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This chapter discusses in detail the methodology used for research in this study. This chapter starts by describing the problem, the nature of the population and sample selected from it and questionnaire used, the procedure adopted for data collection and statistical techniques that have been used to analyse the data.

#### **3.1 The Problem**

This chapter explicates the research methodology that has been used for conducting the research and its application in seeking answers to the research questions that has been raised by the researcher. In this chapter, an attempt has been made to outline the research problem, the nature of the research problem, demographic profile of the population and the sample taken for this study. Especially, efforts have been made to frame the general and specific problems, state the objectives and the purposes, and indicate the theoretical and practical significance of the problem and specify delimitations.

#### **3.2 Statement of the Problem**

Previous two chapters were a methodical attempt to provide an inclusive backdrop for the study. This section is mainly devoted to the statement of the problem. Along with objectives, indicating the importance of the problem, various theoretical, as well as practical concerns have also been covered in this chapter.

The study seeks to answer the following questions:

1. What is the level of awareness of Green HRM Practices?
2. What type of Green HRM Practices are offered by various Organizations?

3. What are the problems faced by organizations while adopting Green HRM Practices?

In order to study the above stated problem, following questions were raised for the purpose of the study:

1. What are the Green HRM practices implemented at the firm level?
2. How are Green HRM practices implemented at the firm level?
3. Why are Green HRM practices implemented at the firm level?
4. What are the different factors that determine the adoption of Green HRM practices by Indian firms?
5. How far Employee Motivation, Job Satisfaction and Organisational Commitment as variables, influenced by Green HRM practices?

### **3.3 Objectives and Purpose of the Study**

There are variables, like, Employee Motivation, Job Satisfaction and Organisational Commitment which have not been studied in detail as an attribute in the research papers in the Indian context, hence by taking this as a gap as discussed in chapter 2 various objectives were framed as follows:-

1. To identify the various Green HRM practices adopted by Indian industries under study;
2. To identify the relationship between Green HRM practices with Employee Motivation, Job Satisfaction and Organisational Commitment;
3. To develop the model based on these factors and test goodness of fit for the same.

### **3.4 Significance of the Study**

Green HRM began its journey through the milieu of green management applications, in order to address the growing concern from corporate stakeholders (Roberts, 1992), in response to the negative impacts of organizational operations on the environment (Waddock, 2004). By embracing green management policies and

strategies, and Green HRM practices and processes, firms are expected to receive direct and peripheral gains such as improved sales, productivity gains and competitive advantages (Wee and Quazi, 2005). In addition, advantageous employee behaviors (Shultz and Holbrook, 1999; Vandermerwe and Oliff, 1990) and increases in corporate efficiencies including improvements in water and energy usage and waste reduction (Klassen and McLaughlin, 1996), are likely to occur.

As it is employees, who are the agents that implement organizational green policies, it is necessary for organizations to promote and ultimately seek to manage and change employee behavior so that they are aligned with organizational green goals (Anderton and Jack, 2011; Daily, Bishop and Govindarajulu, 2009; Ones and Dilchert, 2012a). Increasingly, organizations are considering the adoption of Green HRM practices, i.e. '*HRM aspects of green management*', to promote employee green behavior in the workplace (Renwick et al., 2013).

The present research work seeks to determine the Green HRM practices adopted by firms in India and to identify the relationship between Green HRM practices with Employee Motivation, Job Satisfaction and Organisational Commitment. This study reviews the current situation of the GHRM practices. These practices will be presented by a conceptual model that will provide a blueprint for these companies to adopt GHRM practices. This study, in fact, will better define which HRM practices or cluster of HRM practices could be more correlated with Employee Motivation, Job Satisfaction and Organisational Commitment. So, by using this study, companies would understand which actions to adopt and implement first practices that have more impact on dependent variable Employee Motivation, Job Satisfaction and Organisational Commitment. Eventually, for firms who have already implemented GHRM practices, this study will be a guide in order to improve their sustainability purposes.

At the end of the research there will be a few recommendations for future studies. GHRM best practices model can be tested for green activities irrespective of organization types and country context.

### 3.5 Delimitation of the Study

Notwithstanding its above significance, the methodology has the following major limitations:

1. It is based on a very small sample of 110 companies randomly selected from 4 industries namely automobile industry, plastic industry, Electronics industry and food industry. Therefore, the generalizations of results of the study to all the industries in India are limited as defined by the size of this sample and findings to other industrial organizations are unwarranted.
2. The present study is largely exploratory in nature. Despite its external validity, it lacks internal validity. Thus, notwithstanding its richness of data, it lacks control of variables (either through experimental design or through statistical techniques) influencing the research results.
3. The study is based on two methods of data collection: questionnaires and personal interview. Thus, the extent of reliability and validity of the findings of this study depends on the reliability and validity of these methods of data collection.

### 3.6 The Sampling Design

According to Cavana et al. (2000) personal interviews and questionnaires are helpful and robust for discovering responses to research questions but there's a flip side to this as well as they can do more damage than good, if right population is not targeted.

Two most important methods for choosing the sample respondents are probability sampling and non-probability sampling. Non probability sampling methodology was deemed suitable for this research due to the focused and the scientific features of the concerned research problems. The researcher used quota sampling and within the strata's systematic random sampling was utilized for the purpose of personal interviews as well as questionnaire filling. Well drafted questionnaire was used for the collection of the data. . For the purpose of the study Delhi/NCR was bifurcated into four zones. Each zone represents strata where the South Zone is the South Strata being represented by zone 1, North Zone is North Strata being represented by zone 2, West zone is West Strata being represented by zone 3 and East Zone is East Strata being represented by

zone 4. From each zone purposive sampling was done by selecting at least 70 respondents from each stratum.

### **3.7 The Population**

In this section of the thesis, researcher has tried to describe the Sampling Design, Population, Sample Frame, Location, Elements and Sampling Techniques, that have been used to determine the sampling size of the respondents. According to Cooper and Scindler (2001), the basic purpose of using the appropriate sampling design is to ensure that the group of people that has been selected for the research work is the true representation of the whole population of interest. According to Zikmund, 2003; Sekaran, 2006, determination of the population and sample sizes are also entailed in the sampling process.

The present study is concerned with selected Indian industries. It was decided that to cover the companies mainly from North India region. The companies were selected on the basis of number of employees in the company and turnover of the company. Only the companies with more than 100 employees have been taken into the survey, except couple of plastic manufacturing companies. The companies taken for the survey have turnover of more than 100 crores. A list of companies' database has been prepared for all four industry sectors. Industries taken into the survey were:

- Automobile
- Electronics
- Food
- Plastic

The reason for choosing these four industries is that all four industries contribute to pollution. Automobile industry is limited to air pollution, food industry is limited to water, soil and air pollution. Plastic industry is limited to soil pollution and electronic industry is linked to e- waste which is becoming a big dumping problem and a source to soil pollution.

The following sections highlight more details about these four industries and justify the choice of these specific industries.

### **3.7.1 Background of Industries.**

The following section gives a brief description of the four industries under study.

#### **Automobile Industry**

The Indian auto industry is one of the largest in the world. The industry accounts for 7.1 per cent of the country's Gross Domestic Product (GDP). The Two Wheelers segment with 80 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 14 per cent market share.

India is also a prominent auto exporter and has strong export growth expectations for the near future. Overall automobile exports grew 15.81 per cent year-on-year between April-February 2017-18. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the 2W and Four Wheeler (4W) market in the world by 2020. Production of passenger vehicles, commercial vehicles, three wheelers and two wheelers grew at 14.41 per cent year-on-year between April-February 2017-18 to 26,402,671 vehicles. The auto industry is set to witness major changes in the form of electric vehicles (EVs), shared mobility, Bharat Stage-VI emission and safety norms. Electric cars in India are expected to get new green number plates and may also get free parking for three years along with toll waivers. India's electric vehicle (EV) sales increased to 25,000 units during FY 2016-17 and are poised to rise further on the back of cheaper energy storage costs and the Government of India's vision to see six million electric and hybrid vehicles in India by 2020.

In order to keep up with the growing demand, several auto makers have started investing heavily in various segments of the industry during the last few months. The industry has attracted Foreign Direct Investment (FDI) worth US\$ 18.413 billion during the period April 2000 to December 2017, according to data released by Department of Industrial Policy and Promotion (DIPP).

Some of the recent/planned investments and developments in the automobile sector in India are as follows:

- The only electric automaker in India, Mahindra and Mahindra Ltd, has partnered with Uber for deploying its electric sedan e-Verito and hatchback e2o Plus on Uber platforms in New Delhi and Hyderabad.
- Mahindra and Mahindra (M and M) is planning to make an additional investment of ₹ 500 crore (US\$ 77.23 million) for expanding the capacity for electric vehicles in its plant in Chakan. With the vision of government of India to shift to electric vehicle by year 2030 to bring down pollution, automobile industry shall be focusing more on green practices and hence it will be apt to study this industry.

The automobile industry is supported by various factors such as availability of skilled labour at low cost, robust Research and Development centres and low cost steel production. The industry also provides great opportunities for investment and direct and indirect employment to skilled and unskilled labour. The Indian automotive aftermarket is estimated to grow at around 10-15 per cent to reach US\$ 16.5 billion by 2021 from around US\$ 7 billion in 2016. It has the potential to generate up to US\$ 300 billion in annual revenue by 2026, create 65 million additional jobs and contribute over 12 per cent to India's Gross Domestic Product. (<https://www.ibef.org/industry/india-automobiles.aspx>)

### **Electronics Industry**

The electronics market of India is one of the largest in the world and is anticipated to reach US\$ 400 billion in 2022 from US\$ 69.6 billion in 2012. The market is projected to grow at a compound annual growth rate (CAGR) of 24.4 per cent during 2012-2020. Total production of electronics hardware goods in India is estimated to reach US\$ 104 billion by 2020. The communication and broadcasting equipment segment constituted 31 per cent, which is the highest share of total production of electronic goods in India in FY13, followed by consumer electronics at 23 per cent.

Since electronic equipment play a major role in energy conservation by way of saving electricity and also contributes to environmental pollution by adding pollution in the

form of E- waste, it becomes all the more important to study green practices of electronic industry. Electronic waste or E-waste is the collective name for discarded electronic devices that enter the waste stream from various sources (Jain and Chawla, 2012). It includes items like PCs, telephones, notebook computers, TV set, mobile Phones, electronic toys and electrical appliances like refrigerators, air-conditioners etc. which have become obsolete due to:

- Advancement in Technology
- Change in fashion, style and status
- Nearing the end of their useful life.

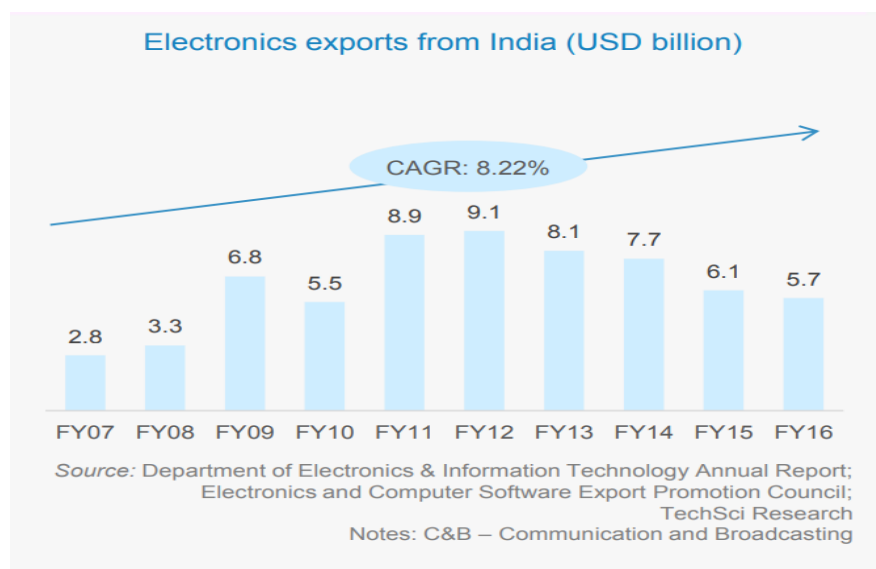
The used and spoiled electronic appliances such as computers, laptops, game devices, mobile phones, TV and video & audio players etc. which have disposed by their original users come in the category of E-waste.

Electronics production in India has been growing at a rapid pace as can be seen from the following facts:-

- Total production of electronics hardware goods in India is estimated to reach US\$ 47.87 billion in FY17 and is expected to reach US\$ 104 billion by 2020.
- Production expanded at a CAGR of 12.60 per cent during FY07–17.
- High production is majorly contributed by accelerating demand for advanced TVs, mobile phones, computers and defence related electronic equipment during FY07 to FY15.
- During FY16, production of industrial electronics, mobile phones and LED was recorded at USD6.89 billion, USD8.25 billion and USD0.55 billion, in value terms, respectively.
- In March 2017, Xiaomi announced its 2nd manufacturing plant along with Taiwan based company Foxconn, in Andhra Pradesh. This will help create employment in 100 nearby villages for at least 5,000 people.



Electronic exports from India reached USD5.7 billion in FY16, over FY07–16, exports from the sector (CAGR: 8.22 per cent). Technological improvements and competitively cost effectiveness are main drivers for demand of Indian electronics products abroad. The Government of India has set up Electronic Hardware Technology Parks (EHTPs), Special Economic Zones (SEZs) and a brought about a favourable climate for foreign direct investment (FDI). It has also increased liberalisation and relaxed tariffs to promote growth in the sector. In addition, the government gave its green signal to the Modified Special Incentive Package ([www.ibef.org](http://www.ibef.org)).



Source: ([www.ibef.org](http://www.ibef.org)).

**Figure 3.1: Electronic exports from India**

### Food Industry

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year. In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry. Accounting for about 32 per cent of the country's total food market, The Government of India has been instrumental in the growth and development of the food processing industry. The Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales. The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production,

consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment. The Indian gourmet food market is currently valued at US\$ 1.3 billion and is growing at a Compound Annual Growth Rate (CAGR) of 20 per cent. India's organic food market is expected to increase by three times by 2020.

The online food ordering business in India is in its nascent stage, but witnessing exponential growth. With online food delivery players like Food Panda, Zomato, Tiny Owl and Swiggy building scale through partnerships, the organised food business has a huge potential and a promising future. The online food delivery industry grew at 150 per cent year-on-year with an estimated Gross Merchandise Value (GMV) of US\$ 300 million in 2016.

According to the data provided by the Department of Industrial Policies and Promotion (DIPP), the food processing sector in India has received around US\$ 7.54 billion worth of Foreign Direct Investment (FDI) during the period April 2000-March 2017. The Confederation of Indian Industry (CII) estimates that the food processing sectors have the potential to attract as much as US\$ 33 billion of investment over the next 10 years and also to generate employment of nine million person-days.

Some of the major investments in this sector in the recent past are:

- Global e-commerce giant, Amazon is planning to enter the Indian food retailing sector by investing US\$ 515 million in the next five years, as per Mr Harsimrat Kaur Badal, Minister of Food Processing Industries, and Government of India.
- Parle Agro Pvt Ltd is launching Frooti Fizz, a succession of the original Mango Frooti, which will be retailed across 1.2 million outlets in the country as it targets increasing its annual revenue from ` 2800 crore (US\$ 0.42 billion) to ` 5000 crore (US\$ 0.75 billion) by 2018.
- US-based food company Cargill Inc, aims to double its branded consumer business in India by 2020, by doubling its retail reach to about 800,000 outlets and increase

market share to become national leader in the sunflower oil category which will help the company be among the top three leading brands in India.

- Mad over Donuts (MoD), outlined plans of expanding its operations in India by opening nine new MOD stores by March 2017.
- Danone SA plans to focus on nutrition business in India, its fastest growing market in South Asia, by launching 10 new products in 2017, and aiming to double its revenue in India by 2020.
- Uber Technologies Inc plans to launch Uber EATS, its food delivery service to India, with investments made across multiple cities and regions.

Going forward, the adoption of food safety and quality assurance mechanisms such as Total Quality Management (TQM) including ISO 9000, ISO 22000, Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP) by the food processing industry offers several benefits. It would enable adherence to stringent quality and hygiene norms and thereby protect consumer health, prepare the industry to face global competition, enhance product acceptance by overseas buyers and keep the industry technologically abreast of international best practices.

(<https://www.ibef.org/industry/indian-food-industry.aspx>)

### **Environmentally Friendly Packaging**

The Nielsen Global Survey on corporate social responsibility found 52% of respondents across the world said their sustainable purchase decisions are influenced by packaging. Of those who will pay extra for sustainable products and those who check the packaging for sustainable labelling, over half are millennials (those born between the early 1980s and late 1990s), the study showed.

As a result, manufacturers are looking to their packaging suppliers for cost-effective solutions. But even where aims can be met to reduce weight, shrink volume or offer a compostable alternative, can the product remain recognisable at the point of sale? Mick Clark, managing director at We Pack, offers a few tips to strike the right balance. (Sustainable packaging and socially responsible business, 2018).

- **World centric**

World Centric's US-made line of compostable cutlery and packaging includes an extensive list of biodegradable bags, dishware, and cutlery for household or corporate use. These certified-compostable disposables are made out perennial plant fibres with long roots that help store carbon underground. As an added bonus, 25 percent of their profits are donated to worthy causes.

- **Papelyco**

Plantable paper plates by Papelyco are just about the coolest green invention since the internet was created. Use their plate, place it in the ground, and a plant will literally grow out of it. They even include important minerals in the plate to provide your new sappling with the nutrients it needs to grow.

- **Be Green Packaging**

Be Green Packaging has it down when it comes to professionalism and precision. They have partnered with companies such as Google, Gillette, Samsung, Whole Foods, and Virgin America to bring compostable packaging to consumers.

- **Ecoware**

New Zealand-based Eco Ware is a carbon neutral company, offsetting all of its energy output by investing in clean technology. Aside from their biodegradable dishware, they also sell bio plastic packaging that has an 80 percent lower carbon footprint than regular plastic<sup>5</sup>.

- **Tipa**

Tipa produces a line of biodegradable flexible plastics - think Ziplock bags, garbage bags, etc. This type of plastic is heavily used by consumers, and can be a game-changing technology moving forward into a more sustainable future.

As food components are natural and comes from environment, therefore, it looks natural that food products won't harm the environment. However, various human activities and the competition to provide fast food to people in today's busy life has led to emergence of various efforts such as (i) packaging, (ii) advertising, (iii) coloring of food, (iv) disposal of waste materials produced during production and

consumption lead to not only damaging of the environment but also its natural state; which is ultimately becoming hazardous to health of human beings. So, it becomes all the more important to study green practices of food industry.

### **Plastic Industry**

Plastic industry makes significant contribution to the economic development and growth of various key sectors in the country such as automotive, construction, electronics, healthcare, textiles, and FMCG. Government initiatives such as Make in India, Skill India, Digital India, Swachh Bharat Abhiyan, etc are opening up opportunities for accelerated growth in the plastics industry, as the industry is contributing in a big way in the success of these programs. For example, for Digital India program, plastic is one of the major components required in the production of electronic gadgets, which are mostly imported at present in the country. In the next 5 to 10 years, most of the products in the electronics industry are proposed to be made in the country, thus reducing imports from China and other countries – making India an emerging sourcing hub. The Indian plastics industry made a promising beginning in 1957 with the production of polystyrene. Thereafter, significant progress has been made, and the industry has grown and diversified rapidly. The industry spans the country and hosts more than 2,000 exporters. It employs about 4 million people and comprises more than 30,000 processing units, 85-90 percent of which are small and medium-sized enterprises.

- Export of plastic products from India stood at US\$ 7.64 billion in FY 2015-16.
- During 2015-16, major importers of Indian plastic products were US (US\$ 652.28 million), China (US\$ 480.8 million), UAE (US\$ 368.16 million), UK (US\$ 271.67 million), Germany (US\$ 256.2 million), Turkey (US\$ 246.86 million), Italy (US\$ 208.29 million), Iran (US\$ 194.5 million), Nepal (US\$ 141.2 million) and Bangladesh (US\$ 136.27 million)
- Domestic consumption of plastic is expected to touch 20 million Metric Tonnes by 2020.
- The Indian plastics industry produces and exports a wide range of raw materials, plastic-moulded extruded goods, polyester films, moulded / soft luggage items, writing instruments, plastic woven sacks and bags, polyvinyl chloride (PVC),

leather cloth and sheeting, packaging, consumer goods, sanitary fittings, electrical accessories, laboratory / medical surgical ware, tarpaulins, laminates, fishnets, travelware, and others.

- The Indian plastics industry offers excellent potential in terms of capacity, infrastructure and skilled manpower. It is supported by a large number of polymer producers, and plastic process machinery and mould manufacturers in the country.
- Among the industry's major strengths is the availability of raw materials in the country. Thus, plastic processors do not have to depend on imports. These raw materials, including polypropylene, high-density polyethylene, low-density polyethylene and PVC, are manufactured domestically.

Plastic industry has been selected for this research work because of the pollution and waste it is creating and hence deteriorating the environment. Accumulation of plastic wastes causes environmental pollution that can be manifested in number of ways such as deterioration of the natural beauty of an environment (Andrady 2003), death and entanglement of marine animals (Azzarello and Van Vleet 1987; Hofmeyr et al. 2006; Lithner et al., 2009), blockage of sewerage systems of cities and towns in developing countries (Adane and Muleta 2011) which in turn creates foul smells and favourable habitats for mosquitoes and other vectors that could spread various diseases like mosquitoes (Ellis et al. 2005), reduce percolation of water and proper aeration of agricultural soils which in turn results in a reduction of productivities of such fields (Njeru 2006).

### **Growing interest in Bio-Plastics**

Growing interest in green products, healthier lifestyles and growing concern to protect environment is leading to a shift towards bio-plastics. Bio-plastics are plastics that contain bio-based content, are biodegradable or both. Many polymers like PLA (Poly Lactic Acid), PHA (Poly Hydroxyalkanoates), Bio PTT (Poly Trimethyl Terephthalate), Bio PDO (Propanediol) etc. are the part of this upcoming trend. These plastics are significantly made of renewable materials like bio mass and save up to 40% energy in production as compared to their petrochemical counterparts. They play

a crucial role in further advancement of the plastic industry and as result businesses are focusing on the adoption of such eco-friendly products. Large numbers of companies are now looking for the development of alternative feedstock and make use bio-based raw material for their production.

The market for this product is still in its infancy. High cost of bio-plastics, lack of clear understanding and infrastructure, limited amount of funding available are acting as constraint to the evolution of this segment. However, increasing stress on green chemistry is expected to bring down the cost, also increasing environmental awareness, positive attitude from government, continuous R&D efforts and shift in consumer preference towards environmental friendly option will lead to the evolution in demand of this industry.

The concept of sustainability, most vehicle and auto parts manufacturers have planned actions to reduce the impact on the nature of both their products and their manufacturing processes. Although initiatives in this sense already exist for some decades, it was in the year 2000, and more markedly after 2005, that they began to be part of the daily routine of companies (Autodata, 2011). The study of all the companies that make this industrial complex up (automakers, plastic, Food and electronic Industry) revealed that actions which aimed at environmental management and social responsibility are generally treated in isolation. They are not integrated into the corporate strategy. Most companies are still at an early stage when compared to world-class standards. On the other hand, researcher observe, in the implementation of new operating units, automakers are already trying to align production processes with the requirements of cleaner production and eco-efficiency, with actions aimed to material and energy savings and emphasizing the aspects of recycling.

### **3.7.2 Sample Size**

This section involves description of population from which the sample of industries have been selected and description of population from which the consumers have been selected. Many researchers have discussed the appropriate procedures for

choosing the suitable sample size. A sample size of less than 30 persons is considered a very small sample size and it is also too small to be useful for any research work, if the population is large then the sample size of at least 100 or more is considered to be the appropriate and minimum sample size for any study (Sekaran 2006). The sample size taken in this research work is 300 respondents. As stated by Zikmund (2006) also, sample size plays a vital role as; the smaller the size of the sample, the higher is the chances of the margin of errors. The researcher has also claimed that, the large sample size gives more accurate results in the research work. The cost of collecting the data is a major consideration and, judgment must be made considering this factor. For interpreting the results of Structural Equation Modelling (SEM), the size of sample plays an important role as, it provides a base for the estimation of error due to sampling. The following criteria (Table 3.2) were used for determining the sample size.

**Table 3.1: Sample Size Determination Criteria**

Stated by	Criteria	Suggested sample as per criteria
Hair et al,1999	Number of factors * 25	13X25= 325 Sample Size
General thumb-rule	Number of statements *5	55 X5= 275 Sample Size

Hence, after finalizing the questionnaire, the researcher was able to gather data from 400 respondents and, out of total respondents, only 300 were the actual and usable questionnaires

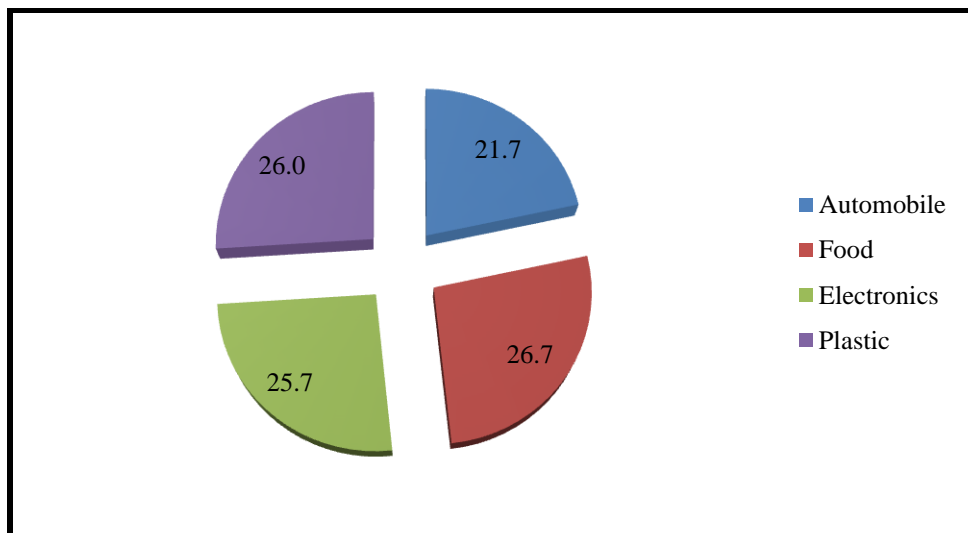
In Delhi there are 7060 companies covered under the four zones. It is not feasible to cover all the units therefore for data collection. Database for the study has been gathered for all four industries in Delhi. A sample of 110 companies, 27 companies from automobile, 26 companies from food, 26 companies from electronics, 31 companies from plastic, each industry was randomly selected from the database( See appendix A). Figure 3.2 connotes that out of 300 respondents, the respondent from Automobile is 21.7%, Food (26.7%), Electronics (25.7%) and Plastic (26%).



For collecting data from the industry, the respondents consisted of people from HR, Admin, Sales and Marketing, and general management profiles. Respondent's participation into the survey was voluntary. From one company 2-6 respondents have been taken into the survey. Response rate was average (5:1 – *Out of 5 respondents only 1 has responded*) for the study. The following number of respondents has been taken for conducting survey:

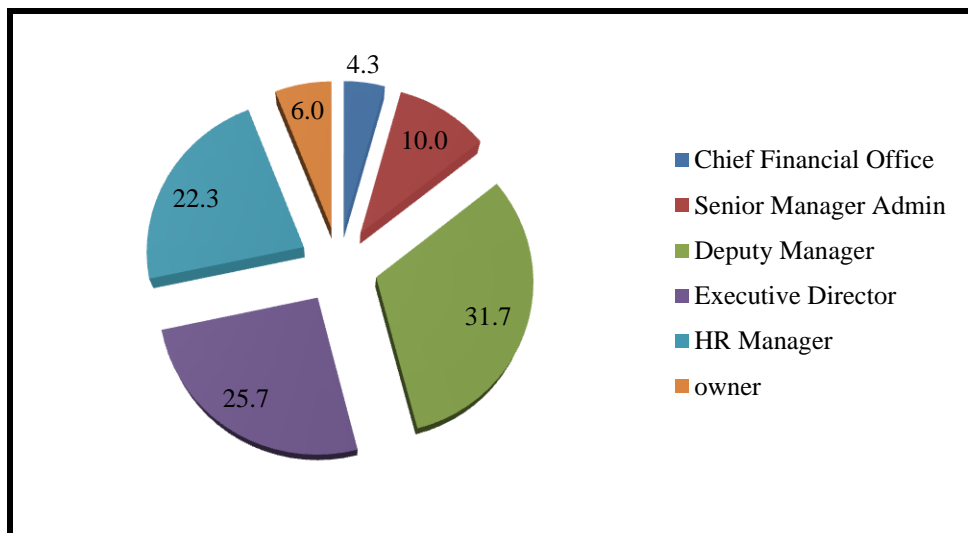
**Table 3.2: Number of respondents have been taken for conducting survey**

Industry	No. of companies	No. of respondents
Automobile	27	75
Electronics	26	72
Food	26	72
Plastic	31	81
Total	110	300



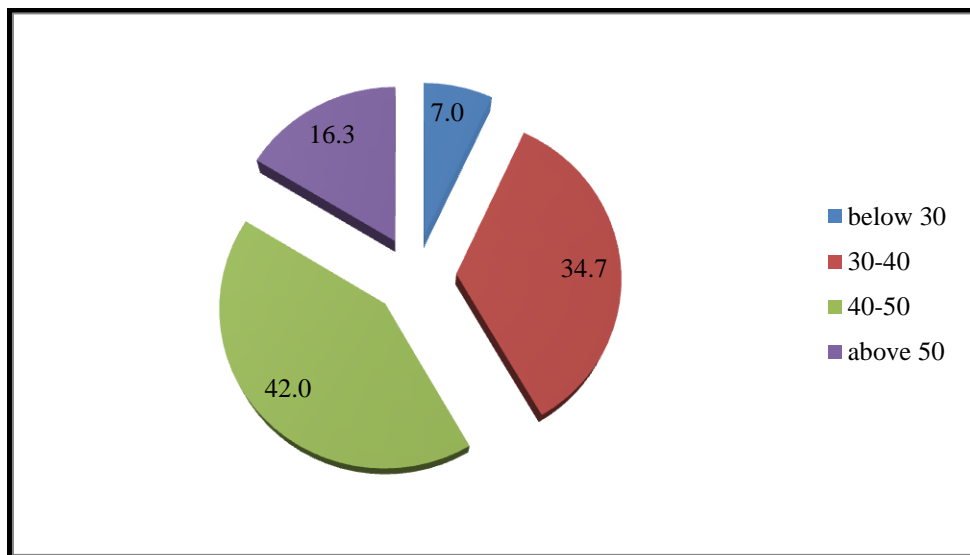
**Figure 3.2: Percentage of the respondents from different industries**

The profile of the consumers covered for this research work has been shown below in figure 3.3 and 3.4.



**Figure 3.3: Profile of the respondents**

As far as designation of respondents is concerned, 25.7 % of the respondents were Executive Director, 22.3% were Chief Financial Officer, 10% were Senior Manager Admin, 31.7% were Deputy Manager, 6% were owner and 4.3% were HR Manager.



**Figure 3.4: Age of the respondents**

Figure 3.4 reveals age-wise distribution of the respondents. It shows that majority of the respondents were in the age group of 40-50 years which constitute 42% of the total respondents. Respondents in the age group of up to 30 years consist of only 7% and 34.7 % belongs to 30-40 years age group. The respondents above age group above 50 years comprise 16.3% to the total respondents.

### 3.8 Data Collection Methods

This segment throws light on diverse sources of data and how the data was gathered in order to carry out the work on objectives to be achieved and inferences to be drawn. The selection of data gathering mechanism depended on the accessibility of amenities, point in time, outlay, extent of precision entailed etc. (Sekaran, 2006). By and large primary and secondary, both types of data had been employed with due consideration to the intent of research.

#### 3.8.1 Primary Data

The primary data in this research has been collected from two modes of information namely: Personal Interview and Questionnaire. These modes of data collection were well-organized, specific as well as time and cost saving. Self-administrated 350 questionnaires were distributed to respondents (including personal interview) during personal interaction. Then, out of 350, 300 were used for the study purpose. That is in totality 300 valid responses were collected during the study.

#### 3.8.2 Secondary Data

Numerous academic journals, articles and books, were referred to collect the desired information from various journals and online databases like Delnet, Proquest, emerald etc.

### 3.9 Research Model and Development of Hypotheses

Following research model as shown in Figure 3.5 was proposed for conducting the study:



**Figure 3.5: Proposed Research Model**

### 3.9.1 Hypothesis Formulation

Hypothesis is specific tentative suppositions, assumption used in framing theories or planning experiments proposed to be given a direct experimental test when feasible (Rogers, 1966). Following hypotheses were framed with the intent to get the answers to all the research questions posed in the previous section of this project work.

- H1: Green Recruitment and Selection has a positive relationship with Job Satisfaction.
- H2: Green Training and Development has a positive relationship with Job Satisfaction.
- H3: Green Reward Management has a positive relationship with Job Satisfaction.
- H4: Green Employee Involvement has a Positive relationship with Job Satisfaction.
- H5: Green Recruitment and Selection has a positive relationship with Employee Motivation.
- H6: Green Training and Development has a positive relationship with Employee Motivation.
- H7: Green Reward Management has a positive relationship with Employee Motivation.
- H8: Green Employee Involvement has a Positive relationship with Employee Motivation.
- H9: Employee Motivation has a Positive relationship with Organisational Commitment.
- H10: Job Satisfaction has a Positive relationship with Organisational Commitment.
- H11: Job Satisfaction Mediates
  - a. Green Recruitment and Selection on Organisational Commitment.
  - b. The positive effect of Green Training and Development on Organisational Commitment.

- c. The positive effect of Green Reward Management on Organisational Commitment.
- d. The Positive effect of Green Employee Involvement on Organisational Commitment.

H12: Employee Motivation Mediates

- a. The positive effect of Green Recruitment and Selection on Organisational Commitment.
- b. The positive effect of Green Training and Development on Organisational Commitment.
- c. The positive effect of Green Reward Management on Organisational Commitment.
- d. The Positive effect of Green Employee Involvement on Organisational Commitment.

### **3.10 Research Design**

According to Berg (1989) “a research design is the strategy on how the research study will be administrated”. In this research work, exploratory and descriptive research designs have been used in combination. The exploratory stage acknowledged the identified research disparities, framed the relevant research questions and a theoretical model by means of an all-embracing literature analysis as mentioned in Chapter two.

The research concerns and the theoretical model both have been improvised to a great extent from modifications based on the views expressed by various investors and professionals through personal interviews. The second stage sanctioned the verification of the acknowledged research model on aspects relevant to mutual fund performance evaluation. With this intent, quantifiable data was gathered with the help of questionnaires done majorly through various web portals and a structural equation model was framed to assess the research model (Neuman, 2006). The present study adopted descriptive as well as an empirical research design based on the questionnaire mode of data collection. Here, the researcher exercises an inductive research approach

to frame a model based on the analysis. The main difference between inductive and deductive approach to research is that whilst a deductive approach is aimed and testing theory, an inductive approach is concerned with the generation of new theory emerging from data.

The research design used in this research work was exploratory and descriptive in nature. The pilot study was initiated with exploratory research design in order to have the in-depth understanding of the Green HRM practices and the relationship between Green HRM practices and Employee Motivation, Job Satisfaction and Organisational Commitment. The exploratory and descriptive research design was used to first explore the variables of GHRM and, then describing the association between various dependent and independent variables, which were explored during the exploratory research study.

### **3.11 The Schedule/Questionnaire**

The researcher has used questionnaire for conducting survey for this research. Hair, Black, Anderson, Babin, and Tatham (2003) also suggested that a questionnaire is the most effective way for a well-educated target population and, normally generates a large amount of response rate. For collection of primary data, schedule/questionnaire was an essential tool that was developed for reliable and first-hand data collection. The researcher has used structured schedule/questionnaire for this purpose as shown in Appendix B.

The development of questionnaire is important as it goes through various phases like, a clear understanding of the topic, defining and identification of the research questions and their association with the constructs. As stated by Yin (1994) for the framing of the research questionnaire, the clear and systematic understanding is required to meet the research goals. The proposed model that was presented in Figure 3.1 has been used as the framework for designing the questionnaire for this research work.

#### **3.11.1 Designing the Questionnaire**

It is consequently imperative to cautiously draft a questionnaire which is according to the purpose of the research (Malhotra, 1999). An effective questionnaire can also play an effectual role in reducing research bias (Sekaran, 2003). To encounter these

prerequisites, the researcher accepted the questionnaire design procedure. Researcher considered four crucial aspects when scheming the questionnaire for this research with the intention to enhance the significance, trustworthiness and authenticity of the research results.

**(i) Relevance**

“A questionnaire is only relevant when the end product is the compilation of the requisite and relevant information. Therefore, the researcher should be precise and clear about data requirements” (Zikmund, 2003). The questionnaire used in this research work, incorporated statements which were associated to the research progression.

**(ii) Accuracy**

The vocabulary used in a questionnaire was effortlessly comprehended by each and every respondent. Double-barreled questions have been totally circumvented. The statements were kept simple and short. The statements were phrased to be as precise and feasible to elude any kind of vagueness. In this research closed ended statements have been framed to allow the respondent to select and bestow responses those were similar to their personal opinions.

**(iii) Sequencing**

A superior questionnaire outlines an assimilated entire set of questions which flow effortlessly. The researcher utilized a funnel arrangement in drafting the questionnaire. A funnel arrangement is the process of systematizing questionnaire statements proceeding from broad to precise (Neuman, 2006).

The questionnaire was designed in a manner that is able to convert research objectives into precise research questions. It was also taken care that the designed questionnaire enables the investigator to procure the required data. A thorough comprehension is compulsory on the research topic for framing of these questions to meet the research aims (Neuman, 2006). The conceptual model presented in chapter two, had been used as the core for designing of the questionnaire. With the help of the variables found suitable for the research purpose, which had been derived from the review of literature

were found to be evident through pilot survey. Structured questions were used with an understandable and easy language so as to convey the intent of the questions.

In order to achieve the research rationale, each question was worded so as to bring forth an answer, which precisely and completely reflected the status of Green HRM practices, adopted by the employees and how employees think about these Green HRM practices.

The developed survey instrument was as a result of the statements that had been derived from the literature review. To assess the structure of the scale, all the items generated were factor analyzed using the principal component analysis. The choice of principal component analysis instead of common factor analysis was based on its appropriateness when the concern is about summarizing data in a minimum number of factors (Hair et al. 1998). This was followed by varimax rotation. According to Hair et al. (1998), quoted by Msweli (2011), the frequent use of orthogonal rotational approaches necessitated by the limited development in analytical procedures for performing oblique rotation.

Initial instrument was developed by generating items from the review of literature. From the literature review, 43 items were found. Later on, the items were reduced to 42 after application of reliability and correlation test. For pilot testing the draft questionnaire was filled by a total of 100 respondent. Only minor changes were made from the feedback. After the pilot study the items were reduced from 43 to 42. All the measuring items were coded on the five-point Likert scale. The same has been suggested by Brace (2004) that, five-point Likert scale is recommended for most of the surveys, as it is very easy for the respondents to participate. For the calculation of the items, the Likert scale has been used by the researcher in this thesis, where the respondent has conveyed his/her opinion on the scale of measurement that includes 1= strongly disagree to 5= strongly agree

### **3.12 Questionnaire finalization process**

The following process was adopted to finalize the instrument.



### **3.12.1 Pilot testing**

For superior research results, a questionnaire should gain from a pilot study as it can reveal the flaws in its draft (Cooper and Schindler 1998). Pilot analysis was conducted for this research in July 2017. The questionnaire was designed by using literature review and to check the reliability data was collected from 100 respondents, For finalization of questionnaire item correlation correction technique was used. The items which were having reliability, value less than 0.7 and correlation value less than 0.5 are removed from the questionnaire. Only one item has been removed from the questionnaire whose correlation value was .422.

### **3.12.2 Research Quality**

The researcher integrated actions to enhance the reliability of the research (Cooper and Schindler, 1998). Points summarized in the following sections incorporate measures to curtail the inaccuracies and to make the findings more applicable and trustworthy (Cooper and Schindler, 1998).

### **3.12.3 Minimizing Errors**

Eminence of research work may be endangered by respondents' and by their biases (Zikmund, 2003). According to Cooper and Schindler (2000) with the intention of minimizing the risk of the respondent as an error cause, the questions or statements were cautiously framed to evade vagueness.

### **3.12.4 Reliability Test**

Reliability is "the extent to which a list of scale items would produce consistent results if data collection were repeated (Malhotra, 2007) and is assessed by determining the proportion of systematic variation in a scale". Internal consistency is obtained by the Cronbach Alpha coefficient (Pallant, 2007), the ideal value of the Cronbach Alpha co-efficient should be above 0.7 (Hair et al. 2010). If the value of Cronbach Alpha coefficient is below 0.7 then it indicates unsatisfactory internal consistency reliability (Malhotra, 2007). The Cronbach Alpha co-efficient value is above .9 for each construct which proves that the questionnaire is reliable.

### **3.12.5 Validity of the Questionnaire**

The validity of a questionnaire measures the extent to which the items in the questionnaire evaluate what the researcher wants to measure. In case the research design is not competent enough to achieve what it is intended to do, it entails a research error further signifying inadequate validity. Higher level of validity signifies precise results to authentic values. Following types of validity were tested for this study.

#### **Face Validity**

Face validity signifies the degree of resemblance amid the notion of the variables and the researcher's observation, which are analysed through the personal interview and questionnaire. To obtain the face validity of the questionnaire, senior experienced academicians, researchers, professionals were asked to mention their impressions regarding the variables after duly examining the variables. Furthermore, they were also asked to demonstrate whether the operational meanings of the variables relate to the basic notion of research study. Subsequently, the language of the statements was revised in the questionnaire as per the suggestions by the experts.

#### **Criterion Related Validity**

The senior experienced academicians/researchers/professionals were actively involved in validating the questionnaire. Experts suggested certain up gradations and gave suggestions which were taken into account while final consolidation of the instrument/questionnaire. Apart from this the wordings and language of the instrument was altered wherever needed.

#### **Content Validity**

According to Haynes, Richard, and Kubany (1995), content validity is "the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose." Note that this definition of content validity is very similar to our original definition of validity. Content validity is the content of the test valid for measuring what it claims to measure. Usually assessed by expert judgement rather than statistical analysis. As senior experienced academicians/researchers/professionals evaluated the questionnaire hence content validity is checked.

### Construct Validity

It alludes to “the extent to which a test or other measure evaluates the fundamental theoretical construct it is supposed to measure (i.e. the test measures what it is indicated to quantify) (Kerlinger, 1973).” Thus, in this research work also, construct validity has been tested by the researcher for the research items through convergent and discriminant validity.

For the pilot testing and initial screening of questionnaire the Corrected Item-Total Correlation and reliability of every item was calculated. The items which were showing reliability less than 0.7 and correlation less than 0.5 had been deleted from the scale before going for further analysis.

### Initial Scale

Likert scale was used for this research work and initial scale (Table No. 3.3) was used for pilot testing by the researcher.

**Table 3.3: Initial Scale for Pilot Testing**

S. No.	
1	The employee promotes environment protection in the workplace.
2	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.
3	My company includes environmental criteria in the recruitment messages.
4	My company provides training for green initiatives and therefore increase my Job Satisfaction.
5	Everybody in this facility get the opportunities to get training on environmental management aspects.
6	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)
7	The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.
8	We have a system of joint consultations in solving environmental issues of the organization.
9	My company communicates the employer’s concern about greening through recruitment efforts.
10	The employee’s behavior of saving paper and energy when operating the machine is beyond the norm.
11	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.
12	My company provides training to the union representatives in environmental management.
13	We are rewarded financially or non- financially for good environmental performance.
14	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need).

S. No.	
15	My company generally selects those applicants who have been engaging in greening as consumers under their private life domain.
16	Job satisfaction is derived due to recognition of green practices by external agencies (Government)
17	My company reflects environmental policy and strategies of the organization in its recruitment policy.
18	We are given equal opportunities to involve and participate in green suggestion schemes.
19	My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction.
20	My company provides environmental education to the workforce.
21	My company considers candidates 'environmental concern and interest as selection criteria.
22	My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).
23	We get proper training on environmental awareness to create "environmental awareness" among the workforce.
24	My company recognizes union as a key stakeholder in environmental management.
25	My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).
26	While interviewing the candidate my company asks Environment-related questions.
27	We are rewarded for green skills acquisition.
28	My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.
29	My Company identifies the environmental training needs of employees in order to make them more environmental concerned.
30	I plan to stay in this company to develop my career for a long time.
31	My company has introduced rewards for innovative environmental performance or initiative.
32	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.
33	We are receiving Team excellence awards for better environmental performance.
34	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
35	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box).
36	I often think of quitting my present job.
37	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.
38	My company provides environmental training to us to develop required skills and knowledge.
39	The employee voluntarily recycles even when no one is watching.
40	The employee follows the Company's policy of disposing waste water to avoid polluting environment.
41	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).
42	The employees follows the Company's recycling policy.
43	My company provides opportunities to the unions to negotiate with management about green workplace agreement.

**Table 3.4: Final Scale for Study**

S. No.	
1	The employee promotes environment protection in the workplace.
2	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.
3	My company includes environmental criteria in the recruitment messages.
4	My company provides training for green initiatives and therefore increase my Job Satisfaction.
5	Everybody in this facility get the opportunities to get training on environmental management aspects.
6	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)
7	The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.
8	We have a system of joint consultations in solving environmental issues of the organization.
9	My company communicates the employer's concern about greening through recruitment efforts.
10	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.
11	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.
12	My company provides training to the union representatives in environmental management.
13	We are rewarded financially or non- financially for good environmental performance.
14	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need).
15	My company generally selects those applicants who have been engaging in greening as consumers under their private life domain.
16	Job satisfaction is derived due to recognition of green practices by external agencies (Government)
17	My company reflects environmental policy and strategies of the organization in its recruitment policy.
18	We are given equal opportunities to involve and participate in green suggestion schemes.
19	My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction.
20	My company provides environmental education to the workforce.
21	My company considers candidates 'environmental concern and interest as selection criteria.
22	My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).
23	We get proper training on environmental awareness to create "environmental awareness" among the workforce.
24	My company recognizes union as a key stakeholder in environmental management.
25	My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).
26	While interviewing the candidate my company asks Environment-related questions.
27	We are rewarded for green skills acquisition.

S. No.	
28	My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.
29	My Company identifies the environmental training needs of employees in order to make them more environmental concerned.
30	I plan to stay in this company to develop my career for a long time.
31	My company has introduced rewards for innovative environmental performance or initiative.
32	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.
33	We are receiving Team excellence awards for better environmental performance.
34	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
35	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box).
36	I often think of quitting my present job.
37	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.
38	My company provides environmental training to us to develop required skills and knowledge.
39	The employee voluntarily recycles even when no one is watching.
40	The employee follows the Company's policy of disposing waste water to avoid polluting environment.
41	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).
42	The employees follow the Company's recycling policy.

Table 3.5 indicates variables, part of questionnaire and number of questions in various sub-sections. In this research study, the questionnaire has 42 statements.

**Table 3.5: Variable and their Corresponding Items in the Questionnaire**

S.No.	Study Variable Areas	Number of Questions
1	Green Recruitment and Selection	Statement 1-8
2	Green Training and Development	Statement 9-15
3	Green Reward Management	Statement 16- 20
4	Green Employee Involvement	Statement 21-25
5	Job Satisfaction	Statement 26-32
6	Employee Motivation	Statement 33-37
7	Organisational Commitment	Statement 38-42

### **3.13 Techniques of Data Analysis**

Under mentioned analysis have been carried out on the data gathered by personal interview and questionnaire:

#### **3.13.1 Missing Data Analysis**

Careful scrutiny of questionnaires has been done to eliminate missing data.

#### **3.13.2 Multivariate Outliers**

For detection of multivariate outliers squared Mahalanobis distance (D2) for each case has been applied.

#### **3.13.3 Test of Normality**

Univariate kurtosis value and its critical ratio (i.e., z-value) has been considered to check data normality. In this context, recommendation by West et al. (1995) regarding  $\beta_2$  values equal to or greater than 7 have been considered. Along with this, Mardia's normalized estimate of multivariate kurtosis to test the normality of each item has been utilized.

#### **3.13.4 Multicollinearity**

In this research work, it has been checked by Variable Inflation Factor (VIF) for all the independent variables by running a multivariate regression.

#### **3.13.5 Reliability Test: Cronbach's Alpha**

In a scale, internal consistency refers to a check of each and every time so that when scale is being assessed the same concept or construct transpires; provided that the sample is not homogeneous. To test the reliability of the statements Cronbach's alpha has been used.

After the data collection, questionnaire was subjected to editing, coding, hypothesis testing and statistical analysis to derive meaningful information from the items. The data collected from the survey were tested using SPSS version 19.0 and analyzed by SEM using AMOS version 20. According to Malhotra (2007), SEM is generally used to test the model, having many dependent links amongst different items.

As stated by Kerlinger (1973), factor analysis provides the researcher with the clear understanding of the arrangement of the correlation table. In particular, it facilitates the study of the inter-relationship among the huge set of correlated numeric items that are correlated by splitting the various measurements into a set of new factors/ variables. The items which are more correlated forms one construct.

Kerlinger (1973) also stated that PCA method i.e. principle component factor analysis takes into consideration only the deviation that is linked within a set of measurements. Usually, the first factor taken in this process, does not postulate meaningful factors. Rotation by this method, makes higher loading larger and lesser loadings even smaller. Thus, this process of rotation produces those variables, which can be labelled and analyzed. As stated by Dhillon and Goldstein (1984), varimax rotation gives the reasonable division of constructs and that is the reason it was used in this study. While performing the construct verification, loading for overall factor has also been confirmed. That is the reason of using the varimax rotation method in this research work.

### **3.13.6 Factor Analysis**

It is a statistical procedure that is generally used to reduce data into some meaningful information. In this research work, it has assisted the researcher in rearranging the co-relational relationship between quantities of continuous variables. Exploratory Factor Analysis (EFA) is a general name used for the step of the process to shrink the data and further summarizing it into some meaningful information. Factor analysis also supported this research work, by reducing the number of variables into a set of reduced, the number of factors or components. Principle Component Analysis i.e. PCA, is a main procedure in the Exploratory Factor Analysis i.e. EFA process, that was utilized to investigate the basic structure of the factors.

### **3.13.7 Structural Equation Modelling**

SEM is a mainly confirmatory method of analysing the data rather than exploratory method. That is, it is normally used to find if a particular model is valid or not by using SEM. It was used to determine a suitable model through SEM analysis frequently entail a certain exploratory element. Factor analysis assisted in the development of a conceptual model with the help of a set of relationships (correlation) between the



measured variables and the relationship was then expressed as a set of the probable relationship developed through the model. The results were then finally drawn with the help of overall indices along with the estimates, standard errors for each parameter.

### **3.14 Concluding Remarks**

This chapter rationalized the use of mixed methodology and particularized the research design. This chapter also outlined in detail about the different methodologies and techniques utilized for carrying out the research incorporating the reasons of selecting the methods, preparation of the questionnaire and its dispensation, checking of the mechanism for validity and reliability, screening of the data and data analysis procedure. The gathering of the data incorporated the populace, sample size, sample size determination and sources of data collection. The method of sampling and its procedure was talked about in background of the study. A pilot study was performed with the intent to examine the questionnaire and ensure that the instrument was valid and reliable. Additionally statistical techniques were used to scrutinize the data in detail. The results of the data analysis are discussed in subsequent chapters.

## CHAPTER 4

### DATA ANALYSIS AND FINDINGS

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The preceding section comprehensively discussed about the methodology, research design and data collection instruments employed to carry out this research work. This chapter examines the primary data collected from the personal interviews and survey. It also presents facts and results derived from the surveys conducted in the process of refining the research model as proposed by the researcher in the literature review section by substantiating the traits of each variable, and then identifying them into constructs.

#### 4.1 Preliminary Data Analysis

Initially, the data was analysed to test and determine (1) instrument's reliability - which was tested via Cronbach alpha; (2) Determinants of Green Human Resource Management Practices (3) Impact of Green Human Resource Management Practices on Job Satisfaction, Employee Motivation and Organisational Commitment. The data was analysed by using various descriptive statistical techniques, such as, Exploratory Factor Analysis i.e. EFA and Structural Equation modelling i.e. SEM. The data analysis fulfilled the following objectives:

1. To study various corporate initiatives which help in development of Green Human Resource Management in the organizations.
2. To examine whether Green Human Resource Management is positively related with Employee Motivation and Job Satisfaction.
3. To analyse whether Green Human Resource Management is positively related with Organisational Commitment.

The researcher has used the factor analysis to obtain the factors which influence the Green Human Resource Management Practices and then SEM method was applied to perform Confirmatory Factor Analysis (CFA) via measurement model and Model

Development via the structural model. The proposed model for this research work has been shown in the previous chapter Figure 3.2. Various components of model are:

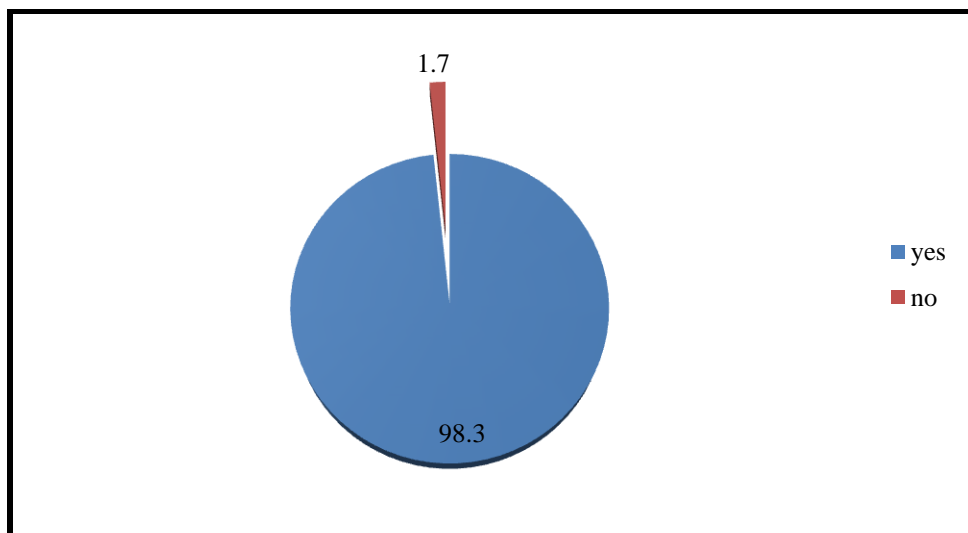
- Green Recruitment and Selection
- Green Training and Development
- Green Reward Management
- Green Employee Involvement
- Employee Motivation
- Job Satisfaction
- Organisational Commitment

## 4.2 Findings and analysis of Part B

The findings of Part B of the questionnaire regarding Green HRM Practices in the four industries selected have been presented below:

### 4.2.1 Awareness of the term Green Human Resource Management Practices.

Figure 4.1 reveals awareness about green human resource management practices. It was found that only 98.3% of the respondents are aware about GHRM.



**Figure 4.1: Awareness about Green HRM**

#### 4.2.2 Awareness of ISO 14000 series issued on environmental management system including a broad range of environmental disciplines.

It is found that 98.3% of the respondents (Figure 4.2) are aware about ISO 14000 issued on environmental management system, which includes a broad range of environmental disciplines

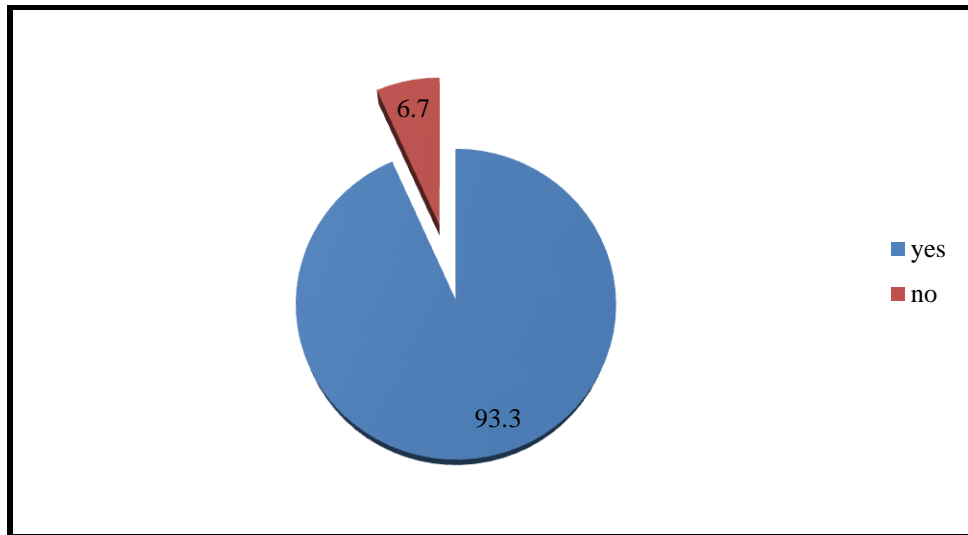


Figure 4.2: Awareness about ISO 14000 series

#### 4.2.3 ISO 14000 Certification

Figure 4.3 highlights that 65.7% companies under survey are ISO 14000 certified.

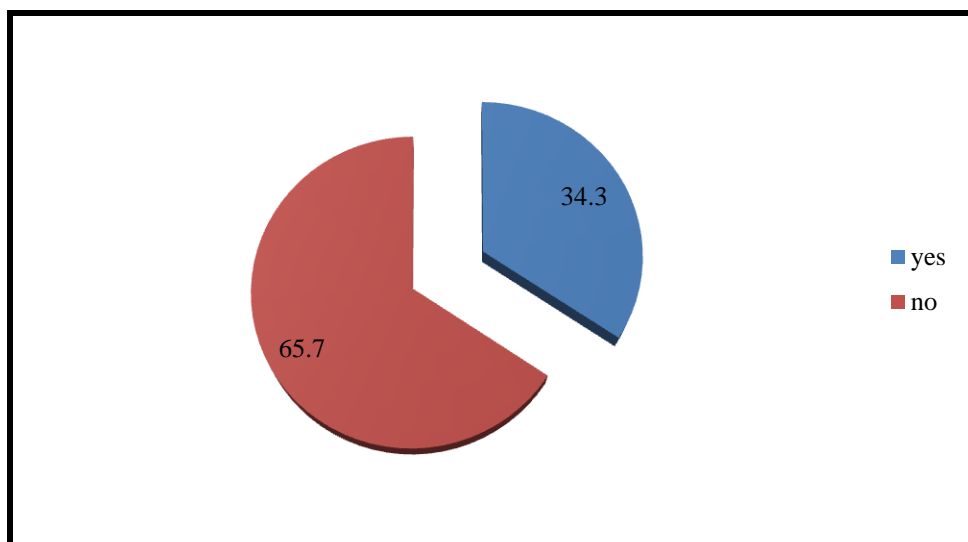


Figure 4.3: ISO 14000 certification

#### 4.2.4 Application of Green Human Resource Management Practices

- **Cost factor associated with waste disposal**

It was found that 42.7% of the respondents agreed that cost was the strongest factor associated with disposal of waste in their company while 41.7% of the respondents (Figure 4.4) consider it as second strongest reason.

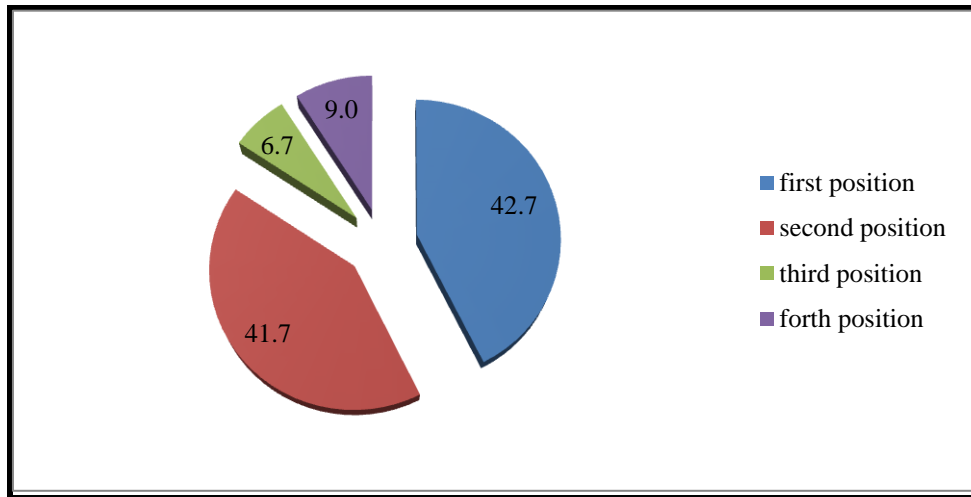


Figure 4.4: Cost factor

- **Moral obligation to be more socially responsible**

It was found that 37% of the respondents considered that the main reason behind the application of GHRM practices in their organisation was moral obligation to be more socially responsible while 47% respondent (Figure 4.5) considered it as second strongest reason.

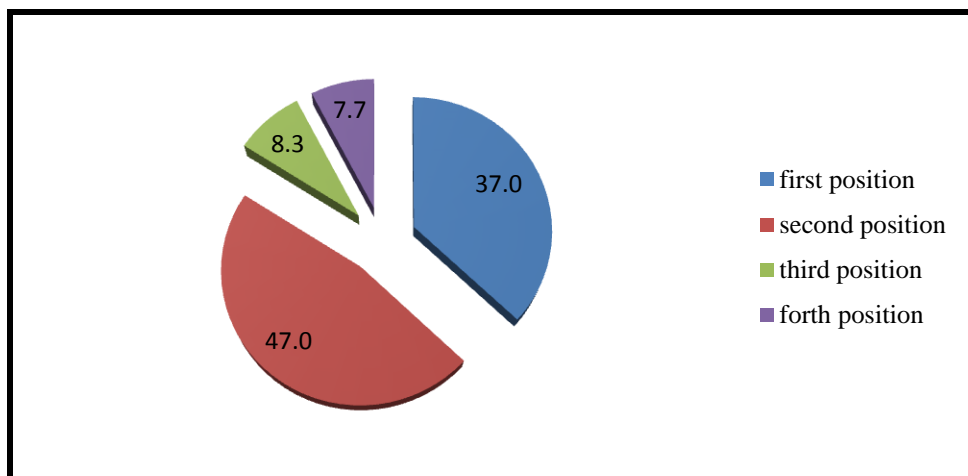
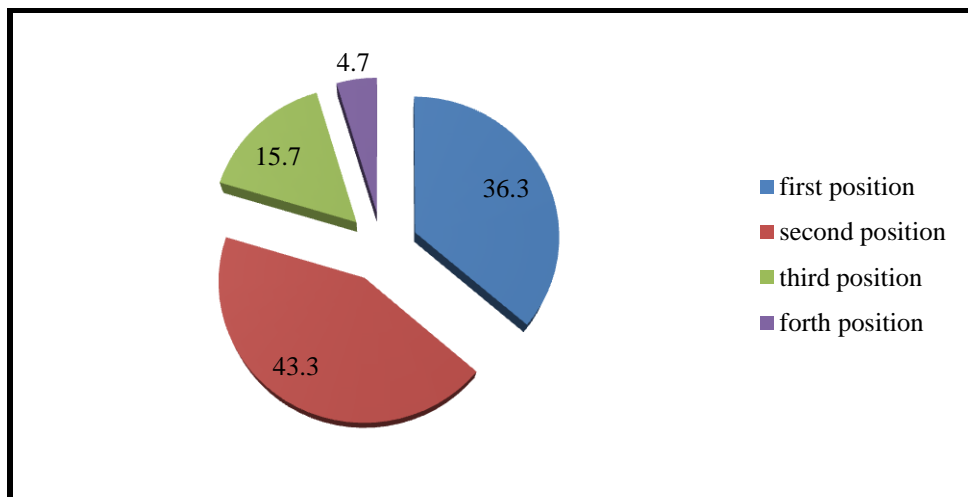


Figure 4.5: Moral obligation to be more socially responsible

- **Pressure from regulatory bodies**

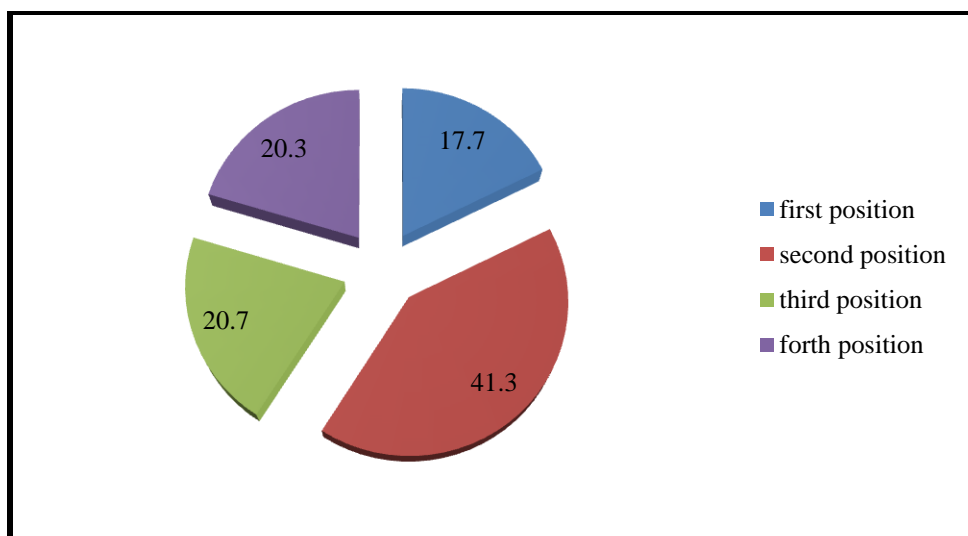
It was found that 36.3% of the respondents agreed that their company applied GHRM practices due to pressure from regulatory bodies while 43.3% respondent (Figure 4.6) considered it as second strongest reason.



**Figure 4.6: Pressure from regulatory bodies**

- **Pressure from competitors**

It was found that only 17.7% of the respondents (Figure 4.7) agreed that their company applied GHRM practices due to pressure from the competitors.



**Figure 4.7: Pressure from competitors**

There are few problems faced by the organizations while adopting Green HRM Practices. It was observed that most of the companies are into green practices due to cost factor associated with waste disposal, moral obligation to be more socially responsible, pressure from regulatory bodies and pressure from competitors. It was observed that 42.7% of the respondents agreed that cost was the main problem associated with the adopting Green HRM Practices. 37% of the respondents considered that the main reason behind the application of GHRM practices in their organisation was moral obligation to be more socially responsible. 36.3% of the respondents agreed that their company applied GHRM practices due to pressure from regulatory bodies. 17.7% of the respondents agreed that their company applied GHRM practices only due to pressure from the competitors.

### **4.3 Overall Industry and Industry Wise Analysis of Green HRM Practices**

The findings of Green HRM Practices in the four industries selected have been presented in this section. The respondents were asked to rank their preferences to certain closed structured questions having various options. This provided ordinal measurement, which does not possess the desirable qualities of equal intervals or absolute zeros. The lack of real zero in this type of measurement is not as serious as the lack of equal intervals. Theoretically, in the absence of interval equality, the distances with the ordinal scale cannot be added without converting it into an interval scale. However, as Kerlinger (1978) observes, ‘though most psychological scales are basically ordinal, we can with considerable assurance often assume equality of intervals, the point of view is a pragmatic one that the assumption of interval equality works’. The rank values were converted into scores as follows:

<b>Ranks</b>	<b>Scores</b>
1	5
2	4
3	3
4	2
5	1

Accordingly, the scores were added and highest scores were associated with higher preferences. The statements where opinions were considered; the scoring was done in the following manner:

<b>Opinion</b>	<b>Scores</b>
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

### **4.3.1 Overall Industry Analysis of Green HRM Practices**

Overall industry analysis of Green HRM Practices for different factors has been discussed in this section below.

#### **Green Recruitment and Selection**

Industry wise analysis for Green Recruitment and Selection has been shown in the Table 4.1 below.

**Table 4.1: Top Ranking Statements for Green Recruitment and Selection**

<b>Ranks</b>	<b>Overall Industry</b>
<b>I</b>	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.
<b>II</b>	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.
<b>III</b>	My company considers candidates 'environmental concern and interest as selection criteria.

For overall industry "My Company indicates about organization's environmental performance (past and current) when communicating recruitment messages" emerged as the top ranking statement.



### Green Training and Development

Industry wise analysis for Green Training and Development has been shown in the Table 4.2 below.

**Table 4.2: Top Ranking Statements for Green Training and Development**

Ranks	Overall Industry
I	My company provides environmental education to the workforce
II	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening)
III	Everybody in this facility get the opportunities to get training on environmental management aspects

For overall industry “My Company provides environmental education to the workforce” emerged as the top ranking statement.

### Green Reward Management

Industry wise analysis for Green Reward Management has been shown in the Table 4.3 below.

**Table 4.3: Top Ranking Statements for Green Reward Management**

Ranks	Overall Industry
I	My company has introduced rewards for innovative environmental performance or initiative.
II	We are rewarded financially or non- financially for good environmental performance.
III	We are receiving Team excellence awards for better environmental performance.

For overall industry “My Company has introduced rewards for innovative environmental performance or initiative” emerged as the top ranking statement.

### Green Employee Involvement

Industry wise analysis for Green Employee Involvement has been shown in the Table 4.4 below.

**Table 4.4: Top Ranking Statements for Green Employee Involvement**

Ranks	Overall Industry
I	We have a system of joint consultations in solving environmental issues of the organization.
II	My company recognizes union as a key stakeholder in environmental management.
III	My company provides opportunities to the unions to negotiate with management about green workplace agreement.

For overall industry “We have a system of joint consultations in solving environmental issues of the organization” emerged as the top ranking statement.

### Employee Motivation

Industry wise analysis for Employee Motivation has been shown in the Table 4.5 below.

**Table 4.5: Top Ranking Statements for Employee Motivation**

Ranks	Overall Industry
I	Employees have a sense of personal obligation to take action to stop wasting resources (e.g. saving water or using less electricity)
II	The employee promotes environment protection in the workplace.
III	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (e.g. turn off the Air- conditioner, lights if you do not need)

For overall industry “Employees have a sense of personal obligation to take action to stop wasting resources (e.g. saving water or using less electricity)” emerged as the top ranking statement.

### Job Satisfaction

Industry wise analysis for Job Satisfaction has been shown in the Table 4.6 below.

**Table 4.6: Top Ranking Statements for Job Satisfaction**

Ranks	Overall Industry
I	My company provides training for green initiatives and therefore increase my Job Satisfaction.
II	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
III	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.

For overall industry “My Company provides training for green initiatives and therefore increase my Job Satisfaction” emerged as the top ranking statement.

### Organisational Commitment

Industry wise analysis for Organisational Commitment has been shown in the Table 4.7 below.

**Table 4.7: Top Ranking Statements for Organisational Commitment**

Ranks	Overall Industry
<b>I</b>	The employee follows the Company’s policy of disposing chemicals to avoid polluting environment.
<b>II</b>	The employee’s behavior of saving paper and energy when operating the machine is beyond the norm.
<b>III</b>	The employee follows the Company’s policy of disposing waste water to avoid polluting environment.

For overall industry “The employee follows the Company’s policy of disposing chemicals to avoid polluting environment” emerged as the top ranking statement.

### 4.3.2 Industry Wise Analysis of Green HRM Practices

Industry wise analysis of Green HRM Practices for different factors has been discussed in this section below.

### Green Recruitment and Selection

Industry wise analysis for Green Recruitment and Selection has been shown in the Table 4.8 below.

**Table 4.8: Top Ranking Statements for Green Recruitment and Selection**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	My Company considers candidates’ environmental concern and interest as selection criteria.	My company communicates the employer’s concern about greening through recruitment efforts	My company indicates about organization’s environmental performance (past and current) when communicating recruitment messages.	My company indicates about organization’s environmental performance (past and current) when communicating recruitment messages.

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>II</b>	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies
<b>III</b>	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies	My company considers candidates 'environmental concern and interest as selection criteria.	My company considers candidates 'environmental concern and interest as selection criteria.	My company reflects environmental policy and strategies of the organization in its recruitment policy.

For food and plastic industry “My Company indicates about organization’s environmental performance (past and current) when communicating recruitment messages” emerged as the top ranking statement. For automobile industry “My Company considers candidates’ environmental concern and interest as selection criteria” and for electronic industry “My Company communicates the employer’s concern about greening through recruitment efforts” emerged as the top ranking statements. Further “Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies” emerged as common preferences at second rank for electronic, food and plastic industry.

### **Green Training and Development**

Industry wise analysis for Green Training and Development has been shown in the Table 4.9 below.

**Table 4.9: Top Ranking Statements for Green Training and Development**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	Everybody in this facility get the opportunities to get training on environmental management aspects	My company provides environmental education to the workforce.	My company provides environmental education to the workforce.	My company provides environmental education to the workforce.
<b>II</b>	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening)	We get proper training on environmental awareness to create “environmental awareness” among the workforce.	We get proper training on environmental awareness to create “environmental awareness” among the workforce.	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).
<b>III</b>	My Company identifies the environmental training needs of employees in order to make them more environmental concerned.	Everybody in this facility get the opportunities to get training on environmental management aspects.	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).	We get proper training on environmental awareness to create “environmental awareness” among the workforce.

For electronic, food and plastic industry “My Company provides environmental education to the workforce.” emerged as the common top ranking statement. For automobile industry “Everybody in this facility get the opportunities to get training on environmental management aspects” emerged as the top ranking statements.

### **Green Reward Management**

Industry wise analysis for Green Reward Management has been shown in the Table 4.10 below.

**Table 4.10: Top Ranking Statements for Green Reward Management**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	My company has introduced rewards for innovative environmental performance or initiative.	My company has introduced rewards for innovative environmental performance or initiative.	We are rewarded financially or non- financially for good environmental performance.	We are rewarded financially or non-financially for good environmental performance.
<b>II</b>	We are rewarded for green skills acquisition.	My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).	My company has introduced rewards for innovative environmental performance or initiative.	We are receiving Team excellence awards for better environmental performance.
<b>III</b>	We are rewarded financially or non-financially for good environmental performance.	We are receiving Team excellence awards for better environmental performance.	We are receiving Team excellence awards for better environmental performance.	My company has introduced rewards for innovative environmental performance or initiative.

For Automobile and electronic industry “My company has introduced rewards for innovative environmental performance or initiative” emerged as the top ranking statement. For food and plastic industry “We are rewarded financially or non-financially for good environmental performance” emerged as the top ranking statements.

### **Green Employee Involvement**

Industry wise analysis for Green Employee Involvement has been shown in the Table 4.11 below.

**Table 4.11: Top Ranking Statements for Green Employee Involvement**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	We have a system of joint consultations in solving environmental issues of the organization.	We have a system of joint consultations in solving environmental issues of the organization.	We have a system of joint consultations in solving environmental issues of the organization.	My company provides opportunities to the unions to negotiate with management about green workplace agreement.
<b>II</b>	My company recognizes union as a key stakeholder in environmental management.	My company recognizes union as a key stakeholder in environmental management.	My company provides opportunities to the unions to negotiate with management about green workplace agreement.	My company recognizes union as a key stakeholder in environmental management.
<b>III</b>	We are given equal opportunities to involve and participate in green suggestion schemes.	My company provides opportunities to the unions to negotiate with management about green workplace agreement.	My company recognizes union as a key stakeholder in environmental management.	We have a system of joint consultations in solving environmental issues of the organization.

For automobile, electronic and food industry “We have a system of joint consultations in solving environmental issues of the organization” emerged as the common top ranking statement. For plastic industry “My Company provides opportunities to the unions to negotiate with management about green workplace agreement” emerged as the top ranking statements. Further “My Company recognizes union as a key stakeholder in environmental management” emerged as common preferences at second rank for automobile, electronic and plastic industry.

### **Employee Motivation**

Industry wise analysis for Employee Motivation has been shown in the Table 4.12 below.

**Table 4.12: Top Ranking Statements for Employee Motivation**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (e.g. turn off the Air-conditioner, lights if you do not need)	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)
<b>II</b>	The employee promotes environment protection in the workplace.	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (e.g. turn off the Air-conditioner, lights if you do not need)	The employee promotes environment protection in the workplace.	The employee promotes environment protection in the workplace.
<b>III</b>	The employee voluntarily recycles even when no one is watching.	The employee promotes environment protection in the workplace.	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (e.g. suggestion box)	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg. turn off the Air- conditioner, lights if you do not need)

For automobile and electronic industry “Employees have a sense of personal obligation to take action to stop wasting resources (e.g. saving water or using less electricity)” emerged as the common top ranking statement. For food industry “Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (e.g. turn off the Air- conditioner, lights if you do not need)” and for plastic industry “Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (e.g. suggestion box)” emerged as the top ranking statements. Further “The employee promotes environment protection in the workplace” emerged as common preferences at second rank for automobile, food and plastic industry.



## Job Satisfaction

Industry wise analysis for Job Satisfaction has been shown in the Table 4.13 below.

**Table 4.13: Top Ranking Statements for Job Satisfaction**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction	My company provides training for green initiatives and therefore increase my Job Satisfaction.	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
<b>II</b>	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.	My company provides training for green initiatives and therefore increase my Job Satisfaction.	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.
<b>III</b>	My company provides training for green initiatives and therefore increase my Job Satisfaction.	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	Job Satisfaction is derived due to recognition of green practices by external agencies (Government)	Job Satisfaction is derived due to recognition of green practices by external agencies (Government)

For automobile industry “My Company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction” emerged as the common top ranking statement. For electronic industry “My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction”, for food industry “My company provides training for green initiatives and therefore increase my Job Satisfaction” and for plastic industry “I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities” emerged as the top ranking statements.

## Organisational Commitment

Industry wise analysis for Organisational Commitment has been shown in the Table 4.14 below.

**Table 4.14: Top Ranking Statements for Organisational Commitment**

Ranks	Type of Industry			
	Automobile	Electronic	Food	Plastic
<b>I</b>	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.
<b>II</b>	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.
<b>III</b>	The employee follows the Company's policy of disposing waste water to avoid polluting environment.	The employee follows the Company's policy of disposing waste water to avoid polluting environment.	The employee follows the Company's policy of disposing waste water to avoid polluting environment.	The employee follows the Company's policy of disposing waste water to avoid polluting environment.

For automobile, food and plastic industry "The employee's behaviour of saving paper and energy when operating the machine is beyond the norm" emerged as the common top ranking statement. For electronic industry "The employee follows the Company's policy of disposing chemicals to avoid polluting environment" emerged as the top ranking statements. Further "The employee follows the Company's policy of disposing chemicals to avoid polluting environment" emerged as common preferences at second rank for automobile, food and plastic industry.

## **4.4 Data Analysis**

Data analysis was mainly used to check the assumption and to verify the research inquiries. It also considered the methods and types of the tools to be used, and finally helped in the development of the scheme, regarding data collection. In this context, for data analysis, SPSS version 19 was used for various statistical tests applied.

### **4.4.1 Data Screening**

Precisely, data screening is the course of action to make sure that data is clean and ready to go before we carry out advanced statistical analysis. Data should essentially be examined so as to make certain that the data is useable, dependable and authenticated for assessing fundamental theory.

#### **4.4.1.1 Missing data**

Several missing values in data create problem to run data analysis. The EFA and CFA entail a specific number of data points to facilitate the computation of estimates. It also includes biasness on the part of respondents, who have not responded some of the questions due to some personal bias or common issues. Upper limit for missing data was compliant but by and large, more than 10% of missing values could be problematic for analysis purposes. In this study, due care was taken during personal interaction for questionnaire filling process so that no question remained unanswered.

### **4.4.2 Reliability**

It is “concerned with the stability, constancy, and reproducibility of measurement results (Sekaran, 2000).” Reliability is considered as the utmost essential element for checking the quality of any measurement instrument. For instance, it assists in determining the inconsistencies if any and its influence on the findings of the measurement instrument. Whenever there are many items relating to one construct in the research work, then it becomes essential to check the internal reliability of the instrument (Bryman and Cramer, 2005).

In this research work, there were multiple measurements consisting of numerous items. For instance, there were eight items that were used for measuring the Green Recruitment

and Selection. Seven items were used for measuring Green Training and Development, and Five were used to measure Green Reward Management, and so on, as elucidated earlier. Name of the factors used and their codes are shown in Table 4.15. As suggested by Nunally (1978), to check or estimate the uniformity in the answers of the respondents, reliability of the measurement of items was checked. To measure it, Cronbach's alpha i.e. the reliability coefficient was used and it was found out to be greater than 0.7 for all the individual constructs as shown in Table 4.16. According to many researchers also (Sekaran, 2000; Hair, 2006), the range of the Reliability coefficients should be greater than 0.7.

**Table 4.15: Name of the Factors and their Codes**

Codes	Factor Name
GRS	Green Recruitment and Selection
GTD	Green Training and Development
GR	Green Reward Management
GEI	Green Employee Involvement
EM	Employee Motivation
JS	Job Satisfaction
OC	Organisational Commitment

**Table 4.16: Summary of Reliability Analysis**

Factor Name	Items	Cronbach Alpha Coefficient	Reliability Results
Green Recruitment and Selection	8	0.928	Good
Green Training and Development	7	0.880	Good
Green Reward Management	5	0.866	Good
Green Employee Involvement	5	0.869	Good
Employee Motivation	5	0.852	Good
Job Satisfaction	7	0.916	Good
Organisational Commitment	5	0.853	Good
Overall	42	0.913	Good

## 4.5 Data Suitability

For conducting the factor analysis, “KMO and Bartlett’s Test of Sphericity” were important to check the appropriateness and suitability of the sample data.

### 4.5.1 Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test of Sphericity

Table 4.17 shows the results of “KMO and Bartlett’s test of Sphericity” and the values were 0.867 for KMO 8859.529 ( $p < .001$ ) for the Bartlett’s test of Sphericity.

**Table 4.17: KMO and Bartlett’s Test**

KMO and Bartlett’s Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.867
Bartlett’s Test of Sphericity	Approx. Chi-Square	8859.529
	df	903
	Sig.	.000

- Considering the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) for individual variance it was discovered that there is sufficient correlation amid the factors.
- The sampling adequacy value of Kaiser-Meyer-Olkin MSA was found to be 0.867 indicating that the sample size was sufficiently decent for sampling.
- The substance of Bartlett’s Test of Sphericity was found to be suitable, thus the test results gave enough clarity to substantiate the suitable practice of Exploratory Factor Analysis on the investor perception scale items.

## 4.6 Exploratory Factor Analysis

Once the data was found to be suitable for analysis, Exploratory Factor Analysis using “Principal Components Analysis (PCA) and varimax rotation via orthogonal method” was performed, through SPSS (version 19.0), for data extraction which helped in finding the factors which determined the underlying relationship among the various variables.

### 4.6.1 Communalities

Communalities between the measured items that were loaded on the EFA model in this research work varied from .512 for GTD1 to .858 for GEI1, as shown in Table 4.18. The GTD1 was the lowest loaded item in this table that indicated; it was the weakest measured item and the researcher might drop that for the final data analysis.

**Table 4.18: Communalities**

Codes	Items	Initial	Extraction
GRS1	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.	1.000	.705
GRS2	My company includes environmental criteria in the recruitment messages.	1.000	.692
GRS3	My company communicates the employer's concern about greening through recruitment efforts.	1.000	.624
GRS5	My company reflects environmental policy and strategies of the organization in its recruitment policy.	1.000	.549
GRS6	My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.	1.000	.628
GRS7	My company considers candidates 'environmental concern and interest as selection criteria.	1.000	.620
GRS8	While interviewing the candidate my company asks Environment-related questions.	1.000	.722
GRS9	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.	1.000	.692
GTD1	My company provides environmental training to us to develop required skills and knowledge.	1.000	.512
GTD2	My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).	1.000	.594
GTD3	My company provides environmental education to the workforce.	1.000	.636
GTD4	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).	1.000	.724
GTD5	My Company identifies the environmental training needs of employees in order to make them more environmental concerned.	1.000	.668
GTD6	We get proper training on environmental awareness to create "environmental awareness" among the workforce.	1.000	.572
GTD7	Everybody in this facility get the opportunities to get training on environmental management aspects.	1.000	.631

<b>Codes</b>	<b>Items</b>	<b>Initial</b>	<b>Extraction</b>
GR1	We are rewarded financially or non- financially for good environmental performance.	1.000	.616
GR2	We are receiving Team excellence awards for better environmental performance.	1.000	.632
GR3	My company has introduced rewards for innovative environmental performance or initiative.	1.000	.667
GR4	My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).	1.000	.694
GR5	We are rewarded for green skills acquisition.	1.000	.653
GEI1	We are given equal opportunities to involve and participate in green suggestion schemes.	1.000	.858
GEI2	My company provides training to the union representatives in environmental management.	1.000	.682
GEI3	We have a system of joint consultations in solving environmental issues of the organization.	1.000	.752
GEI4	My company recognizes union as a key stakeholder in environmental management.	1.000	.548
GEI5	My company provides opportunities to the unions to negotiate with management about green workplace agreement.	1.000	.566
JS1	I plan to stay in this company to develop my career for a long time.	1.000	.738
JS2	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.	1.000	.777
JS3	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	1.000	.699
JS4	My company provides training for green initiatives and therefore increase my Job Satisfaction.	1.000	.600
JS5	My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction	1.000	.736
JS6	Job satisfaction is derived due to recognition of green practices by external agencies (Government)	1.000	.745
JS7	I often think of quitting my present job.	1.000	.699
EM1	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)	1.000	.603
EM2	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need)	1.000	.611
EM3	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	1.000	.737
EM4	The employee voluntarily recycles even when no one is watching.	1.000	.581

Codes	Items	Initial	Extraction
EM5	The employee promotes environment protection in the workplace.	1.000	.623
OC1	The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.	1.000	.648
OC2	The employee follows the Company's policy of disposing waste water to avoid polluting environment.	1.000	.654
OC3	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.	1.000	.613
OC4	The employee's behavior of saving paper and energy when operating the machine is beyond the norm.	1.000	.623
OC5	The employees follow the Company's recycling policy.	1.000	.738

Extraction Method: Principal Component Analysis (PCA).

## 4.7 Exploratory Factors Extraction Model

For extracting the factors, Eigen values greater than one (Kaiser's criterion) was applied. After using this criterion, twelve factors were identified. The result of extraction of factors with Eigen value more than 1 is presented in Table 4.19.

### 4.7.1 Loadings of Items on Latent Factors

The loadings of the each of items of the seven constructs that were characterized in the EFA are presented in the rotated component matrix in Table 4.20.

**Table 4.19: Total Variance Explained**

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	11.718	27.252	27.252	11.718	27.252	27.252	5.896	13.713	13.713
2	5.719	13.300	40.552	5.719	13.300	40.552	4.693	10.915	24.628
3	3.401	7.910	48.462	3.401	7.910	48.462	4.160	9.674	34.301
4	2.599	6.043	54.505	2.599	6.043	54.505	3.418	7.949	42.250
5	2.098	4.879	59.385	2.098	4.879	59.385	3.403	7.915	50.165
6	1.495	3.477	62.861	1.495	3.477	62.861	3.400	7.906	58.071
7	1.267	2.946	65.807	1.267	2.946	65.807	3.327	7.736	65.807

Extraction Method: Principal Component Analysis.



Table 4.20: Rotated Component Matrix

Rotated Component Matrix <sup>a</sup>							
	Component						
	1	2	3	4	5	6	7
GRS1	.818						
GRS2	.823						
GRS3	.781						
GRS5	.731						
GRS6	.771						
GRS7	.779						
GRS8	.839						
GRS9	.824						
GTD1			.638				
GTD2			.703				
GTD3			.645				
GTD4			.784				
GTD5			.731				
GTD6			.633				
GTD7			.700				
GR1					.727		
GR2					.704		
GR3					.746		
GR4					.713		
GR5					.770		
GEI1						.788	
GEI2						.636	
GEI3						.741	
GEI4						.620	
GEI5						.690	
JS1		.701					
JS2		.796					
JS3		.750					
JS4		.676					
JS5		.813					
JS6		.826					
JS7		.646					
EM1							.635
EM2							.714
EM3							.805
EM4							.664
EM5							.687
OC1				.754			
OC2				.785			
OC3				.729			
OC4				.692			
OC5				.819			
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.							
a. Rotation converged in 7 iteratio							

## 4.8 Interpretation of Factors

According to Tabachnick and Fidell (2007), each construct needs to be given a unique label that shows its features and helps in the explanation of each factor. Each of the variables affecting Green HRM Practices, were obtained through PCA in the process of EFA in this research work, which is discussed below. The total variance explained, factor loading of each item of the construct, and Cronbach alpha for each construct related to the Green HRM Practices, are also discussed in the subsequent sub-sections.

### 4.8.1 Green Recruitment and Selection

The foremost variable that has the largest total variance explained has been clearly explained as “Green Recruitment and Selection”.

**Table 4.21: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Green Recruitment and Selection**

Factor No. 1: Green Recruitment and Selection	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		“Extraction Sums of Squared Loadings”	“Rotation Sums of Squared Loadings”	
Items				
My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.	.818	27.252	13.713	0.928
My company includes environmental criteria in the recruitment messages.	.823			
My company communicates the employer's concern about greening through recruitment efforts.	.781			
My company reflects environmental policy and strategies of the organization in its recruitment policy.	.731			
My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.	.771			
My company considers candidates 'environmental concern and interest as selection criteria.	.779			
While interviewing the candidate my company asks Environment-related questions.	.839			
Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.	.824			

Table 4.21 represents the summary of factor loadings, percentage of total variance explained and reliability of Green Recruitment and Selection. Factor loadings, which is coefficient of correlation between the statements and a factor, for all the items were found to be above the minimum criteria of 0.40 and percentage of total variance explained was 27.252%. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

#### 4.8.2 Green Training and Development

The Second construct has been explained as "Green Training and Development".

**Table 4.22: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Green Training and Development**

Factor No. 2: Green Training and Development	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		"Extraction Sums of Squared Loadings"	"Rotation Sums of Squared Loadings"	
Items				
My company provides environmental training to us to develop required skills and knowledge.	.638	7.910	9.674	0.880
My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).	.703			
My company provides environmental education to the workforce.	.645			
My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).	.784			
My Company identifies the environmental training needs of employees in order to make them more environmental concerned.	.731			
We get proper training on environmental awareness to create "environmental awareness" among the workforce.	.633			
Everybody in this facility get the opportunities to get training on environmental management aspects.	.700			

Table 4.22 represents the summary of factor loadings, percentage of total variance explained and reliability of Green Training and Development. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 9.674 %. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

### 4.8.3 Green Reward Management

The Third construct has been explained as "Green Reward Management".

**Table 4.23: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Green Reward Management**

Items	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		"Extraction Sums of Squared Loadings"	"Rotation Sums of Squared Loadings"	
We are rewarded financially or non-financially for good environmental performance.	.727	4.879	7.915	0.866
We are receiving Team excellence awards for better environmental performance.	.704			
My company has introduced rewards for innovative environmental performance or initiative.	.746			
My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).	.713			
We are rewarded for green skills acquisition.	.770			

Table 4.23 represents the summary of factor loadings, percentage of total variance explained and reliability of Green Reward Management. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 7.915 %. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

#### 4.8.4 Green Employee Involvement

The fourth variable has been elucidated as, “Green Employee Involvement”.

**Table 4.24: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Green Employee Involvement**

Factor No. 4: Green Employee Involvement	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		“Extraction Sums of Squared Loadings”	“Rotation Sums of Squared Loadings”	
Items				
We are given equal opportunities to involve and participate in green suggestion schemes.	.788	3.477	7.906	0.869
My company provides training to the union representatives in environmental management.	.636			
We have a system of joint consultations in solving environmental issues of the organization.	.741			
My company recognizes union as a key stakeholder in environmental management.	.620			
My company provides opportunities to the unions to negotiate with management about green workplace agreement.	.690			

Table 4.24 represents the summary of factor loadings, percentage of total variance explained and reliability of Green Employee Involvement. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 7.906%. Value of Cronbach’s Alpha i.e. reliability coefficient was more than 0.7 for this construct.

### 4.8.5 Employee Motivation

The fifth construct has been described as, “Employee Motivation”.

**Table 4.25: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Employee Motivation**

Factor No. 5:Employee Motivation	Factor Loadings	% of variance explained		Cronbach's Alpha
		“Extraction Sums of Squared Loadings”	“Rotation Sums of Squared Loadings”	
Items				
Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)	.635	2.946	7.736	0.852
Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need)	.714			
Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	.805			
The employee voluntarily recycles even when no one is watching.	.664			
The employee promotes environment protection in the workplace.	.687			

Table 4.25 represents the summary of factor loadings, percentage of total variance explained and reliability of Employee Motivation. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 7.736 %. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

#### 4.8.6 Job Satisfaction

The sixth construct has been interpreted as “Job Satisfaction”.

**Table 4.26: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Job Satisfaction**

Factor No. 6: Job Satisfaction	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		“Extraction Sums of Squared Loadings”	“Rotation Sums of Squared Loadings”	
Items				
I plan to stay in this company to develop my career for a long time.	.701	13.300	10.915	0.916
I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.	.796			
My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	.750			
My company provides training for green initiatives and therefore increase my Job Satisfaction.	.676			
My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction	.813			
Job satisfaction is derived due to recognition of green practices by external agencies (Government)	.826			
I often think of quitting my present job.	.646			

Table 4.26 represents the summary of factor loadings, percentage of total variance explained and reliability of Job Satisfaction. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 10.915 %. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

#### 4.8.7 Organisational Commitment

The seventh construct has been explained as “Organisational Commitment”.

**Table 4.27: Summary of Factor Loadings, Percentage of Total Variance Explained and Reliability of Organisational Commitment**

Factor No. 7: Organisational Commitment	Factor Loadings	% of Variance Explained		Cronbach's Alpha
		“Extraction Sums of Squared Loadings”	“Rotation Sums of Squared Loadings”	
Items				
The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.	.754	6.043	7.949	0.853
The employee follows the Company's policy of disposing waste water to avoid polluting environment.	.785			
The employee follows the Company's policy of disposing chemicals to avoid polluting environment.	.729			
The employee's behavior of saving paper and energy when operating the machine is beyond the norm.	.692			
The employees follow the Company's recycling policy.	.819			

Table 4.27 represents the summary of factor loadings, percentage of total variance explained and reliability of Organisational Commitment. Factor loadings for all the items were above the minimum criteria of 0.40 and percentage of total variance explained was 7.949 %. Value of Cronbach's Alpha i.e. reliability coefficient was more than 0.7 for this construct.

#### 4.9 Statistical Analysis- Structural Equation Modelling

It is a grouping of various statistical models that pursues to elucidate and describe different types of associations between multiple latent variables or constructs. According to Hair (2006), while using SEM, investigators can inspect interconnected



associations amongst various dependent and independent variables concurrently. Hence, many different authors and researchers have suggested that SEM as a scientific procedure, has been utilized as a part of many fields, and has become an imperative technique for analysing the data in various academic research (Hair, 2006; Kline, 2005; Byrne, 2001). Likewise, different authors also claimed that SEM is a multivariate technical analysis that permits scientists to analyse, both the estimation and basic parts of a research model by checking the relations and associations between numerous dependent and independent variables simultaneously (Tabachnick and Fidell, 2007). Consequently, in the current research work, there were multiple dependent and independent relationships in the proposed model for research as discussed in chapter 3 of the report, so SEM techniques found out to be the most appropriate technique, which can be applied for data analysis of this research work. To investigate the statistical associations amongst the measurements of dependent variables i.e., (Employee Motivation, Job Satisfaction and Organisational Commitment) and independent variables i.e. (Green Recruitment and Selection, Green Training and Development, Green Reward Management, Green Employee Involvement), researcher has used the SEM technical software package, known as, “AMOS (Analysis of Moment Structure) Version 20”. SEM was chosen for the data analysis of this research work. There are two reasons for this: Primarily, it is a systematic tool to confirm the relationships between various variables and their indicators i.e. items, and to investigate the associations between the variables in one model (Hair, 2006; Hoyle, 1995). Secondly, according to many researchers, it offered an effective and challenging statistical tool that handles the complicated research models (Hair, 2006; Tabachnick and Fidell, 2001; Bryne, 2001). Bentler (1999) and Hoyle (1995, 2006) stated that in SEM, to find out the relationships among constructs and indicators, confirmatory factor analysis (CFA) was used, which is also called measurement model, and the model used to verify and investigate the associations among various constructs is known as structural model, which are explained in the Table 4.28.

**Table 4.28: Code, Latent Variables and Observed Variables used for the study**

Code	Latent Variable	Observed Variable
GRS	Green Recruitment and Selection	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.
		My company includes environmental criteria in the recruitment messages.
		My company communicates the employer's concern about greening through recruitment efforts.
		My company reflects environmental policy and strategies of the organization in its recruitment policy.
		My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.
		My company considers candidates 'environmental concern and interest as selection criteria.
		While interviewing the candidate my company asks Environment-related questions.
		Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.
GTD	Green Training and Development	My company provides environmental training to us to develop required skills and knowledge.
		My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).
		My company provides environmental education to the workforce.
		My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).
		My Company identifies the environmental training needs of employees in order to make them more environmental concerned.
		We get proper training on environmental awareness to create "environmental awareness" among the workforce.
		Everybody in this facility get the opportunities to get training on environmental management aspects.
GRM	Green Reward Management	We are rewarded financially or non- financially for good environmental performance.
		We are receiving Team excellence awards for better environmental performance.
		My company has introduced rewards for innovative environmental performance or initiative.
		My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).
		We are rewarded for green skills acquisition.

Code	Latent Variable	Observed Variable
GEI	Green Employee Involvement	We are given equal opportunities to involve and participate in green suggestion schemes.
		My company provides training to the union representatives in environmental management.
		We have a system of joint consultations in solving environmental issues of the organization.
		My company recognizes union as a key stakeholder in environmental management.
		My company provides opportunities to the unions to negotiate with management about green workplace agreement.
EM	Employee Motivation	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)
		Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg. turn off the Air-conditioner, lights if you do not need)
		Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)
		The employee voluntarily recycles even when no one is watching.
		The employee promotes environment protection in the workplace.
JS	Job Satisfaction	I plan to stay in this company to develop my career for a long time.
		I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
		My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.
		My company provides training for green initiatives and therefore increase my Job Satisfaction.
		My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction
		Job satisfaction is derived due to recognition of green practices by external agencies (Government)
		I often think of quitting my present job.
OC	Organisational Commitment	The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.
		The employee follows the Company's policy of disposing waste water to avoid polluting environment.
		The employee follows the Company's policy of disposing chemicals to avoid polluting environment.
		The employee's behavior of saving paper and energy when operating the machine is beyond the norm.
		The employees follow the Company's recycling policy.

### 4.9.1 Measurement Model

According to Kline (2005), CFA is a widely-used technique of SEM, and as per Byrne (2001), it is by and large connected, when there is some contextual knowledge and understanding of the basic factors and their measuring items. It is exceptionally suggested that, CFA should be applied after EFA, so as to check and affirm the scales derived from EFA (Hair, 1998; Byrne, 2001). So, the researcher in this research work has also applied EFA before CFA. As stated by Byrne (2001), in practice, unlike EFA, in which researcher explores the factors, CFA is a procedure used to affirm from the prior hypotheses regarding, associations among the set of items and their corresponding latent variables. As stated by Hair (2006), in CFA, there are two wide methodologies that were used to assess the measurement model: (1) to decide the (GOF) goodness of fit criteria indices, (2) to assess the reliability and validity of the measurement model. Hence, for measuring the unidimensionality, reliability and validity of the measures, the researcher in this research work has applied the measurement model, which has been described below.

### 4.9.2 Reliability

Reliability has already been discussed and checked in the section 4.4.2. The result of reliability as desired i.e. above 0.7.

### 4.9.3 Validity

As suggested by Sekaran (2000), validity is associated with the accuracy of items. As stated by Neuman (2003), validity is higher, when the items and the latent variables show the good model fit. Convergent validity and discriminant validity are the two types of validity, which helps in the analysis of Construct validity, which are described below.

#### 4.9.3.1 Convergent Validity

According to Hair (2006), for checking the convergent validity of each variable (represented in Table 4.29), three estimations are generally used, these are factor “Average Variance Extracted (AVE), loadings of factors, and construct reliability (CR) estimation”. In addition to this, Hair et al. (2006) also recommended that for assessing the convergent validity, the minimum cut off criteria as follows:

- Ideal standardized loading of each item should be either 0.7 or higher,
- The Average Variance Extracted estimate should be more than 0.5, and
- Reliability i.e. Cronbach alpha estimates should be greater than 0.7.

**Table 4.29: Indices of Convergent Validity for the Constructs**

Factor Name	Cronbach Alpha Coefficient	Average Variance Explained
Green Recruitment and Selection	0.928	0.584
Green Training and Development	0.880	0.505
Green Reward Management	0.866	0.565
Green Employee Involvement	0.869	0.605
Employee Motivation	0.852	0.532
Job Satisfaction	0.916	0.616
Organisational Commitment	0.853	0.518

#### 4.9.3.2 Discriminant Validity

Hair (2006) suggested the method to assess the discriminant validity (represented in Table 4.30), in this AVE for every variable is equated with the matching (SIC) squared inter-construct correlations, and calculated value of Average Variance Extracted constantly should be greater than the estimate of SIC. This specifies the validation for discriminant validity of each variable.

In this study, the researcher has used both Convergent Validity and Discriminant Validity to evaluate the Construct Validity of each variable.

**Table 4.30: Indices of Discriminant Validity for the Constructs**

Factor Name	Average Variance Explained	Maximum Shared Variance
Green Recruitment and Selection	0.584	0.028
Green Training and Development	0.505	0.352
Green Reward Management	0.565	0.511
Green Employee Involvement	0.605	0.506
Employee Motivation	0.532	0.511
Job Satisfaction	0.616	0.506
Organisational Commitment	0.518	0.208

Table 4.30 encapsulates the reliability and validity values of all the constructs, explicitly Green Recruitment and Selection, Green Training and Development, Green Reward Management, Green Employee Involvement, Employee Motivation, Job Satisfaction, Organisational Commitment. The Cronbach's Alpha values for all the constructs were higher than the mandatory threshold. Average Variance Explained also surpassed the needed threshold of 0.5. This exhibits that all indicators successfully determine the construct they belong to. Moreover, the MSV also was lower than AVE which was an adequate indication to validate that the statements vary from each other.

#### 4.9.4 Goodness of Fit Indices

Hair (1998), suggested that there are three kinds of fit measure indices used in SEM: "incremental fit indices, parsimonious fit indices, and absolute fit indices". As stated by Hair (1998), "the absolute fit indices are used to measure the ability of the overall model fit and these indices incorporate the likelihood ratio statistic chi-square ( $\chi^2$ ), in connotation with the root mean square error of approximation (RMSEA), and the goodness of fit index (GFI)." According to Hair (1998) and Hair (2006) to contrast the proposed model with the baseline model, incremental fit indexes were used and "the incremental fit indices comprised of comparative fit index (CFI) and normed fit index (NFI)". Particulars of all these fit indices and their suggested levels are shown in the Table 4.31.

**Table 4.31: Statistics of Goodness of Fit used in SEM**

Model Fix Index	Recommended Cut-off Value
P Value <0.05	P <0.05
CMIN/df	$1 < \text{CMIN}/df < 4$ (HU and Bentler, 1999)
Comparative Fix Index (CFI)	Values greater than 0.9 (Bentler and Bonnet, 1980)
Goodness Fit Index (GFI)	Values greater than 0.9 (Bryne (2001); Hair et.al. (2006))
Root Mean Square Error of Approximation (RMSEA)	Values lower than 0.08 (MacCallum, Browne, and Sugawara, 1996)

#### 4.10 Model Estimates

To assess the measurement model, there are also other standardized estimates other than GOF indices, such as, standardized regression weight i.e. factor loadings, and critical ratio (Cr) approximations standards. The cut-off point, as suggested by many academicians, was used in this research work. As suggested by Holmes-Smith (2002), the value of each loadings of the factors should be at least 0.7; though, a value more than 0.5 is also tolerable (Churchill, 1979) and the values of CR should not be less than 1.96 (Byrne, 2001; Hair, 1998).

As described earlier, measurement model was used in this research work to describe the relationships among the various observed variables i.e. indicator variables and unobserved variables i.e. latent variables. It assisted in determining and affirming which item is related to the each of its corresponding fundamental variable i.e. the latent variable. Hence, CFA is also called as measurement model, and according to Kline, (1998) and Hair, (1998), it was executed in order to classify and validate the outline, through this all, the measuring items were loaded onto its own specific variable. Measurement model was projected by using AMOS software, as suggested by many researchers (Hair, 1998; Tabachnick and Fidell, 2001). There were many reasons for choosing this procedure of estimation as discussed below:-

- Firstly, CFA was suggested, if the sample size is small and in case the research model is not meeting the condition of having minimum 5 items of measurement for each variable (Anderson and Gerbing, 1988; Hair, 1998) as some of the constructs in this research work has also used less than 5 measurement items, So CFA was applied in this study as well.
- Secondly, in this research work, the researcher has used a five point Likert scale. As suggested by many researchers, this Maximum Likelihood Estimation (MLE) technique is impartial contrasted with other estimation techniques under adequate defilements of normal data (Bollen, 1989; Bryne, 2001; Kline, 2005).
- At last, while using the SEM analysis technique, MLE technique is the most commonly used estimator (Tabachnick and Fidell, 2001; Kline, 1998) on the

grounds, that this technique minimizes the difference between observed matrices and covariance; as an outcome and it enhances the assessments of various parameters (Hair, 2006).

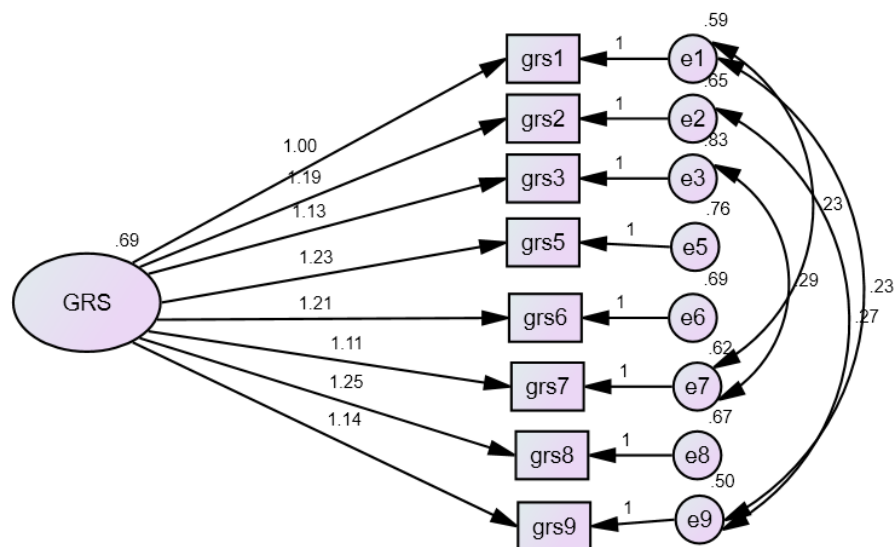
Consequently, in this research work, MLE method was used while running the measurement model, as suggested by various investigators (Kline, 2005; Anderson and Gerbing, 1988; Hair, 1998).

#### 4.10.1 Individual Construct SEM Models – Measurement Models

In order to verify the various variables that were identified during EFA, Confirmatory Factor Analysis (CFA) was conducted as a next step. Further, to assess the whole model fit, the model fitness of individual factors was assessed through a zero order CFA, and it was constructed for all the latent variables, as discussed below:-

##### Green Recruitment and Selection

Zero Order CFA of Green Recruitment and Selection and its Measured Variables is shown in Figure 4.8 below.



**Figure 4.8: “Zero Order CFA of Green Recruitment and Selection and its Measured Variables”**



The terminology used in this zero-order model is illustrated in Table 4.32 of “Green Recruitment and Selection (GRS)” and its measured variables.

**Table 4.32: Terminology Referred for GRS**

Code	Latent Variable	Observed Variable
GRS	Green Recruitment and Selection	
GRS1		My company indicates about organization’s environmental performance (past and current) when communicating recruitment messages.
GRS2		My company includes environmental criteria in the recruitment messages.
GRS3		My company communicates the employer’s concern about greening through recruitment efforts.
GRS5		My company reflects environmental policy and strategies of the organization in its recruitment policy.
GRS6		My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.
GRS7		My company considers candidates ‘environmental concern and interest as selection criteria.
GRS8		While interviewing the candidate my company asks Environment-related questions.
GRS9		Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies.

Green Recruitment and Selection (GRS) is the latent construct having eight measured factors as shown in Figure 4.8, Variable loadings, or standardized estimate, represents the extent to which each of the items is associated with its latent construct. Since the item was unable to explain the latent variable entirely, so an error term was also added to its respected measured item.

The Unstandardized Regression Coefficient (as Shown in Table 4.26) denotes “the extent by which the dependent variable changes, if the investigator changes the independent variable by one unit, by keeping the other independent variables constant.” Figure 4.1 also explains the error variance. Error variance represents the “extent of the amount by which variance could not be explained by the observed variable.” For e.g., the result of the Zero Order CFA suggests that  $e_9$  is 0.50, which means; in predicting the Green Recruitment and Selection, 50% of the variance is unexplained by GRS9.

Lower Variance indicates lower error, so it is a good indication. Table 4.33 also shows that the value of  $R^2$  value is 0.69, and it reflects that, in the independent variable, 69% of the variance is explicated by all the independent constructs taken together.

Moreover, the four curved arrows represent the covariance or correlations between the pairs. Covariance is defined as “a measure of how much two random variables vary together.” It is more or less same as the variance, but the difference is, variance explains the variation of single variable, whereas, covariance explains the variation of two variables together.

**Table 4.33: Unstandardized Regression Coefficients of Green Recruitment and Selection**

Code	Unstandardized Regression Coefficients
	$R^2 = 0.69$
GRS1	1.00
GRS2	1.19
GRS3	1.13
GRS5	1.23
GRS6	1.21
GRS7	1.11
GRS8	1.25
GRS9	1.14

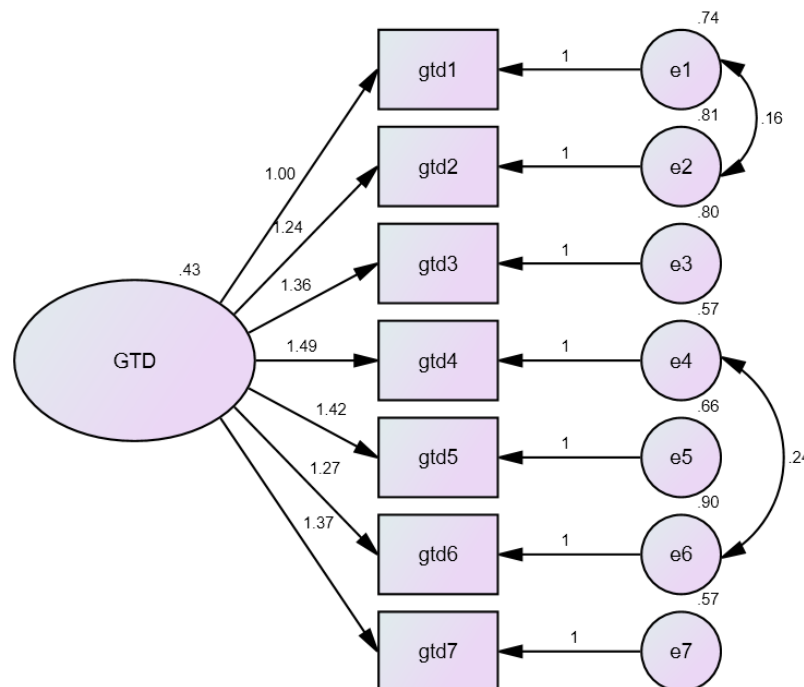
**Table 4.34: Standardized Regression Weights and Model Fit Indices of Green Recruitment and Selection**

			Estimate	Model Fit Indicator	
GRS1	<---	GRS	.779	CMIN/DF	4.140
GRS2	<---	GRS	.765	CFI	.971
GRS3	<---	GRS	.724	GFI	.950
GRS5	<---	GRS	.745	RMSEA	.102
GRS6	<---	GRS	.772	AVE	0.584
GRS7	<---	GRS	.797	MSV	0.028
GRS8	<---	GRS	.764		
GRS9	<---	GRS	.784		

The Beta Value or Standardized Regression Weight is defined as “a measure of how strongly each predictor (independent) variable influences the criterion (dependent) variable.” The Standard Deviation was used to measure the value of beta. As shown in Table 4.34, GRS7 and GRS9 have factor loadings of 0.797 and 0.784 respectively; this indicates that these two independent variables are the best indicators of Green Recruitment and Selection. The model fit indices illustrated that, the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Green Recruitment and Selection.

### Green Training and Development

Zero Order CFA of Green Training and Development and its Measured Variables is shown in Figure 4.9 below.



**Figure 4.9: “Zero Order CFA of Green Training and Development and its Measured Variables”**

The terminology used in this Zero Order model is illustrated in Table 4.35 of “Green Training and Development (GTD)” and its measured variables.

**Table 4.35: Terminology Referred for GTD**

Code	Latent Variable	Observed Variable
GTD	Green Training and Development	
GTD1		My company provides environmental training to us to develop required skills and knowledge.
GTD2		My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).
GTD3		My company provides environmental education to the workforce.
GTD4		My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).
GTD5		My Company identifies the environmental training needs of employees in order to make them more environmental concerned.
GTD6		We get proper training on environmental awareness to create “environmental awareness” among the workforce.
GTD7		Everybody in this facility get the opportunities to get training on environmental management aspects.

Green Training and Development is the latent construct, having seven measured factors as shown in Figure 4.9. The result of the Zero order CFA suggests that  $e_7$  is 0.57, which means in predicting the Green Training and Development, 57% of the variance is unexplained by GTD7. The Figure 4.9 also shows that the value of  $R^2$  value is 0.43, and it reflects that in the independent variable, 43% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.36).

**Table 4.36: Unstandardized Regression Coefficients of Green Training and Development**

Code	Unstandardized Regression Coefficients
	$R^2 = 0.43$
GTD1	1.00
GTD2	1.24
GTD3	1.36
GTD4	1.49
GTD5	1.42
GTD6	1.27
GTD7	1.37

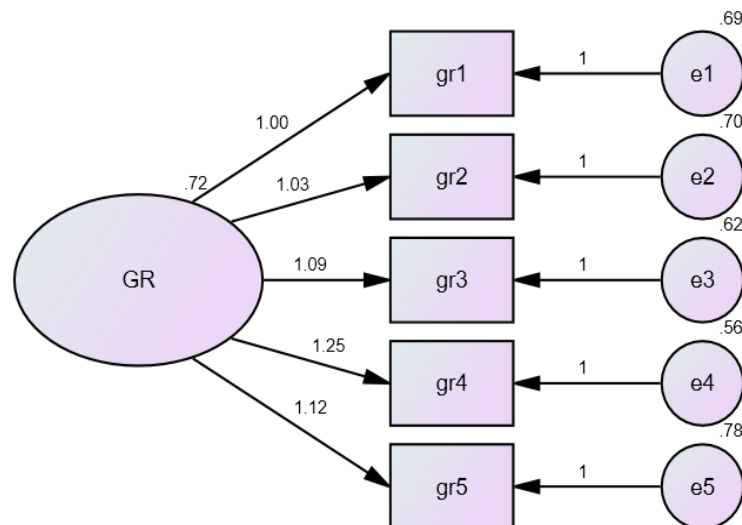
**Table 4.37: Standardized Regression Weights and Model Fit Indices of Green Training and Development**

			Estimate	Model Fit Indicator	
GTD1	<---	GTD	.610	CMIN/DF	3.377
GTD2	<---	GTD	.670	CFI	.970
GTD3	<---	GTD	.706	GFI	.964
GTD4	<---	GTD	.826	RMSEA	.089
GTD5	<---	GTD	.735	AVE	.505
GTD6	<---	GTD	.712	MSV	.352
GTD7	<---	GTD	.748		

As shown in Table 4.37, GTD4 and GTD7 have factor loadings of 0.826 and 0.748 respectively; this indicates that these two independent variables are the best indicators of Green Training and Development. The model fit indices illustrated that, the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Green Training and Development.

### Green Reward Management

Zero Order CFA of Green Reward Management and its Measured Variables is shown in Figure 4.10 below.

**Figure 4.10: “Zero Order CFA of Green Reward Management and its Measured Variables”**

The terminology used in this zero-order model is illustrated in Table 4.38 of “Green Reward Management (GR)” and its measured variables.

**Table 4.38: Terminology Referred for GR**

Code	Latent Variable	Observed Variable
GR	Green Reward Management	
GR1		We are rewarded financially or non- financially for good environmental performance.
GR2		We are receiving Team excellence awards for better environmental performance.
GR3		My company has introduced rewards for innovative environmental performance or initiative.
GR4		My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).
GR5		We are rewarded for green skills acquisition.

Green Reward Management is the latent construct having five measured factors as shown in Figure 4.10. The result of the Zero order CFA suggests that  $e_4$  is 0.56, which means in predicting the Green Reward Management, 56% of the variance is unexplained by GR4. The Figure 4.10 also shows that the value of  $R^2$  value is 0.72, and it reflects that in the independent variable, 72% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.39).

**Table 4.39: Unstandardized Regression Coefficients of Green Reward Management**

Code	Unstandardized Regression Coefficients
	$R^2 = 0.72$
GR1	1.00
GR2	1.03
GR3	1.09
GR4	1.25
GR5	1.12

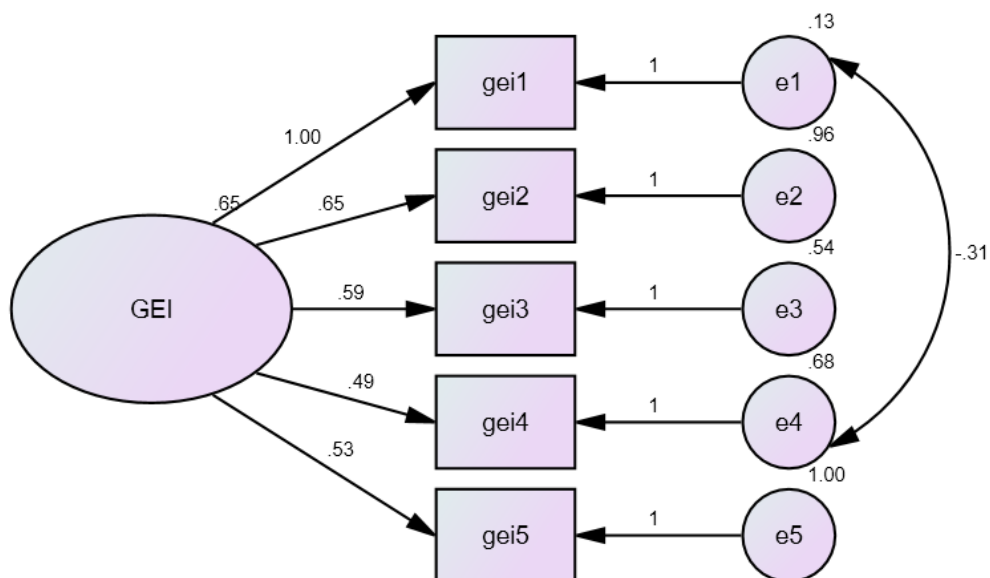
**Table 4.40: Standardized Regression Weights and Model Fit Indices of Green Reward Management**

			Estimate	Model Fit Indicator	
GR1	<---	GR	.716	CMIN/DF	2.998
GR2	<---	GR	.725	CFI	.985
GR3	<---	GR	.763	GFI	.981
GR4	<---	GR	.817	RMSEA	0.082
GR5	<---	GR	.734	AVE	.565
				MSV	.511

As shown in Table 4.40; GR4 and GR3 have factor loadings of 0.817 and 0.763 respectively; this indicates that these two independent variables are the best indicators of Green Reward Management. The model fit indices illustrated that the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Green Reward Management.

### Green Employee Involvement

Zero Order CFA of Green Employee Involvement (GEI) and its Measured Variables is shown in Figure 4.11 below.

**Figure 4.11: “Zero Order CFA of Green Employee Involvement and its Measured Variables”**

The terminology used in this zero-order model is illustrated in Table 4.41 of Green Employee Involvement and its measured variables.

**Table 4.41: Terminology Referred for GEI**

Code	Latent Variable	Observed Variable
GEI	Green Employee Involvement	
GEI1		We are given equal opportunities to involve and participate in green suggestion schemes.
GEI2		My company provides training to the union representatives in environmental management.
GEI3		We have a system of joint consultations in solving environmental issues of the organization.
GEI4		My company recognizes union as a key stakeholder in environmental management.
GEI5		My company provides opportunities to the unions to negotiate with management about green workplace agreement.

Green Employee Involvement is the latent construct having five measured factors as shown in Figure 4.11. The result of the Zero order CFA suggests that  $e_1$  is 0.13, which means in predicting the Green Employee Involvement, 13% of the variance is unexplained by GEI1. The Figure 4.11 also shows that the value of  $R^2$  value is .65, and it reflects that in the independent variable, 65% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.42).

**Table 4.42: Unstandardized Regression Coefficients of Green Employee Involvement**

Code	Unstandardized Regression Coefficients
	$R^2 = 0.65$
GEI1	1.00
GEI2	.65
GEI3	.59
GEI4	.49
GEI5	.53



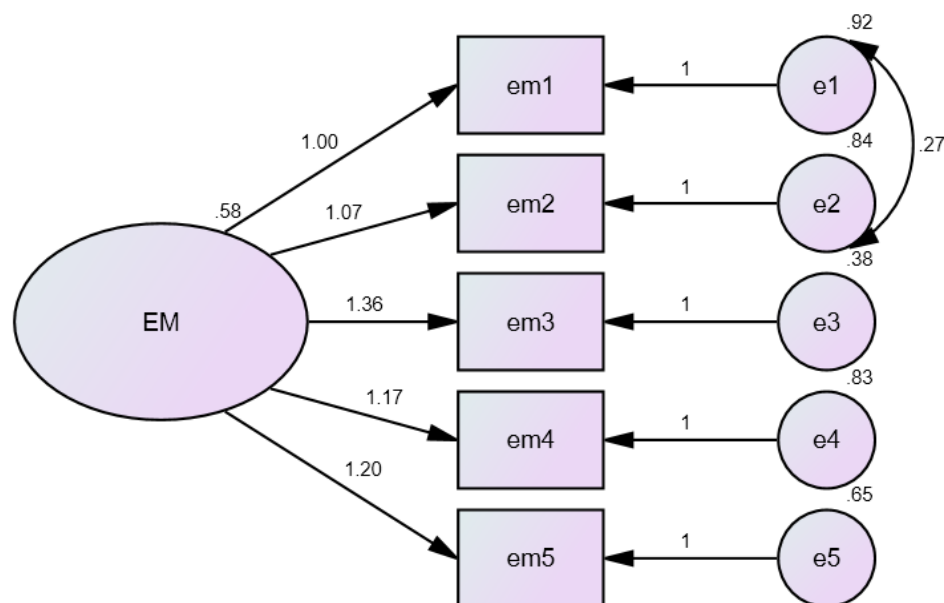
**Table 4.43: Standardized Regression Weights and Model Fit Indices of Green Employee Involvement**

			Estimate	Model Fit Indicator	
GEI1	<---	GEI	0.977	CMIN/DF	1.298
GEI2	<---	GEI	0.736	CFI	.998
GEI3	<---	GEI	0.792	GFI	.993
GEI4	<---	GEI	0.695	RMSEA	0.032
GEI5	<---	GEI	0.650	AVE	0.605
				MSV	.506

As shown in Table 4.43; GEI1 and GEI3 have factor loadings of 0.977 and 0.792 respectively; this indicates that these two independent variables are the best indicators of Green Employee Involvement. The model fit indices illustrated that the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Green Employee Involvement.

### Employee Motivation

Zero Order CFA of "Employee Motivation (EM)" and its Measured Variables is shown in Figure 4.12 below.

**Figure 4.12: "Zero Order CFA of Employee Motivation and its Measured Variables"**

The terminology used in this zero-order model is illustrated in Table 4.44 of Employee Motivation and its measured variables.

**Table 4.44: Terminology Referred for EM**

Code	Latent Variable	Observed Variable
	Employee Motivation	
EM1		Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)
EM2		Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg. turn off the Air- conditioner, lights if you do not need)
EM3		Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)
EM4		The employee voluntarily recycles even when no one is watching.
EM5		The employee promotes environment protection in the workplace.

Employee Motivation is the latent construct having five measured factors as shown in Figure 4.12. The result of the Zero order CFA suggests that  $e_3$  is 0.38, which means in predicting the Employee Motivation, 38% of the variance is unexplained by EM3. Figure 4.12 also shows that the value of  $R^2$  value is .58, and it reflects that in the independent variable, 58% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.45).

**Table 4.45: Unstandardized Regression Coefficients of Employee Motivation**

Code	Unstandardized Regression Coefficients
	$R^2 = 0.58$
EM1	1.00
EM2	1.07
EM3	1.36
EM4	1.17
EM5	1.20

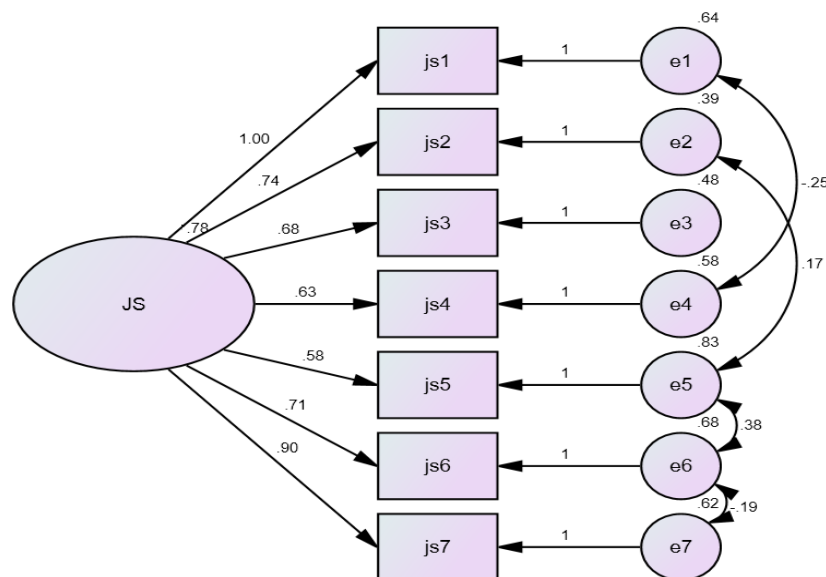
**Table 4.46: Standardized Regression Weights and Model Fit Indices of Employee Motivation**

			Estimate	Model Fit Indicator	
EM1	<---	EM	.624	CMIN/DF	1.964
EM2	<---	EM	.667	CFI	.994
EM3	<---	EM	.861	GFI	.990
EM4	<---	EM	.699	RMSEA	.057
EM5	<---	EM	.750	AVE	.532
				MSV	.511

As shown in Table 4.46; EM3 and EM5 have factor loadings of 0.861 and 0.750 respectively; this indicates that these two independent variables are the best indicators of Employee Motivation. The model fit indices illustrated that the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Employee Motivation.

### Job Satisfaction

Zero Order CFA of Job Satisfaction and its Measured Variables is shown in Figure 4.13 below.

**Figure 4.13: “Zero Order CFA of Job Satisfaction and its Measured Variables”**

The terminology used in this zero-order model is illustrated in Table 4.47 of “Job Satisfaction (JS)” and its measured variables.

**Table 4.47: Terminology Referred for JS**

Code	Latent Variable	Observed Variable
JS	Job Satisfaction	
JS1		I plan to stay in this company to develop my career for a long time.
JS2		I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.
JS3		My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.
JS4		My company provides training for green initiatives and therefore increase my Job Satisfaction.
JS5		My company recognizes the innovations and suggestions for green practices which leads to Job Satisfaction
JS6		Job satisfaction is derived due to recognition of green practices by external agencies (Government)
JS7		I often think of quitting my present job.

Job Satisfaction is the latent construct having five measured factors as shown in Figure 4.13. The result of the Zero order CFA suggests that  $e_2$  is 0.39, which means in predicting the Job Satisfaction, 39% of the variance is unexplained by JS2. The Figure 4.13 also shows that the value of  $R^2$  value is 0.78, and it reflects that in the independent variable, 78% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.48).

**Table 4.48: Unstandardized Regression Coefficients of Job Satisfaction**

Code	Unstandardized Regression Coefficients
	$R^2 = .78$
JS1	1.00
JS2	.78
JS3	.64
JS4	.63
JS5	.58
JS6	.71
JS7	.90

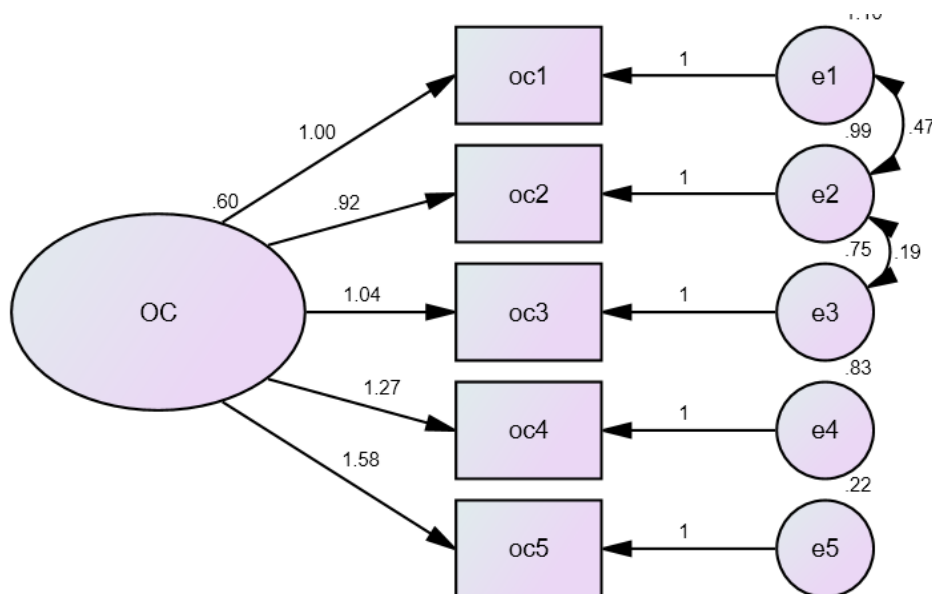
**Table 4.49: Standardized Regression Weights and Model Fit Indices of Job Satisfaction**

			Estimate	Model Fit Indicator	
JS1	<---	JS	.857	CMIN/DF	4.359
JS2	<---	JS	.847	CFI	.977
JS3	<---	JS	.797	GFI	.962
JS4	<---	JS	.742	RMSEA	.106
JS5	<---	JS	.647	AVE	.616
JS6	<---	JS	.754	MSV	.506
JS7	<---	JS	.836		

As shown in Table 4.49; JS1 and JS2 have factor loadings of 0.857 and 0.847 respectively; this indicates that these two independent variables are the best indicators of Job Satisfaction. The model fit indices illustrated that the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Job Satisfaction.

### Organisational Commitment

Zero Order CFA of Organisational Commitment and its Measured Variables is shown in Figure 4.14 below

**Figure 4.14: “Zero Order CFA of Organisational Commitment and its Measured Variables”**

The terminology used in this zero-order model is illustrated in Table 4.50 of “Organisational Commitment (OC)” and its measured variables.

**Table 4.50: Terminology Referred for OC**

Code	Latent Variable	Observed Variable
OC	Organisational Commitment	
OC1		The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.
OC2		The employee follows the Company’s policy of disposing waste water to avoid polluting environment.
OC3		The employee follows the Company’s policy of disposing chemicals to avoid polluting environment.
OC4		The employee’s behavior of saving paper and energy when operating the machine is beyond the norm.
OC5		The employees follows the Company’s recycling policy.

Organisational Commitment is the latent construct having seven measured factors as shown in Figure 4.14. The result of the Zero order CFA suggests that  $e_5$  is 0.22, which means in predicting the Organisational Commitment, 22% of the variance is unexplained by OC5. Figure 4.14 also shows that the value of  $R^2$  value is 0.60, and it reflects that in the independent variable, 60% of the variance is explicated by all the independent constructs taken together (as also depicted in Table 4.51).

**Table 4.51: Unstandardized Regression Coefficients of Organisational Commitment**

Code	Unstandardized Regression Coefficients
	$R^2 = .60$
OC1	1.00
OC2	.92
OC3	1.04
OC4	1.27
OC5	1.58

**Table 4.52: Standardized Regression Weights and Model Fit Indices of Organisational Commitment**

			Estimate	Model Fit Indicator	
OC1	<---	OC	.595	CMIN/DF	0.374
OC2	<---	OC	.586	CFI	1.000
OC3	<---	OC	.681	GFI	.999
OC4	<---	OC	.733	RMSEA	.000
OC5	<---	OC	.933	AVE	.518
				MSV	.208

As shown in Table 4.52; OC5 and OC4, have factor loadings of 0.933 and 0.733 respectively; this indicates that these two independent variables are the best indicators of Organisational Commitment. The model fit indices illustrated that the model was a good fit. All other model fit indices were at acceptable levels that represented a good fit for Organisational Commitment.

#### 4.10.2 First Order Model

The fitness of the model was tested using the measurement and structural model test. Confirmatory factor analysis (CFA) was carried out with the intention to assert a more meticulous elucidation of Green HRM Practices. To estimate the goodness-of-fit of the model a number of measures of indices were employed as suggested by numerous eminent researchers like Hair et al. (1998). All item parcels loaded significantly onto their respective factors. All measures accomplished the minimum suggested benchmark value requirements (refer to Table no. 4.53). Consequently, CFA model was understood to be a good fit model.

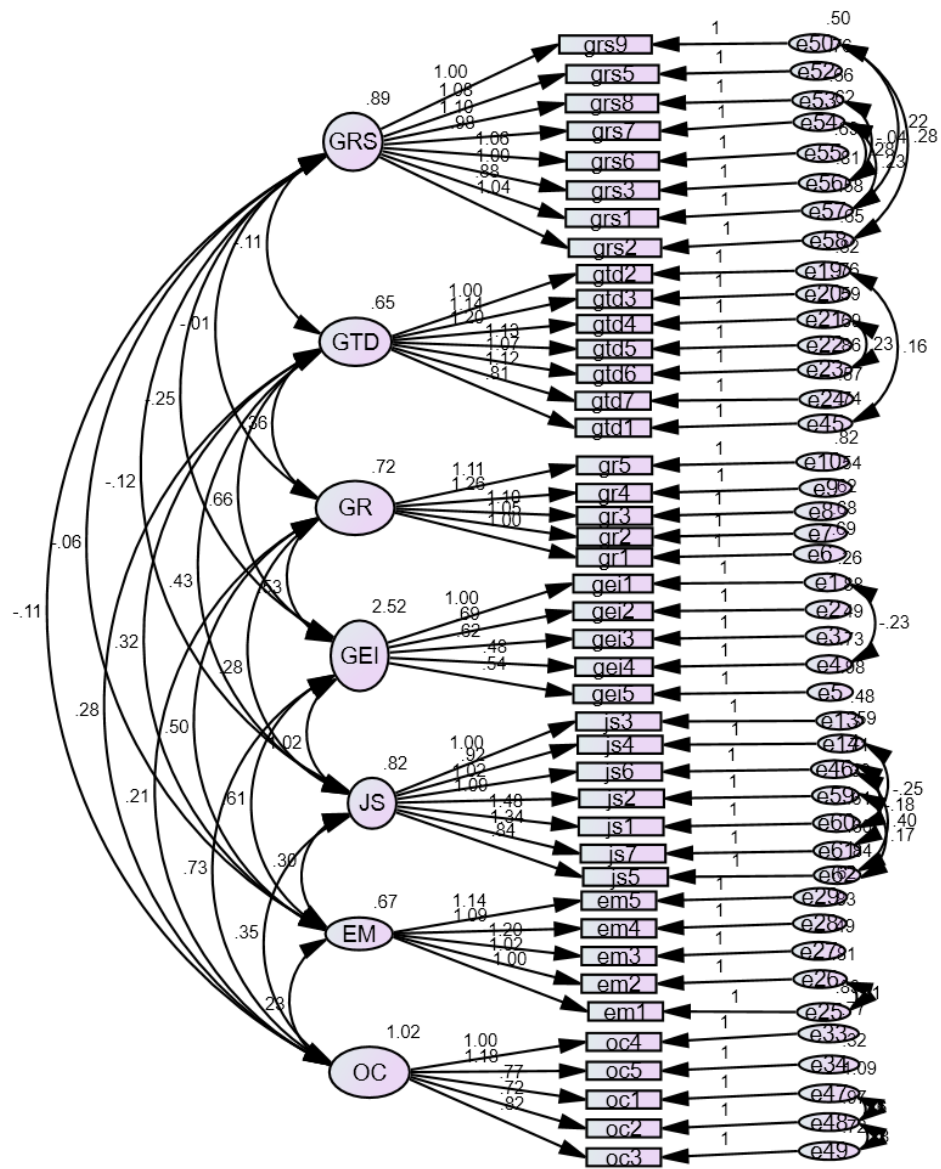


Figure 4.15: First Order Model

Table 4.53: Model Fit Indices

	CFI	GFI	RMSEA	CMIN/df
First Order Model	.900	.903	.059	2.044

The value of GFI in First Order model as shown in Figure 4.15, was above 0.90, the required cut-off criterion. The CFI was also above the accepted guideline of 0.90. Additionally, the RMSEA was below the 0.08 guideline of acceptability (as depicted in



Table 4.46). Therefore, the model was determined to be acceptable enough to proceed for further analysis.

#### **4.11 Evaluation of Structural Model and Hypothesis Testing**

In this research work, the researcher has used a two-step method in analysing the research model via SEM. Initially, measurement model estimation (via CFA) was performed by investigating the unidimensionality, reliability, and validity of all the latent variables. Henceforth, Kline (2005) and Hair (2006) suggested to test the postulated association amongst all the latent variables in the proposed model via the structural model. The hypothesized model, i.e. structural model showed the associations between the latent variables. According to Byrne (2001), it aimed at hypothesizing which variables directly or indirectly impact the values of other variables in the proposed model for research.

The structural model was verified by using the Path analysis. It was initiated by constructing a path diagram on the AMOS screen graphical program. As discussed earlier, the observed variables (multiple items are summed and averaged into scales to measure variables) were connected to other variables, representing the hypothesized linkage in the conceptual model on the AMOS screen. The observed variables were drawn in rectangles and the resulting path model is drawn on AMOS screen (Figure 4.9). Model – fitting analysis was then computed to determine the path coefficients. Three dependent variables in the path analysis model “(i.e. Employee Motivation, Job Satisfaction and Organisational Commitment)” were being explained by four independent constructs “(i.e. Green Recruitment and Selection, Green Training and Development, Green Reward Management, Green Employee Involvement)”. The variables being explained in the model are called as endogenous variables.

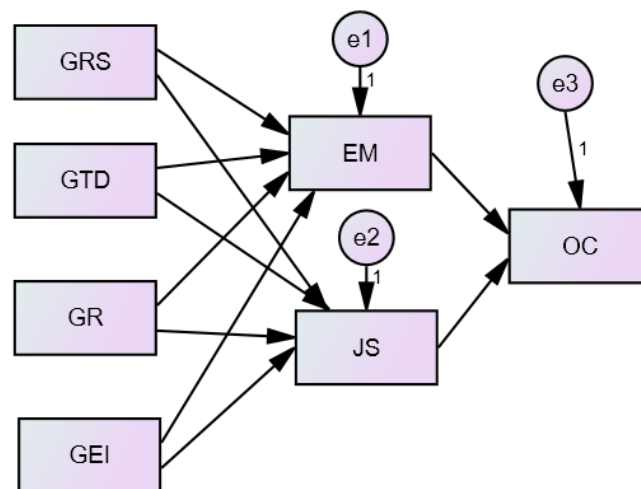
Path coefficients were the standardized regression coefficients (Beta weights), derived from the analysis. In Figure 4.16, the error terms designated by the circles e2 and e3 represented other influences which may affect the endogenous variables besides those specified in the model. In Figure 4.16, the error terms already have been assigned

values of 1, as the unstandardized path coefficients in order to provide it with a scale of measurement.

After conducting the path analysis, the researcher examined the selected overall fit measures as discussed in the preceding section how the path model (as shown in Figure 4.16). fits the data. Analysis of a path model yielded a reasonable model fit to the collected data and it is depicted in Table 4.54.

**Table 4.54: Path-Analysis Model Fit Indices**

CFI	GFI	RMSEA	CMIN/df
1	1	0.00	.091



**Figure 4.16: Path-Analysis Model**

The value of GFI was above 0.90, the required cut-off criterion. The CFI was also above the accepted guideline of 0.90. Additionally, the RMSEA was below the 0.08 guideline of acceptability. Therefore, the model was determined to be acceptable enough to proceed with further analysis.

#### 4.11.1 Summary of Hypotheses Testing by doing Path Analysis

The establishment of an identified path model allowed the researcher to test the hypothesized relationship between the factors as outlined in the proposed research model.

**H1** stated that Green Recruitment and Selection has a positive relationship with Job Satisfaction. As indicated in Table 4.48, the effect of Green Recruitment and Selection on Job Satisfaction is in the hypothesized direction but it was not statistically significant (Standardized Beta = 0.008;  $p > 0.01$ ). Accordingly, **this hypothesis was not supported.**

**Table 4.55: Standardized Direct Effect**

Path			Standardized Direct Effect		
			Beta	p-Value	
EM	<---	GRS	-.037	.196	Not Significant
EM	<---	GTD	.043	.201	Not Significant
EM	<---	GR	.661	***	Significant
JS	<---	GEI	.322	***	Significant
EM	<---	GEI	.090	***	Significant
JS	<---	GR	-.066	.094	Not Significant
JS	<---	GTD	.422	***	Significant
JS	<---	GRS	.008	.828	Not Significant
OC	<---	EM	.210	.003	Significant
OC	<---	JS	.366	***	Significant

**H2** stated that Green Training and Development has a positive relationship with Job Satisfaction. As indicated in Table 4.55, the effect of Green Training and Development on Job Satisfaction is in the hypothesized direction, and it was statistically significant (Standardized Beta = 0.422;  $p < 0.01$ ). Accordingly, **this hypothesis was supported.**

**H3** stated that Green Reward Management has a positive relationship with Job Satisfaction. As indicated in Table 4.55, the influence of Green Reward Management on Job Satisfaction is not in the hypothesized direction, and it was statistically not significant (Standardized Beta = -0.066;  $p > 0.01$ ). Accordingly, **this hypothesis was not supported.**

**H4** stated that Green Employee Involvement has a Positive relationship with Job Satisfaction. As indicated in Table 4.55, the effect of Green Employee Involvement on

Job Satisfaction is in the hypothesized direction, and it was statistically significant (Standardized Beta = 0.322;  $p < 0.01$ ). Accordingly, **this hypothesis was supported.**

**H5** stated that Green Recruitment and Selection has a positive relationship with Employee Motivation. As indicated in Table 4.55, the effect of Green Recruitment and Selection on Employee Motivation is not in the hypothesized direction, and it was not statistically significant (Standardized Beta = -0.037;  $p > 0.01$ ). Accordingly, **this hypothesis was not supported.**

**H6** stated that Green Training and Development has a positive relationship with Employee Motivation. As indicated in Table 4.55, the effect of Green Training and Development on Employee Motivation is in the hypothesized direction but it was not statistically significant (Standardized Beta = 0.043;  $p > 0.01$ ). Accordingly, **this hypothesis was not supported.**

**H7** stated that Green Reward Management has a positive relationship with Employee Motivation. As indicated in Table 4.55, the effect of Green Reward Management on Employee Motivation is in the hypothesized direction, and it was statistically significant (Standardized Beta = 0.661;  $p < 0.01$ ). Accordingly, **this hypothesis was supported.**

**H8** stated that Green Employee Involvement has a Positive relationship with Employee Motivation. As indicated in Table 4.55, the effect of Green Employee Involvement on Employee Motivation is in the hypothesized direction, and it was statistically significant (Standardized Beta = 0.090;  $p < 0.001$ ). Accordingly, **this hypothesis was supported.**

**H9** stated Employee Motivation has a Positive relationship with Organisational Commitment. As indicated in step 3 of Table 4.55, the effect of Employee Motivation on Organisational Commitment is in the hypothesized direction, and it was statistically significant (Standardized Beta = 0.210;  $p < 0.001$ ). Accordingly, **this hypothesis was supported.**

**H10** stated that Job Satisfaction has a Positive relationship with Organisational Commitment. As indicated in step 3 of Table 4.55, the effect of Job Satisfaction on

Organisational Commitment is in the hypothesized direction, and it was statistically significant (Standardized Beta =0.366;  $p < 0.001$ ). Accordingly, **this hypothesis was supported.**

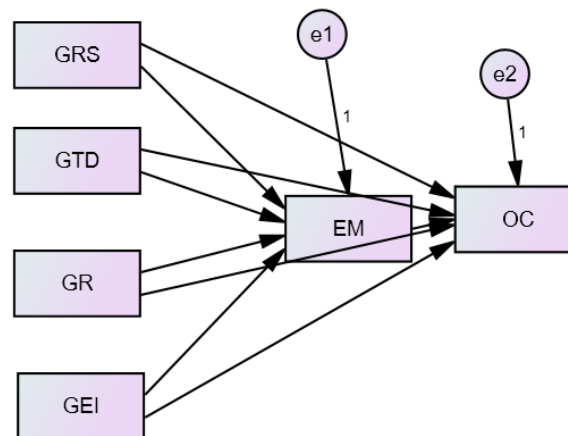
To test the mediating effect of Job Satisfaction and Employee Motivation, as proposed in H11 and H12, the researcher followed the procedure followed by **Baron and Kenny**. The researcher has illustrated that the mediator analysis test was done through current path analysis investigation. The researcher has also compared the direct effect model (D-E-M), when the path from Job Satisfaction and Employee Motivation to Organisational Commitment is constrained to zero (as shown in Figure 4.16 and Figure 4.17) with the free model when the mediating path from Job Satisfaction and Employee Motivation to Organisational Commitment is opened. For illustration, the D-E-M included the additional direct path from Green Recruitment and Selection to Organisational Commitment. Similarly, the additional direct path from Green Training and Development, Green Reward Management and Green Employee Involvement to Organisational Commitment was drawn in addition to the Mediating Paths from Job Satisfaction and Employee Motivation to Organisational Commitment. The comparison of the proposed model allowed the researcher to test, whether Job Satisfaction and Employee Motivation fully or partially mediated the influence of antecedent variables on Organisational Commitment. To satisfy the condition of full or partial Mediation, the effect of antecedent variables on Behaviour Intention should be significant in the constrained model and the previous significant effect should not be significantly reduced in the free model.

Initially, there was no significant relation observed between Green Recruitment and Selection, Green Reward Management and Organisational Commitment and significant relation between Green Training and Development, Green Employee Involvement and Organisational Commitment.

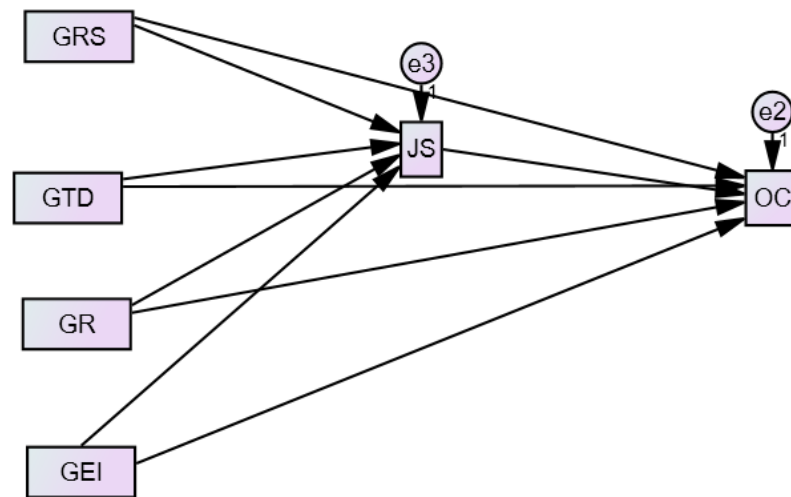
**Table 4.56: Regression Weights: (Group number 1 - Default Model) (Direct Effect)**

Step 1: Regression Weights: (Group number 1 - Default model)								
Direct effect								
				Estimate	S.E.	C.R.	P	
	OC	<---	GRS	-0.042	0.053	-0.797	0.425	Not Significant
	OC	<---	GTD	0.173	0.063	2.755	0.006	Significant
	OC	<---	GR	0.027	0.059	0.461	0.645	Not Significant
	OC	<---	GEI	0.244	0.03	8.017	***	Significant

After reviewing the conditions for mediation, the researcher has recommended that the mediating effects of Job Satisfaction and Employee Motivation were not present amongst all exogenous variables on Organisational Commitment. This indicates that there was no indirect relationship. This was checked through boot strapping too, which replicates the same results in the Table 4.56:

**Figure 4.17: Employee Management as Mediator****Table 4.57: Standardized Indirect Effect**

In Presence of EM			Standardized Indirect Effect		
			Beta	p-Value	
OC	<---	GEI	0.012	0.437	Not Significant
OC	<---	GR	0.044	0.476	Not Significant
OC	<---	GTD	0.003	0.343	Not Significant
OC	<---	GRS	-0.003	0.328	Not Significant



**Figure 4.18: Job Satisfaction as Mediator**

**Table 4.58: Standardized Indirect Effect**

In Presence of JS			Standardized Indirect Effect		
			Beta	p-Value	
OC	<---	GEI	0	0.729	Not Significant
OC	<---	GR	0.02	0.638	Not Significant
OC	<---	GTD	-0.003	0.419	Not Significant
OC	<---	GRS	0.015	0.643	Not Significant

To conclude, no mediation effect of Job Satisfaction and Employee Motivation was observed between Green Recruitment and Selection, Green Reward Management, Green Training and Development, Green Employee Involvement to Organisational Commitment.

H1: Green Recruitment and Selection has a positive relationship with Job Satisfaction. This Hypothesis is **not accepted**.

H2: Green Training and Development has a positive relationship with Job Satisfaction. This Hypothesis is **accepted**.

H3: Green Reward Management has a positive relationship with Job Satisfaction. This Hypothesis is **not accepted**.

H4: Green Employee Involvement has a Positive relationship with Job Satisfaction.

This Hypothesis is **accepted**.

H5: Green Recruitment and Selection has a positive relationship with Employee Motivation. This Hypothesis is **not accepted**.

H6: Green Training and Development has a positive relationship with Employee Motivation. This Hypothesis is **not accepted**.

H7: Green Reward Management has a positive relationship with Employee Motivation. This Hypothesis is **accepted**.

H8: Green Employee Involvement has a Positive relationship with Employee Motivation. This Hypothesis is **accepted**

H9: Employee Motivation has a Positive relationship with Organisational Commitment. This Hypothesis is **accepted**

H10: Job Satisfaction has a Positive relationship with Organisational Commitment. This Hypothesis is **accepted**

**Hypothesis for mediation:**

H11: Job Satisfaction Mediates

- a. The positive effect of Green Recruitment and Selection on Organisational Commitment. There is **no Mediating Effect** observed.
- b. The positive effect of Green Training and Development on Organisational Commitment. There is **no Mediating Effect** observed.
- c. The positive effect of Green Reward Management on Organisational Commitment. There is **no Mediating Effect** observed.
- d. The Positive effect of Green Employee Involvement on Organisational Commitment. There is **no Mediating Effect** observed.

H12: Employee Motivation Mediates

- e. The positive effect of Green Recruitment and Selection on Organisational Commitment. There is **no Mediating Effect** observed.



- f. The positive effect of Green Training and Development on Organisational Commitment. There is **no Mediating Effect** observed.
- g. The positive effect of Green Reward Management on Organisational Commitment. There is **no Mediating Effect** observed.
- h. The Positive effect of Green Employee Involvement on Organisational Commitment. There is **no Mediating Effect** observed.

This section covered the data analysis. The next chapter has been devoted to interpretation of findings, conclusions, limitations and suggestions.

## CHAPTER 5

### INTERPRETATION OF FINDINGS, CONCLUSIONS, LIMITATIONS AND SUGGESTIONS

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In view of the outcome of this research work, a detailed discussion of the theoretical and practical implication is represented in this chapter. Additionally, the researcher has also given some suggestions that can be adopted by the organizations. In this chapter, suggestions based on research work, limitations and further scope of research has been discussed.

#### 5.1 Interpretation of Findings of Main Variables of Study

For finalizing the scale of different variables, Factor analysis was used which is a technique of data reduction. From the analysis, 7 factors were finally extracted regarding Green HRM. These are: Green Recruitment and Selection, Green Training and Development, Green Reward Management, Green Employee Involvement, Employee Motivation, Job Satisfaction, Organisational Commitment. It has been found that the percentage of variance explained by factor one to seven is 13.713 for Green Recruitment and Selection, 9.674 for Green Training and Development, 7.915 for Green Reward Management, 7.906 Green Employee Involvement, 7.736 for Employee Motivation, 10.915 for Job Satisfaction, and 7.949 for Organisational Commitment. The empirical analysis of the data has validated several major findings as per the objectives. The key objectives of this study were, to identify the various Green HRM practices adopted by Indian firms, and to identify the relationship between Green HRM practices and Employee Motivation, Job Satisfaction and Organisational Commitment, and to analyse the suggested model. The details of the findings of the research work are discussed below.

##### 5.1.1 Green Recruitment and Selection and Job Satisfaction

The initial hypothesis formulated for this study was: **“H1: Green Recruitment and Selection has a positive relationship with Job Satisfaction.”** This hypothesis was **not Accepted.**

The results of this study indicate that Green Recruitment and Selection does not have positive relationship with Job Satisfaction. As per the result, including environmental criteria in Recruitment and Selection does not give Job Satisfaction to the employees of the organisation but employees feel satisfaction with the job if the company is giving them good environment, transparent reward system, timely promotions and security of their job in the future.

### **5.1.2 Green Training and Development and Job Satisfaction**

Second hypothesis was “**H2: Green Training and Development has a positive relationship with Job Satisfaction.**” This hypothesis was **Accepted.**

The result of the study indicates that Green Training and Development has a positive relationship with Job Satisfaction. This suggests that if company imparts environmental training to their employees to develop required skills and knowledge, employees will become more satisfied with their job. Environmental training practices include less paper work, reducing long distance travel and giving training on online interaction with the clients. North (1997) goes on to state that a core challenge for Personnel Managers is providing environmental education that will result in a change of attitude and behavior among managers and employees. Therefore, the researcher suggested that environmental training and education are vital, in order to provide knowledge, change attitudes and behaviors and acquire new skills. However, in order for this to be achieved, environmental training and education programmes need to be appropriately designed.

### **5.1.3 Green Reward Management and Job Satisfaction**

Third Hypothesis was “**H3: Green Reward Management has a positive relationship with Job Satisfaction.**” This hypothesis was **not Accepted.**

The result of this research indicates that Green Reward Management does not have a positive relationship with Job Satisfaction. Rewards are not directly effecting the Job Satisfaction in some organizations. Reward has an insignificant impact on Job Satisfaction. Reward system should be based on individual performance not in totality. It was observed that most of the companies are into green practices due to cost factor associated with waste

disposal, moral obligation to be more socially responsible, pressure from regulatory bodies and pressure from competitors. Hence rewards were performance based.

#### **5.1.4 Green Employee Involvement and Job Satisfaction**

Fourth Hypothesis was **“H4: Green Employee Involvement has a Positive relationship with Job Satisfaction.”** This hypothesis was **Accepted**.

The result of this research work indicates that Green Employee Involvement has a Positive relationship with Job Satisfaction. This suggests that involvement of employees in the decisions of the organizations will make them more satisfied with their job. By giving equal opportunities to the employees to involve and participate in green suggestion schemes make them more responsible to follow the green management practices. It was observed that respondents were of the view that for most businesses, sustainability plans now extend beyond daily operations. It affects everyone in business from CEO level to workers working at the shop floor level.

#### **5.1.5 Green Recruitment and Selection and Employee Motivation**

Fifth hypothesis was **“H5: Green Recruitment and Selection has a positive relationship with Employee Motivation.”** This hypothesis was **not Accepted**.

The result of this study also indicates that Green Recruitment and Selection does not have positive relationship with Employee Motivation. Employees will not be motivated if organizations follow green practices in framing recruitment and selection process. So organizations need not ask environment related questions to the prospective candidates. Employees are not in the favour that Company should select only those candidates who are sufficiently aware of greening to fill job vacancies, as employee might be a good performer in other areas.

#### **5.1.6 Green Training and Development and Employee Motivation**

Sixth hypothesis was **“H6: Green Training and Development has a positive relationship with Employee Motivation.”** This hypothesis was **not Accepted**.

The result of the study indicates that Green Training and Development does not have a positive relationship with Employee Motivation. This shows that employees are not

interested in environmental training and education, but employees want their training to be completely based on the skills and knowledge needed for good performance. Training and development based on the job skills will actually motivate them to perform better.

### **5.1.7 Green Reward Management and Employee Motivation**

Seventh hypothesis was “**H7: Green Reward Management has a positive relationship with Employee Motivation.**” This hypothesis was **Accepted.**

The results of the study indicate that Green Reward Management has a positive relationship with Employee Motivation. This means that employees have concern with rewards. Crosbie and Knight (1995) state that some companies have successfully rewarded extraordinary environmental performance, practices and ideas by including environmental criteria into salary reviews. It can be implemented in the form of monetary rewards (bonuses, cash premiums), non-monetary rewards (sabbaticals, leave, gifts) and recognition awards (awards, dinners, daily praise) (Bonnie F. Daily & Huang, 2001; Govindarajulu & Daily, 2004; Renwick, 2008). It can motivate and increase employee's commitment to be more environmentally responsible which can help both the company and its workers and environmental performance will be enhanced (Bonnie F Daily, 2011). It can reinforce empowerment and good decision making, improving corrective and preventive measures employees initiate (Bonnie F. Daily & Huang, 2001). In order to produce desirable behaviors in environmental management, companies require effective employment of both incentives and disincentives (Rees, 1996). For example, Xerox has awarded a number of environmental teams company-wide with team excellence awards, in recognition for developing environmentally-sound packaging, re-use of materials and packaging, and the marketing of recycled paper for Xerox copiers, (Bhushan, 1994). Xerox has also further developed an 'Earth Award' that recognises achievements in innovations of waste reduction, re-use and recycling.

### **5.1.8 Green Employee Involvement and Employee Motivation**

Eighth hypothesis was “**H8: Green Employee Involvement has a positive relationship with Employee Motivation.**” This hypothesis was **Accepted.**

The result of this research work indicates that Green Employee Involvement has a positive relationship with Employee Motivation. This suggests that involvement of employees in the organization motivates the employees. By giving equal opportunities to the employees to involve and participate in green suggestion schemes, motivates the employees to work better. According to Jabber and Abid (2015), wider employee participation rather than restricting involvement to managers and specialists is often seen as crucial to successful outcomes. When a firm gives them opportunity to get involved in eco-initiatives and make decisions then they become more motivated and satisfied with their jobs. The two gains seen from introducing environmental employee involvement are improvement in environmental and worker health and safety, and development of more knowledgeable employees and supervisors (Govindarajulu & Daily, 2004). Also it can have a strong effect on changing working routines, affecting behaviour and increasing environmental consciousness (Kaur, 2011). Once the employees are involved, they will be motivated to work in teams in order to achieve the team objectives (Bonnie F Daily et al., 2011).

#### **5.1.9 Employee Motivation and Organisational Commitment**

Ninth hypothesis was “**H9: Employee Motivation has a Positive relationship with Organisational Commitment.**” This hypothesis was **Accepted.**

The result of this study indicates that Employee Motivation has a Positive relationship with Organisational Commitment. This suggests that if employees are motivated in the organization then they will be more committed towards the organizations. Employees will follow the green practices and policies of the organizations on their own without any need of imposing the practices on them. (Daily & Huang, 2001) states that management clearly establishes its commitment to environmental improvement by forming environmental policy. It establishes an environmental vision and guide the company's efforts to achieve it (Wee & Quazi, 2005, Govindarajulu & Daily, 2004). With the top management support environmental strategies could be adopted that leads to low emissions, reduce wastes and environmentally responsible products that can lead to continual improvement in environmental performance.

### **5.1.10 Job Satisfaction and Organisational Commitment.**

Tenth hypothesis was “**H10: Job Satisfaction has a Positive relationship with Organisational Commitment.**” This hypothesis was **Accepted.**

The result of this study also indicates a positive relationship between Job Satisfaction and Organisational Commitment. This suggests that employees who are satisfied with their job will be more committed towards the organization. Employees will not think of quitting the job for a longer period and they will feel proud in working with such organisations. Many studies assert the high correlation between Job Satisfaction and Organisational Commitment (Mathieu, 1991, Yousef, 2002, Rayton, 2006, and Huang & Hsiao, 2007). Huang & Hsiao (2007) stated satisfaction is the precursor of commitment; it may benefit both changing human behavior outcome and increasing commitment. People will be more committed to their work if they felt satisfied and appreciated. Aamodt (2007) indicated that satisfied employees tend to be committed to an organization, and employees who are satisfied and committed are more likely to attend work, stay with an organization, arrive at work on time, perform well and engage in behavior helpful to the organization.

## **5.2 Conclusions**

Today, Organizations are trying to focus on profit maximization and environmental obligation at the same time. In today’s world organization that has more focus on environment has higher acceptance in society. Due to this rising awareness of the society about environment, organizations are being pushed to pay more attention on the environment. Now, it may seem that more investment on environmental issues will cause profit minimization. In that case, non-financial practice like green human resource management can be implemented in the organization. Financial help to a part of the total population of a country may get less focus than being green through Green HRM. Higher focus will create higher acceptance. Higher focus will facilitate an organization to maximize their profit in long run. In this way CSR can also be performed through Green HRM. So practicing Green HRM as a means of promoting CSR in this industry will have a positive impact over the industry which will facilitate them to achieve higher social acceptance as well as higher profit making in the long run.

1. In this empirical research work, the researcher has provided useful insights into the green practices adopted by organizations in the background of a developing economy like India where environmental concern is on rise.
2. Using confirmatory factor analysis, the study confirms seven major factors i.e. “a) Green Recruitment and Selection, b) Green Training and Development, c) Green Reward Management, d) Employee Involvement, e) Employee Motivation, f) Job Satisfaction, g) Organisational Commitment”, important for adoption of green practices by various organisations in India and it also establishes the structural relationship between these factors.
3. The insights from the study, can indeed be used to formulate various strategies especially for green services in various sectors in India. It would ultimately give rise to sustainable development and preservation of environment. Green HRM helps in the effective outcomes like they could get a first mover advantage, many organizations can also develop a competitive edge by creating a brand image as an environment conscious body.
4. In view of the optimistic response of various organizations towards adoption of green practices, the research work suggests implication for the marketers and policy makers for effective implementation of green programs in future which helps them to get subsidies from the government.
5. Previously, Armstrong (2014) has recognized that training is important in creating a strong culture based on values and mission statements. Thus, this HRM attribute can be supported and reinforced by Cook and Seith (1992) who state that training is a very crucial element in the success of environmental initiatives and North (1997) who state that training is definitely a core factor in developing human resources for the environment. In addition, Milliman and Clair, (1996); Beaumont et al, (1993); Barrett et al, (1996); and North, (1992, 1997), all argue the vital importance of training and development which must take place at all levels within the organization in order to embed an environmental consciousness and organizational environmental commitment.
6. Crosbie and Knight's, (1995) and Milliman and Clair's, (1994, 1996) statements support the key HRM attribute by stating that reward systems should include



environmental criteria. Reward systems should also be linked to the achievement of performance appraisal goals in order to motivate the employees of the organizations.

7. Schmidheiny (1992), argues that adopting environmentally responsible practices will probably involve major change in organizational values, practices and procedures, breaking embedded habits and practices and adopting new ways of thinking which will consider what is done, why and how.
8. Though the green movement and Green HR are still in the stages of infancy, growing awareness within organizations of the significance of green issues have compelled them to embrace environment-friendly HR practices with a specific focus on waste management, recycling, reducing the carbon footprint, and using and producing green products. Clearly, a majority of the employees feel strongly about the environment and, exhibit greater commitment and Job Satisfaction toward an organization that is ever ready to go “Green.”
9. The responsibilities of the present generation HR managers are to create awareness among the youngsters and among the people working for the organization about the Green HRM, Green movement, utilization of natural resources and helping the corporate to maintain proper environment, and retain the natural resources for our future generation i.e. sustainable development (Mathapati, 2013).

The conclusion that can be derived from this research is that Green ideas and practices are finding more and more relevance in many organizations’ and within the space of the HR profession. HR leaders being the advocates of organizational culture and policies are critical to inculcate a sense of responsibility in each employee towards a sustainable green human resources management. However, still greater change needs to happen so that employees and organizations 'take that big leap in ensuring greening process in all their activities.

### **5.3 Limitations**

This research work was carried out to find out the relationship between Green HRM practices with Employee Motivation, Job Satisfaction and organizational. Despite best of efforts to minimize all limitations that might creep in course of the research, there were certain constraints within which the research was completed. These are discussed below:

- Notwithstanding its wide-ranging coverage, the current research work may be criticized because it misses an in-depth analysis of the type the psychologists or anthropologists has often conducted. This research work has not analysed by using any econometric test or psychometric test. This research work is totally based on the practices followed in the organisations.
- Sustainability has three aspects: social, economic and environment. In this study, the researcher has studied only environment dimension in relation to Green HRM Practices.
- In this study, the researcher has only taken Green Recruitment and Selection, Green Training and Development, Green Reward Management, Employee Involvement, Employee Motivation, Job Satisfaction and Organisational Commitment. There are other factors also which impact the Green HRM practices like, Green Health and Safety Management, Green Job Design and Analysis, Green Induction, etc. that have not been considered.
- The research was purely based on primary data as well as secondary data. The primary data for this study was collected from the samples based in NCR only. While researcher has tried to make sure that the sample is a true representation of the population, the generalization of the findings of the research work is restricted as defined by the size of the sample, which comprised of 300 respondents carefully chosen from various areas of NCR.

## **5.4 Suggestions**

Based on the above findings the following suggestions are proposed by the researcher for the effective implementation of the GHRM in the Organizations.

### **5.4.1 To Business Organizations**

- Secure job environment enhances the degree of Job Satisfaction. Management must create an environment of job security among employees Apart from job security, management must provide job stability.
- Job Satisfaction of employees in any organization is of utmost importance to in order to achieve the objectives of an organization and make it sustainable in the long run.

- A business and businessmen have to ensure the employee participation in management and administration. In management there is a proverb that “Esprit de corps” that means unity is strength. Harmonious and team work is always effective and efficient for the business success. When the workers and employees are encouraged to take part in the management and decision making that means they are contributing to the organization.
- It reflects that when the level of Job Satisfaction increases, the level of Organisational Commitment also increases. Therefore, this factor should be increased to improve an employee’s commitment to an organization. Organizations should commence proper performance appraisal systems which result in pay rise, promotion, and training of the employees that will enhance on employees’ Job Satisfaction.
- Human Resource Management of the organizations should offer extensive Green Training and Development programs for the employees for better satisfaction of the employees.
- As there is no positive relation between Green Reward Management and Job Satisfaction, so employees should be properly trained and promotion of the employees should be based on the qualification of employees and /or experience of employees to create Job Satisfaction.
- As there is positive relation between Green Reward Management and Employee Motivation so, company should offer recognition rewards for environmental performance. The success of recognition rewards relies on the importance of company-wide identification. For example, such attention increases employee’s awareness of environmental achievements (Bhushan, 1994). There are many ways in which organisations can communicate their environmental excellence within the organisation. For example, managers at Coors present awards at important meetings to employees who have participated in successful environmental programmes, (Woods, 1993).
- Organizations must give environmental training and education to the employees as these are vital, in order to provide knowledge, change attitudes and behavior and acquire new skills.

- Rewards should be given to the employees who uses bicycles to commute or uses car pools. It would encourage those who live nearby to commute by cycle or walk, thereby reducing pollution. The ones who live far off could use bicycles to go to the market. It would be a good exercise and would keep the employee in good health.
- Employees should be recognised and rewarded for green innovations. The employees who come up with the most innovative green initiatives should be awarded a ‘Go Green’ badge.
- Segregation of waste and disposal of waste should be streamlined in the organisation. Food canteen should adhere to zero wastage policy and use the leftover food for a better cause.
- Organizations should attempt to replace the age old tradition of paper documentation by paperless office. This can be achieved by ensuring 100% IT-based HR operations.
- Organizations should initiates practices of green rewards to departments and individuals for innovative initiatives and green contribution through reduction of wastes, green resources and energy. Take innovative initiatives of saving electricity by encouraging volunteering to switch off lights and fans where and whenever required. Companies should conduct an energy audit to ensure effective and efficient use of energy in organisations and use energy efficient bulbs and install timer to switch off the light automatically after a definite time.
- Corporate gardens must encourage the use of natural fertilisers and pesticides. Every office should maintain greening of office premises with gardens. There should be HR policies for participation of employees for gardening; by contributing manure or attending to a certain plant area of the garden.
- Use online system in most of the procedures of the organizational activities to make your organization eco-friendly. Companies should encourage suppliers to provide environmentally sustainable product to make the outer world green.

- Develop or Enhance waste management system to reduce atmospheric (air, water, soil) pollution. At most care about use of water and leakage of drainage system to ensure efficient use of water and to reduce water pollution.
- Spread green thinking among employees and stakeholders to make them green psychologically. Engaging with employees and empowering them to act through the company in a nonsuperficial way is a most effective means through which to increase output towards and ultimately achieve or enhance environmental strategies and goals.
- Reward employees on the basis of green activities to motivate them to be more aware about environment. They should use organization's transport in group rather than privately to ensure less emission of different harmful gases to the atmosphere. Reduce business travel and focus on teleconferencing to minimize the emission of carbon-di-oxide.
- Make everyone feel concerned about the green benefits (even cash value of greening) to create their willingness towards green. Companies should also create a green identity through green activities that will create a Brand image.
- Encourage employees to share new ideas regarding environmental issues. Get your surrounding community know about your greening practice that will make them loyal to your brand. Companies should also try to integrate green HR practices with corporate social responsibilities.
- Install heat management system to ensure comfortable temperature in the organization and surroundings that increases productivity and efficiency of employees.
- Conduct annual survey on measuring the level of green practice adopted by the organization at different levels.
- This research work should act as a guiding force for the HR of the organization to develop policies and procedures which will help in making energy efficient, sustainable and environmentally friendly product and services.

#### **5.4.2 To the Government**

- Government of India can also play a proactive role with a special role assigned to Ministry of Environment (MoE) in enhancing the speed of reforms to combat the issues of climate change and decarbonize the economy. Various skill development centres should be developed that are related to training workforce specially in the area of environmental management, sustainable energy, recycling waste, generation of energy from waste, managing e-waste, clean technologies etc.
- Compensation in the form of “Green Allowance” can be added as an incentive to the salary of central government/ state government employees who qualifies exams related to environment or contributes by way of innovation towards environment related practices in their offices.
- In order to create better educational infrastructure in country an introduction of nominal cess can be thought. The money collected in this manner can be used to create environment institutes across different states that can train and create green manpower.
- Government should create green advisory for industry and public. Just like advisory to farmers helped in improving yield of crops at one point of time, similarly, creation of green advisory for industry and public can help, educate and motivate general public and industries undertake practices that help in conserving, improving and cleaning environment. Special help line numbers can be an added advantage that make access to such advisory organisations earlier.
- Tax holidays can be given to green organisations who wish to invest in India. Organisations promoting buying, selling or manufacturing of green products can be encouraged by way of exemption from paying tax for two years. Such organisations will be requested to spend this money on training and giving incentives to its employees for learning and implementing green practices. These organisations should be encouraged to have their own green eco labels and green trademarks to promote their products and services.

- Government should implement green tax on polluting and non-green organisations. Organisations that have direct impact on environment because of their activity should be made to pay green tax to compensate for damage made by them to environment. They should be further enforced to train their workforce regarding green practices so that employees can bring change in their organisation.
- Like BSE and NSE, creation of stock exchange looking after trading of carbon credits and equities linked to green organisation should be created. Organisations should then think of creating a concept of green employee's stock options (GESOP) so that they can have stake in green organisations of future.

### **5.4.3 To Researchers and Academicians**

Though area of environmental science, environmental management, and environment conservation is a well-developed area but creation of green workforce is far from reality. Environment has been seen as a credence good and hence reaction to issues related to environment is slow and not instantaneous. Many researches have been conducted in the field of management in area of green marketing, green supply chain, green human resource, green finance but change in behaviour related to environment protection is less observed.

Present government has started many new schemes like digital India, Swachh Bharat Abhiyan, and clean India which is starting towards changing behaviour of general masses towards clean and green environment.

In order to create orientation towards environment, academicians at primary, secondary and tertiary level need to create curriculum related to creation of green workforce. This workforce need to be trained in a manner that creates skill set required for:

- 1) Managing waste
- 2) Promote reduce, recycling and reuse.
- 3) Promote digitization
- 4) Promote social awareness and transformation among students

- 5) Promote innovation related modified environmental conscious behaviour among general masses.
- 6) Integration of IT and environmental conservation.
  - Researcher can undertake studies on areas like creation of on the job green induction and training programmes, promoting green investment, and trading in carbon credits, creation of green services, investor behaviour and career progression of green human resource.
  - Studies should be undertaken to assess effectiveness and usefulness of training manpower related to environment related courses presently being offered by educational institutions and how can they be modified to create better learning outcomes that have far reaching effect on society.
  - Researcher has proposed that GHRM has substantial scope for research in management field but there are very few studies on this topic hence, there is a need to bridge the gap between professional GHRM practices and preaches in research and teaching of environmental management.
  - Academicians in the field of management and engineering, economics and law should come together and suggest an integrated model for environment that can be applied for this great nation-India and use this piece of research as a small link of a big chain which needs to be developed fast.

## **5.5 Future Scope of Research**

The following are the related areas which have been identified by the researcher for the scope of further research related to this area.

- The present study proposes future researchers to fill the gap in the existing literatures by conducting empirical studies such as Green HRM practices in the manufacturing or service organizations (particularly the organizations that are polluting environment, Comparing Green HRM practices between developed and developing countries, Green perceptions, attitudes of employer and employees, barriers in the Green HRM implementation in organizations.



- A comparative study of Green HRM among different sectors can be conducted to get an insight of Green HRM practices followed by the organizations.
- In the present study, the researcher has studied only few organizations, the future researcher can select some other organizations for study and can suggest some more options for better implementation of Green HRM Practices.
- In addition, it will be of interest to the future researchers to explore and validate the model developed for this study in other cultural settings, like Asian or Western developing or developed countries. This will be valuable in providing evidence concerning the robustness of research model across different cultural settings. It is understood that the robustness of the model may vary across different cultural settings and thus need to be empirically tested (Mao and Palvia, 2006).
- As there is still confusion and compromise on the integration of environmental issues into organization's policies, further research should be conducted to determine the association between other HRM Functions like employee health, employee retention, self-actualization in context to environment needs and its relationship with the environmental performance.
- Further studies can be conducted in backdrop of suggestions provided in the previous section.

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## APPENDIX A

### LIST OF COMPANIES TAKEN FOR SURVEY

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SN	Name of company	Industry
1	Amtek Auto Ltd.	Automobile
2	Anand Group	Automobile
3	Anand NVH Products Pvt. Ltd.	Automobile
4	ANG Auto Ltd	Automobile
5	Anu Industries Ltd.	Automobile
6	Autodoor Systems India (P) Ltd	Automobile
7	Autofit Ltd.	Automobile
8	AVTEC Limited	Automobile
9	Continental Engines Ltd.	Automobile
10	Eicher Motors Ltd	Automobile
11	Goetze (India) Limited	Automobile
12	Hero Moto Corp Ltd.	Automobile
13	J.S. Automobiles	Automobile
14	Jamna Auto Industries Ltd	Automobile
15	Maruti Suzuki India Ltd	Automobile
16	Meko Auto Pvt Ltd	Automobile
17	Paul Automobiles	Automobile
18	Reva Transmission	Automobile
19	Roop Group Of Companies	Automobile
20	Sadhu Forging Ltd	Automobile
21	Sakshi Polytubes pvt ltd	Automobile
22	Sharda Motor Industries Ltd	Automobile
23	Shivam Autotech Limited	Automobile
24	Silco Cables	Automobile
25	Sona Koyo Steering Systems Ltd.	Automobile
26	Sudhir Automotive Industries Pvt. Ltd.	Automobile

27	Viking Filters Private Limited	Automobile
28	Bansal Wire Industries Ltd	Electronics
29	Captain Gears and Fans	Electronics
30	Compact Lamps Pvt. Ltd.	Electronics
31	ECCO Electronics Pvt Ltd	Electronics
32	ECE Elevators Ltd	Electronics
33	Eon Electric Ltd.	Electronics
34	Glorious Electronics (I) Pvt Ltd	Electronics
35	Gupta Electric Company	Electronics
36	Havells India Limited	Electronics
37	HPL Electric and Power Pvt. Ltd.	Electronics
38	Ledvance Pvt Ltd	Electronics
39	LG Electronics India	Electronics
40	Moser Baer India Ltd.	Electronics
41	National Electric Company	Electronics
42	Orient Electric	Electronics
43	Osram Lighting Private Limited	Electronics
44	Philips Lighting India Limited	Electronics
45	Phoenix Electric (India) Ltd	Electronics
46	Precision Electronic	Electronics
47	S M Creative Electronics Ltd	Electronics
48	Samitech Electronics Private Limited	Electronics
49	Securico Electronics India Ltd	Electronics
50	Super Electrical Company	Electronics
51	Surya Roshni Ltd	Electronics
52	Usha International Ltd	Electronics
53	Usha Shriram Enterprises Pvt. Ltd.	Electronics
54	Agro Pure Capital Foods Pvt Ltd	Food
55	Agson Global Pvt Ltd	Food
56	Annpurna Food Industries	Food
57	Apsara Food Industries (P) Ltd	Food
58	B L Agro Oils Limited	Food

59	Best Foods Ltd	Food
60	Borges India Pvt Ltd	Food
61	BTW India Pvt Ltd	Food
62	Cremica Food Industries Ltd.	Food
63	Dabur	Food
64	Dhampur Sugar Mills Ltd	Food
65	Dr.Oetker India Pvt Ltd	Food
66	Dupont Danisco India Pvt Ltd	Food
67	GTC Foods Pvt Ltd	Food
68	Jadli Foods (India) Pvt Ltd	Food
69	Jagatjit Industries Ltd	Food
70	KRBL Ltd	Food
71	Lamba Food Products	Food
72	LT Foods Limited	Food
73	Mother Dairy Fruit and Vegetable Pvt Ltd	Food
74	Nestle	Food
75	Nitish Food Products	Food
76	O.H.P.Food Products Private Limited	Food
77	S. S. Food Industries	Food
78	Sidel India Pvt Ltd	Food
79	Tirupati Food Industries Pvt Ltd	Food
80	21 Century Polymers	Plastic
81	All India Plastic Industries Association	Plastic
82	Alok Masterbatches Pvt.Ltd	Plastic
83	Aravali Plastics and Steel Pvt Ltd	Plastic
84	Diamond Plastic Company	Plastic
85	Durga Polyplast Pvt Ltd	Plastic
86	General Plastic Industries	Plastic
87	Gold Plast India Private Limited	Plastic
88	Haryana Plastics and Engg. Works	Plastic
89	Hindustan Plastic And Machine Corporation	Plastic
90	Jindal Poly Films Ltd.	Plastic

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91	JPS Plastics Pvt Ltd	Plastic
92	JPS Plastics Pvt. Ltd.	Plastic
93	Kay Kay Industries	Plastic
94	Krishna Plastic Industries	Plastic
95	Krishna Polyplast (India) Pvt Ltd	Plastic
96	Krishna Polyplast Pvt Limited	Plastic
97	Nagraj Plastic Company	Plastic
98	National Plastic Industries	Plastic
99	Neetu Plastic	Plastic
100	Om Plastic Industries	Plastic
101	Pacific Plastic Industries	Plastic
102	R. K. G Plastic	Plastic
103	Raymonds Plastics	Plastic
104	Royal Touch Plastics	Plastic
105	S. S. Plastic Works	Plastic
106	Sona Plastic Industries	Plastic
107	Sunshine Indus India	Plastic
108	Supreme Plastics	Plastic
109	Winner Plastic	Plastic
110	Yash Plastics	Plastic

## APPENDIX B

Dear Respondent,

This survey is anonymous and is used for the academic research purpose only. No individual will be identified and responses will only be viewed in aggregate.

### PART A – ORGANIZATIONAL PROFILE

- 1) Name of the organization: \_\_\_\_\_
- 2) Position of the respondent filling the questionnaire: \_\_\_\_\_
- 3) Your organization exists in which industry? \_\_\_\_\_

### PART – B

- 1) Are you aware of the term ‘Green Human Resource Management Practices’?  
Yes/No
- 2) Are you aware of ISO 14000 series issued on environmental management system, which includes a broad range of environmental disciplines? Yes/No
- 3) Is your Company ISO 14000 Certified? Yes/No
- 4) If yes (for Q.3), what is the reason that motivated your company to be certified under ISO 14000?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 5) Do you think that Green Human Resource Management Practices should be applied in your industry? (Please encircle and give different ranks to different

statements from 1 to 4) Use 1 for the strongest reason and 4 for the weakest reason

	Ranks			
	1	2	3	4
• Cost factor associated with waste disposal.	1	2	3	4
• Moral obligation to be more socially responsible	1	2	3	4
• Pressure from regulatory bodies	1	2	3	4
• Pressure from competitors	1	2	3	4

6) What are the internal efforts made by your organization to promote and protect environment? (Please tick)

- i. Use of CNG/LPG in office vehicle ( )
- ii. Car pool for officers ( )
- iii. Video Conferencing ( )
- iv. Rain Water Harvesting ( )
- v. Tree plantation in locality ( )
- vi. Adoption of nearby villages to educate people in environment protection. ( )
- vii. Organize national/international seminars/workshops/ Symposiums etc. ( )
- viii. Donate/sponsor organizers for national events on environment protection ( )
- ix. Any other, please specify \_\_\_\_\_

7) What are the different HR Policies formulated in your organization related to GHRM?

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8) What are the various GHRM Practices used by your organization in the process of recruitment and selection? (e.g. Online application or online interviews)

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9) What are the various GHRM Practices used by your organization in the process of training and development? (e.g. Online training or online performance feedback)

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10) What are the different types of rewards (financial or non- financial) given by your company for the green initiatives taken by employees?

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11) In a 5 point scale, please indicate to what extent you feel your company has been successful in practicing Green Human Resource Management Practices. Encircle the appropriate number indicating your level of agreement.

Note: Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA).

S.No	Item	SD	D	N	A	SA
1.	The employee promotes environment protection in the workplace.					
2.	My company has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.					
3.	My company includes environmental criteria in the recruitment messages.					
4.	My company provides training for green initiatives and therefore increase my Job Satisfaction.					
5.	Everybody in this facility get the opportunities to get training on environmental					



S.No	Item	SD	D	N	A	SA
	management aspects.					
6.	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)					
7.	The employees follow the best practice of operating the machine in order to reduce paper and energy consumption.					
8.	We have a system of joint consultations in solving environmental issues of the organization.					
9.	My company communicates the employer’s concern about greening through recruitment efforts. If agree, please suggest how?					
10.	The employee’s behavior of saving paper and energy when operating the machine is beyond the norm.					
11.	Company generally selects those candidates who are sufficiently aware of greening to fill job vacancies. If agree, please elaborate. How you check candidate’s awareness about greening?					
12.	My company provides training to the union representatives in environmental management.					
13.	We are rewarded financially or non- financially for good environmental performance. If yes, please give an example?					
14.	Employees in this company are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need).					
15.	My company generally selects those applicants who have been engaging in greening as consumers under their private life domain.					
16.	Job Satisfaction is derived due to recognition of green practices by external agencies (Government). If agree please elaborate.					
17.	My company reflects environmental policy and strategies of the organization in its recruitment policy.					
18.	We are given equal opportunities to involve and participate in green suggestion schemes.					
19.	My company provides environmental education to the workforce.					
20.	My company considers candidates ‘environmental concern and interest as selection criteria.					
21.	My company provides training to learn or adapt environmental friendly best practices (e.g. reducing long-distance business travel and recycling).					
22.	We get proper training on environmental awareness to create “environmental awareness” among the workforce.					
23.	My company recognizes union as a key stakeholder in environmental management.					
24.	My company provides incentives to encourage environmentally friendly activities and behaviors (e.g. recycling and waste management).					
25.	While interviewing the candidate my company asks Environment-related questions.					
26.	We are rewarded for green skills acquisition. If agree, please share how?					
27.	My company also expresses its preference towards those candidates who have competency and attitudes to participate in corporate environmental management initiatives too in the recruitment message.					

S.No	Item	SD	D	N	A	SA
28.	My Company identifies the environmental training needs of employees in order to make them more environmental concerned.					
29.	I plan to stay in this company to develop my career for a long time.					
30.	My company has introduced rewards for innovative environmental performance or initiative.					
31.	My company indicates about organization's environmental performance (past and current) when communicating recruitment messages.					
32.	We are receiving Team excellence awards for better environmental performance.					
33.	I feel proud to be a part of company due to engagement in supporting green and sustainable initiatives and activities.					
34.	Employee in this company are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box).					
35.	I often think of quitting my present job.					
36.	The employee follows the Company's policy of disposing chemicals to avoid polluting environment.					
37.	My company provides environmental training to us to develop required skills and knowledge.					
38.	The employee voluntarily recycles even when no one is watching.					
39.	The employee follows the Company's policy of disposing waste water to avoid polluting environment.					
40.	My Company imparts right knowledge and skills about greening (to each employee through a training program exclusively designed for greening).					
41.	The employees follows the Company's recycling policy.					
42.	My company provides opportunities to the unions to negotiate with management about green workplace agreement.					

12 a) According to you, how adoption of GHRM Practices makes a difference to your organization?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

12 b) According to you, how adoption of GHRM Practices does not makes a difference to your organization?

1. \_\_\_\_\_
2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

**Personal Information:**

Name (optional): \_\_\_\_\_

Age (in years):    a) Below 30    b) 30 to 40    c) 40 to 50    d) Above 50

Designation: \_\_\_\_\_

Thank you for participating in this short survey to help us understand the Green Human Resource Management Practices that are being adopted in your organization.

**APPENDIX C**

**STATISTICS**

		N	%
Cases	Valid	100	100.0
	Excluded <sup>a</sup>	0	.0
	Total	100	100.0
a. Listwise deletion based on all variables in the procedure.			

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.962	.962	43

**Item Statistics**

	Mean	Std. Deviation	N
grs1	3.7900	1.52617	100
grs2	4.0300	1.16736	100
grs4	4.0900	1.18146	100
grs5	3.9500	1.25025	100
grs6	3.8200	1.39537	100
grs9	3.7400	1.49491	100
grs7	3.9200	1.40475	100
grs8	4.1000	1.29880	100
gtd1	3.4000	1.55050	100
gtd2	3.6400	1.29115	100
gtd3	3.6700	1.25573	100
gtd4	3.7000	1.32192	100
gtd5	3.6300	1.34581	100
gtd6	3.4400	1.43773	100
gtd7	3.5600	1.40216	100
gr2	3.7200	1.34900	100
gr3	3.6800	1.30948	100
gr4	3.7900	1.30496	100

gr5	3.5700	1.33526	100
gei1	3.6300	1.22808	100
gei2	3.7400	1.37525	100
gei3	3.3600	1.54737	100
gei4	3.6000	1.29490	100
js1	3.8200	1.27430	100
js2	3.4900	1.41774	100
js3	3.6700	1.32615	100
js4	3.5500	1.54642	100
js7	3.7600	1.28802	100
em1	3.9100	1.17288	100
em3	3.7100	1.36548	100
em4	3.9900	1.24312	100
em5	3.6700	1.37109	100
oc1	4.0300	1.22643	100
oc2	3.9600	1.25465	100
js6	3.9500	1.29782	100
em2	3.9600	1.25465	100
gr1	3.6100	1.29408	100
gei5	3.6400	1.29115	100
js5	3.6300	1.29221	100
grs3	3.6000	1.31809	100
oc3	3.7700	1.54302	100
oc4	4.0300	1.16736	100
oc5	3.5900	1.31114	100

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
grs1	157.1200	1217.238	.541	.962
grs2	156.8800	1232.450	.529	.962
grs4	156.8200	1230.513	.422	.962
grs5	156.9600	1230.584	.513	.962
grs6	157.0900	1233.840	.546	.962
grs9	157.1700	1221.132	.515	.962
grs7	156.9900	1225.869	.501	.962
grs8	156.8100	1228.034	.521	.962
gtd1	157.5100	1212.515	.576	.961
gtd2	157.2700	1216.300	.657	.961
gtd3	157.2400	1217.497	.663	.961

gtd4	157.2100	1218.875	.612	.961
gtd5	157.2800	1212.810	.667	.961
gtd6	157.4700	1208.151	.670	.961
gtd7	157.3500	1210.391	.664	.961
gr2	157.1900	1221.125	.575	.961
gr3	157.2300	1220.684	.598	.961
gr4	157.1200	1220.450	.603	.961
gr5	157.3400	1200.772	.806	.960
gei1	157.2800	1216.628	.689	.961
gei2	157.1700	1218.789	.588	.961
gei3	157.5500	1202.371	.674	.961
gei4	157.3100	1215.549	.663	.961
js1	157.0900	1228.871	.522	.962
js2	157.4200	1207.095	.691	.961
js3	157.2400	1216.750	.634	.961
js4	157.3600	1215.142	.553	.962
js7	157.1500	1223.058	.582	.961
em1	157.0000	1234.626	.599	.962
em3	157.2000	1220.909	.570	.961
em4	156.9200	1235.084	.564	.962
em5	157.2400	1223.922	.535	.962
oc1	156.8800	1241.218	.398	.962
oc2	156.9500	1231.381	.502	.962
js6	156.9600	1230.503	.594	.962
em2	156.9500	1235.361	.656	.962
gr1	157.3000	1202.071	.818	.960
gei5	157.2700	1205.593	.779	.960
js5	157.2800	1203.759	.800	.960
grs3	157.3100	1200.903	.815	.960
oc3	157.1400	1215.596	.550	.962
oc4	156.8800	1233.258	.519	.962
oc5	157.3200	1201.674	.811	.960

## Factor Analysis

### Notes

Output Created		19-Apr-2018 13:48:09
Comments		
Input	Data	C:\Users\hp\Google Drive\UGC Research proposal\DATA ANALYSIS\zero order\UGC11.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
Missing Value Handling	N of Rows in Working Data File	300
	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing. LISTWISE: Statistics are based on cases with no missing values for any variable used.
	Cases Used	FACTOR /VARIABLES grs1 grs2 grs3 grs4 grs5 grs6 grs9 grs7 grs8 gtd1 gtd2 gtd3 gtd4 gtd5 gtd6 gtd7 gr1 gr2 gr3 gr4 gr5 gei1 gei2 gei3 gei4 gei5 js1 js2 js3 js4 js5 js6 js7 em1 em2 em3 em4 em5 oc1 oc2 oc3 oc4 oc5 /MISSING LISTWISE /ANALYSIS grs1 grs2 grs3 grs4 grs5 grs6 grs9 grs7 grs8 gtd1 gtd2 gtd3 gtd4 gtd5 gtd6 gtd7 gr1 gr2 gr3 gr4 gr5 gei1 gei2 gei3 gei4 gei5 js1 js2 js3 js4 js5 js6 js7 em1 em2 em3 em4 em5 oc1 oc2 oc3 oc4 oc5 /PRINT INITIAL KMO EXTRACTION ROTATION /FORMAT BLANK(.4) /CRITERIA FACTORS(7) ITERATE(25) /EXTRACTION PC /CRITERIA ITERATE(25) /ROTATION VARIMAX /METHOD=CORRELATION.
Syntax		
Resources	Processor Time	00 00:00:00.015
	Elapsed Time	00 00:00:00.032
	Maximum Memory Required	210820 (205.879K) bytes

[DataSet2]

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	8859.529
	df	903
	Sig.	.000

## Communalities

	Initial	Extraction
grs1	1.000	.705
grs2	1.000	.692
grs3	1.000	.624
grs4	1.000	.549
grs5	1.000	.628
grs6	1.000	.620
grs9	1.000	.722
grs7	1.000	.692
grs8	1.000	.636
gtd1	1.000	.512
gtd2	1.000	.594
gtd3	1.000	.636
gtd4	1.000	.724
gtd5	1.000	.668
gtd6	1.000	.572
gtd7	1.000	.631
gr1	1.000	.616
gr2	1.000	.632
gr3	1.000	.667
gr4	1.000	.694
gr5	1.000	.653
gei1	1.000	.858
gei2	1.000	.682
gei3	1.000	.752
gei4	1.000	.548
gei5	1.000	.566
js1	1.000	.738
js2	1.000	.777
js3	1.000	.699
js4	1.000	.600
js5	1.000	.736
js6	1.000	.745
js7	1.000	.699
em1	1.000	.603
em2	1.000	.611
em3	1.000	.737
em4	1.000	.581
em5	1.000	.623
oc1	1.000	.648
oc2	1.000	.654
oc3	1.000	.613
oc4	1.000	.623
oc5	1.000	.738

Extraction Method: Principal Component Analysis.



**Total Variance Explained**

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	11.718	27.252	27.252	11.718	27.252	27.252	5.896	13.713	13.713
2	5.719	13.300	40.552	5.719	13.300	40.552	4.693	10.915	24.628
3	3.401	7.910	48.462	3.401	7.910	48.462	4.160	9.674	34.301
4	2.599	6.043	54.505	2.599	6.043	54.505	3.418	7.949	42.250
5	2.098	4.879	59.385	2.098	4.879	59.385	3.403	7.915	50.165
6	1.495	3.477	62.861	1.495	3.477	62.861	3.400	7.906	58.071
7	1.267	2.946	65.807	1.267	2.946	65.807	3.327	7.736	65.807
8	.967	2.248	68.055						
9	.869	2.020	70.075						
10	.810	1.884	71.959						
11	.759	1.766	73.725						
12	.699	1.624	75.350						
13	.666	1.548	76.898						
14	.626	1.456	78.354						
15	.606	1.409	79.763						
16	.591	1.374	81.138						
17	.575	1.337	82.474						
18	.532	1.236	83.710						
19	.525	1.221	84.932						
20	.492	1.144	86.076						
21	.463	1.077	87.153						
22	.435	1.012	88.165						
23	.428	.995	89.160						
24	.402	.934	90.094						
25	.375	.871	90.965						
26	.356	.827	91.793						
27	.332	.771	92.564						
28	.308	.717	93.281						
29	.291	.676	93.957						
30	.283	.658	94.615						
31	.275	.639	95.254						
32	.250	.582	95.836						
33	.244	.567	96.403						
34	.222	.516	96.919						
35	.218	.506	97.426						
36	.209	.486	97.911						
37	.180	.418	98.330						
38	.150	.349	98.679						
39	.144	.336	99.015						
40	.142	.330	99.345						
41	.124	.289	99.633						
42	.086	.201	99.834						
43	.071	.166	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix<sup>a</sup>

	Component						
	1	2	3	4	5	6	7
grs1		.765					
grs2		.800					
grs3		.766					
grs4		.708					
grs5		.739					
grs6		.747					
grs9		.800					
grs7		.786					
grs8		.768					
gtd1	.532				.445		
gtd2	.558				.514		
gtd3	.654						
gtd4	.627				.468		
gtd5	.566				.547		
gtd6	.616						
gtd7	.645						
gr1	.493		-.441				
gr2	.500		-.497				
gr3	.484		-.534				
gr4	.591		-.461				
gr5	.467		-.496				
gei1	.737						
gei2	.694						
gei3	.662						
gei4	.568						
gei5	.544						
js1	.711						
js2	.694						
js3	.679						
js4	.630						
js5	.560					.437	
js6	.565						
js7	.739						
em1	.551						
em2	.513						
em3	.531		-.444				
em4	.486		-.449				
em5	.547		-.456				
oc1				.555			
oc2				.589			
oc3	.427			.579			
oc4	.507			.542			
oc5	.481			.623			

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

Rotated Component Matrix<sup>a</sup>

	Component						
	1	2	3	4	5	6	7
grs1	.818						
grs2	.823						
grs3	.781						
grs4	.731						
grs5	.771						
grs6	.779						
grs9	.839						
grs7	.824						
grs8	.788						
gtd1			.638				
gtd2			.703				
gtd3			.645				
gtd4			.784				
gtd5			.731				
gtd6			.633				
gtd7			.700				
gr1					.727		
gr2					.704		
gr3					.746		
gr4					.713		
gr5					.770		
gei1						.788	
gei2						.636	
gei3						.741	
gei4						.620	
gei5						.690	
js1		.701				.425	
js2		.796					
js3		.750					
js4		.676					
js5		.813					
js6		.826					
js7		.646					
em1							.635
em2							.714
em3							.805
em4							.664
em5							.687
oc1				.754			
oc2				.785			
oc3				.729			
oc4				.692			
oc5				.819			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

**Component Transformation Matrix**

Component	1	2	3	4	5	6	7
1	-.197	.494	.463	.305	.339	.412	.354
2	.970	.098	.075	-.002	.166	.020	.123
3	.119	.454	-.044	.318	-.600	.253	-.503
4	.039	-.453	-.276	.831	.094	.102	.091
5	.022	-.273	.781	.194	.010	-.363	-.381
6	-.059	.499	-.281	.237	.394	-.650	-.186
7	.006	.109	.116	.147	-.578	-.448	.647

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	11	7.857	4	.097	1.964
Saturated model	15	.000	0		
Independence model	5	622.645	10	.000	62.265

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.027	.990	.962	.264
Saturated model	.000	1.000		
Independence model	.668	.462	.193	.308

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.987	.968	.994	.984	.994
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

***Parsimony-Adjusted Measures***

Model	PRATIO	PNFI	PCFI
Default model	.400	.395	.397
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

***NCP***

Model	NCP	LO 90	HI 90
Default model	3.857	.000	15.955
Saturated model	.000	.000	.000
Independence model	612.645	534.549	698.144

***FMIN***

Model	FMIN	F0	LO 90	HI 90
Default model	.026	.013	.000	.053
Saturated model	.000	.000	.000	.000
Independence model	2.082	2.049	1.788	2.335

***RMSEA***

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.057	.000	.115	.351
Independence model	.453	.423	.483	.000

***AIC***

Model	AIC	BCC	BIC	CAIC
Default model	29.857	30.307	70.598	81.598
Saturated model	30.000	30.614	85.557	100.557
Independence model	632.645	632.850	651.164	656.164

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.100	.087	.140	.101
Saturated model	.100	.100	.100	.102
Independence model	2.116	1.855	2.402	2.117

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	362	506
Independence model	9	12

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	11	5.192	4	.268	1.298
Saturated model	15	.000	0		
Independence model	5	795.157	10	.000	79.516

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.027	.993	.973	.265
Saturated model	.000	1.000		
Independence model	.917	.424	.136	.283

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.993	.984	.998	.996	.998
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.400	.397	.399
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	1.192	.000	11.373
Saturated model	.000	.000	.000
Independence model	785.157	696.342	881.366

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.017	.004	.000	.038
Saturated model	.000	.000	.000	.000
Independence model	2.659	2.626	2.329	2.948

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.032	.000	.098	.591
Independence model	.512	.483	.543	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	27.192	27.643	67.934	78.934
Saturated model	30.000	30.614	85.557	100.557
Independence model	805.157	805.362	823.676	828.676

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.091	.087	.125	.092
Saturated model	.100	.100	.100	.102
Independence model	2.693	2.396	3.015	2.694

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	547	765
Independence model	7	9

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	10	14.992	5	.010	2.998
Saturated model	15	.000	0		
Independence model	5	663.627	10	.000	66.363

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.039	.981	.943	.327
Saturated model	.000	1.000		
Independence model	.716	.438	.158	.292



**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.977	.955	.985	.969	.985
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.500	.489	.492
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	9.992	1.945	25.626
Saturated model	.000	.000	.000
Independence model	653.627	572.861	741.793

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.050	.033	.007	.086
Saturated model	.000	.000	.000	.000
Independence model	2.219	2.186	1.916	2.481

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.082	.036	.131	.112
Independence model	.468	.438	.498	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	34.992	35.402	72.030	82.030
Saturated model	30.000	30.614	85.557	100.557
Independence model	673.627	673.832	692.146	697.146

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.117	.090	.169	.118
Saturated model	.100	.100	.100	.102
Independence model	2.253	1.983	2.548	2.254

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	221	301
Independence model	9	11

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	20	66.233	16	.000	4.140
Saturated model	36	.000	0		
Independence model	8	1777.441	28	.000	63.480

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.057	.950	.887	.422
Saturated model	.000	1.000		
Independence model	.850	.276	.070	.215

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.963	.935	.971	.950	.971
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.571	.550	.555
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	50.233	28.808	79.216
Saturated model	.000	.000	.000
Independence model	1749.441	1614.929	1891.313

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.222	.168	.096	.265
Saturated model	.000	.000	.000	.000
Independence model	5.945	5.851	5.401	6.325

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.102	.078	.129	.000
Independence model	.457	.439	.475	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	106.233	107.475	180.309	200.309
Saturated model	72.000	74.234	205.336	241.336
Independence model	1793.441	1793.938	1823.072	1831.072

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.355	.284	.452	.359
Saturated model	.241	.241	.241	.248
Independence model	5.998	5.548	6.473	6.000

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	119	145
Independence model	7	9

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	16	40.519	12	.000	3.377
Saturated model	28	.000	0		
Independence model	7	976.382	21	.000	46.494

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.048	.964	.916	.413
Saturated model	.000	1.000		
Independence model	.658	.384	.178	.288

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.959	.927	.970	.948	.970
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.571	.548	.554
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	28.519	12.860	51.770
Saturated model	.000	.000	.000
Independence model	955.382	856.801	1061.357

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.136	.095	.043	.173
Saturated model	.000	.000	.000	.000
Independence model	3.265	3.195	2.866	3.550

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.089	.060	.120	.016
Independence model	.390	.369	.411	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	72.519	73.399	131.780	147.780
Saturated model	56.000	57.540	159.706	187.706
Independence model	990.382	990.767	1016.308	1023.308

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.243	.190	.320	.245
Saturated model	.187	.187	.187	.192
Independence model	3.312	2.983	3.667	3.314

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	156	194
Independence model	11	12

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	18	43.588	10	.000	4.359
Saturated model	28	.000	0		
Independence model	7	1503.861	21	.000	71.612

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.046	.962	.893	.344
Saturated model	.000	1.000		
Independence model	.887	.299	.066	.225

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.971	.939	.978	.952	.977
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.476	.462	.465
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	33.588	16.801	57.919
Saturated model	.000	.000	.000
Independence model	1482.861	1359.375	1613.716

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.146	.112	.056	.194
Saturated model	.000	.000	.000	.000
Independence model	5.030	4.959	4.546	5.397

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.106	.075	.139	.002
Independence model	.486	.465	.507	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	79.588	80.578	146.256	164.256
Saturated model	56.000	57.540	159.706	187.706
Independence model	1517.861	1518.246	1543.788	1550.788

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	.266	.210	.348	.269
Saturated model	.187	.187	.187	.192
Independence model	5.076	4.663	5.514	5.078

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	126	160
Independence model	7	8

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	12	1.123	3	.772	.374
Saturated model	15	.000	0		
Independence model	5	675.002	10	.000	67.500



**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.011	.999	.993	.200
Saturated model	.000	1.000		
Independence model	.726	.457	.185	.305

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.998	.994	1.003	1.009	1.000
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

**Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.300	.300	.300
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

**NCP**

Model	NCP	LO 90	HI 90
Default model	.000	.000	3.798
Saturated model	.000	.000	.000
Independence model	665.002	583.508	753.893

***FMIN***

Model	FMIN	F0	LO 90	HI 90
Default model	.004	.000	.000	.013
Saturated model	.000	.000	.000	.000
Independence model	2.258	2.224	1.952	2.521

***RMSEA***

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.000	.000	.065	.906
Independence model	.472	.442	.502	.000

***AIC***

Model	AIC	BCC	BIC	CAIC
Default model	25.123	25.614	69.568	81.568
Saturated model	30.000	30.614	85.557	100.557
Independence model	685.002	685.206	703.521	708.521

***ECVI***

Model	ECVI	LO 90	HI 90	MECVI
Default model	.084	.090	.103	.086
Saturated model	.100	.100	.100	.102
Independence model	2.291	2.018	2.588	2.292

***HOELTER***

Model	HOELTER .05	HOELTER .01
Default model	2081	3021
Independence model	9	11

First Order

**Notes for Model (Default model)**

**Computation of degrees of freedom (Default model)**

Number of distinct sample moments: 903  
 Number of distinct parameters to be estimated: 120  
 Degrees of freedom (903 - 120): 783

**Result (Default model)**

Minimum was achieved  
 Chi-square = 1600.292  
 Degrees of freedom = 783  
 Probability level = .000

**Estimates (Group number 1 - Default model)**

**Scalar Estimates (Group number 1 - Default model)**

**Maximum Likelihood Estimates**

**Regression Weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
gei1	<---	GEI	1.000				
gei2	<---	GEI	.693	.040	17.491	***	par_1
gei3	<---	GEI	.617	.031	19.891	***	par_2
gei5	<---	GEI	.545	.040	13.751	***	par_3
gr1	<---	GR	1.000				
gr2	<---	GR	1.050	.089	11.782	***	par_4
gr3	<---	GR	1.098	.090	12.226	***	par_5
gr4	<---	GR	1.263	.096	13.094	***	par_6
gr5	<---	GR	1.108	.096	11.558	***	par_7
js3	<---	JS	1.000				
js4	<---	JS	.924	.067	13.887	***	par_8
gtd2	<---	GTD	1.000				
gtd3	<---	GTD	1.137	.105	10.793	***	par_9

			Estimate	S.E.	C.R.	P	Label
gtd4	<---	GTD	1.200	.105	11.455	***	par_10
gtd5	<---	GTD	1.132	.103	10.956	***	par_11
gtd6	<---	GTD	1.068	.105	10.147	***	par_12
gtd7	<---	GTD	1.117	.099	11.283	***	par_13
em1	<---	EM	1.000				
em2	<---	EM	1.021	.086	11.940	***	par_14
em3	<---	EM	1.205	.103	11.712	***	par_15
em4	<---	EM	1.092	.105	10.435	***	par_16
em5	<---	EM	1.141	.102	11.193	***	par_17
oc4	<---	OC	1.000				
oc5	<---	OC	1.176	.082	14.309	***	par_18
gei4	<---	GEI	.484	.040	12.121	***	par_40
gtd1	<---	GTD	.814	.078	10.434	***	par_41
js6	<---	JS	1.025	.073	14.015	***	par_42
oc1	<---	OC	.773	.077	10.049	***	par_43
oc2	<---	OC	.722	.073	9.929	***	par_44
oc3	<---	OC	.816	.069	11.793	***	par_45
grs9	<---	GRS	1.000				
grs5	<---	GRS	1.078	.077	14.044	***	par_47
grs8	<---	GRS	1.096	.075	14.536	***	par_48
grs7	<---	GRS	.976	.070	14.027	***	par_49
grs6	<---	GRS	1.062	.075	14.252	***	par_50
grs3	<---	GRS	1.001	.077	13.022	***	par_51
grs1	<---	GRS	.879	.050	17.441	***	par_52
grs2	<---	GRS	1.042	.052	20.066	***	par_53
js2	<---	JS	1.090	.065	16.783	***	par_54
js1	<---	JS	1.480	.086	17.191	***	par_55
js7	<---	JS	1.338	.080	16.668	***	par_56
js5	<---	JS	.844	.072	11.767	***	par_57

**Standardized Regression Weights: (Group number 1 - Default model)**

			Estimate
gei1	<---	GEI	.952
gei2	<---	GEI	.760
gei3	<---	GEI	.812
gei5	<---	GEI	.657
gr1	<---	GR	.713
gr2	<---	GR	.734
gr3	<---	GR	.763
gr4	<---	GR	.824
gr5	<---	GR	.719
js3	<---	JS	.794
js4	<---	JS	.739
gtd2	<---	GTD	.664
gtd3	<---	GTD	.724
gtd4	<---	GTD	.783
gtd5	<---	GTD	.738
gtd6	<---	GTD	.680
gtd7	<---	GTD	.765
em1	<---	EM	.669
em2	<---	EM	.682
em3	<---	EM	.816
em4	<---	EM	.702
em5	<---	EM	.766
oc4	<---	OC	.755
oc5	<---	OC	.904
gei4	<---	GEI	.670
gtd1	<---	GTD	.604
js6	<---	JS	.741
oc1	<---	OC	.600
oc2	<---	OC	.596
oc3	<---	OC	.697
grs9	<---	GRS	.800
grs5	<---	GRS	.760
grs8	<---	GRS	.786
grs7	<---	GRS	.760
grs6	<---	GRS	.769
grs3	<---	GRS	.725
grs1	<---	GRS	.736
grs2	<---	GRS	.773
js2	<---	JS	.845
js1	<---	JS	.864
js7	<---	JS	.843
js5	<---	JS	.642

**Covariances: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
GEI	<-->	GR	.531	.096	5.552	***	par_19
GEI	<-->	JS	1.024	.116	8.838	***	par_20
GEI	<-->	GTD	.660	.100	6.605	***	par_21
GEI	<-->	EM	.609	.099	6.132	***	par_22
GEI	<-->	OC	.732	.117	6.264	***	par_23
GEI	<-->	GRS	-.251	.095	-2.639	.008	par_24
GR	<-->	JS	.276	.055	5.006	***	par_25
GR	<-->	GTD	.355	.059	6.068	***	par_26
GR	<-->	EM	.496	.070	7.120	***	par_27
GR	<-->	OC	.208	.060	3.461	***	par_28
GR	<-->	GRS	-.007	.052	-.126	.900	par_29
JS	<-->	GTD	.432	.063	6.861	***	par_30
JS	<-->	EM	.302	.056	5.361	***	par_31
JS	<-->	OC	.350	.066	5.283	***	par_32
JS	<-->	GRS	-.120	.055	-2.185	.029	par_33
GTD	<-->	EM	.322	.057	5.682	***	par_34
GTD	<-->	OC	.275	.061	4.531	***	par_35
GTD	<-->	GRS	-.109	.051	-2.152	.031	par_36
EM	<-->	OC	.235	.060	3.886	***	par_37
EM	<-->	GRS	-.063	.052	-1.216	.224	par_38
OC	<-->	GRS	-.115	.063	-1.816	.069	par_39
e47	<-->	e48	.458	.069	6.609	***	par_46
e46	<-->	e62	.395	.051	7.691	***	par_58
e21	<-->	e23	.227	.055	4.157	***	par_59
e50	<-->	e58	.276	.042	6.642	***	par_60
e53	<-->	e56	-.045	.045	-.992	.321	par_61
e54	<-->	e56	.285	.048	5.891	***	par_62
e50	<-->	e57	.224	.031	7.115	***	par_63
e54	<-->	e57	.231	.034	6.711	***	par_64
e59	<-->	e62	.169	.032	5.190	***	par_65
e14	<-->	e60	-.254	.043	-5.947	***	par_66
e46	<-->	e61	-.184	.038	-4.878	***	par_67
e19	<-->	e45	.164	.052	3.166	.002	par_68
e1	<-->	e4	-.231	.047	-4.939	***	par_69
e25	<-->	e26	.210	.058	3.605	***	par_70
e48	<-->	e49	.178	.050	3.578	***	par_71

**Correlations: (Group number 1 - Default model)**

			Estimate
GEI	<-->	GR	.395
GEI	<-->	JS	.711
GEI	<-->	GTD	.518
GEI	<-->	EM	.468
GEI	<-->	OC	.456
GEI	<-->	GRS	-.168
GR	<-->	JS	.360
GR	<-->	GTD	.522
GR	<-->	EM	.715
GR	<-->	OC	.243
GR	<-->	GRS	-.008
JS	<-->	GTD	.593
JS	<-->	EM	.406
JS	<-->	OC	.381
JS	<-->	GRS	-.140
GTD	<-->	EM	.489
GTD	<-->	OC	.338
GTD	<-->	GRS	-.144
EM	<-->	OC	.283
EM	<-->	GRS	-.081
OC	<-->	GRS	-.120
e47	<-->	e48	.445
e46	<-->	e62	.512
e21	<-->	e23	.320
e50	<-->	e58	.483
e53	<-->	e56	-.061
e54	<-->	e56	.401
e50	<-->	e57	.413
e54	<-->	e57	.383
e59	<-->	e62	.294
e14	<-->	e60	-.424
e46	<-->	e61	-.282
e19	<-->	e45	.211
e1	<-->	e4	-.534
e25	<-->	e26	.257
e48	<-->	e49	.212

*Variances: (Group number 1 - Default model)*

	Estimate	S.E.	C.R.	P	Label
GEI	2.516	.234	10.755	***	par_72
GR	.716	.106	6.776	***	par_73
JS	.824	.101	8.148	***	par_74
GTD	.645	.105	6.146	***	par_75
EM	.672	.109	6.141	***	par_76
OC	1.025	.142	7.239	***	par_77
GRS	.893	.111	8.051	***	par_78
e1	.258	.065	3.989	***	par_79
e2	.885	.079	11.236	***	par_80
e3	.493	.046	10.642	***	par_81
e5	.983	.084	11.751	***	par_82
e6	.694	.066	10.573	***	par_83
e7	.676	.065	10.350	***	par_84
e8	.618	.062	9.977	***	par_85
e9	.541	.061	8.821	***	par_86
e10	.820	.078	10.506	***	par_87
e13	.483	.044	11.028	***	par_88
e14	.586	.053	10.968	***	par_89
e19	.818	.075	10.874	***	par_90
e20	.755	.073	10.412	***	par_91
e21	.587	.062	9.501	***	par_92
e22	.692	.067	10.261	***	par_93
e23	.855	.081	10.596	***	par_94
e24	.569	.058	9.893	***	par_95
e25	.828	.078	10.601	***	par_96
e26	.808	.077	10.502	***	par_97
e27	.489	.058	8.490	***	par_98
e28	.826	.079	10.432	***	par_99
e29	.616	.064	9.574	***	par_100
e33	.772	.080	9.642	***	par_101
e34	.317	.068	4.688	***	par_102
e4	.726	.069	10.566	***	par_103
e45	.742	.066	11.213	***	par_104
e46	.711	.064	11.138	***	par_105
e47	1.090	.097	11.245	***	par_106
e48	.972	.085	11.397	***	par_107



	Estimate	S.E.	C.R.	P	Label
e49	.723	.069	10.477	***	par_108
e50	.502	.048	10.543	***	par_109
e52	.757	.074	10.278	***	par_110
e53	.662	.068	9.740	***	par_111
e54	.622	.058	10.790	***	par_112
e55	.694	.068	10.161	***	par_113
e56	.809	.079	10.255	***	par_114
e57	.585	.052	11.211	***	par_115
e58	.652	.065	10.049	***	par_116
e59	.394	.038	10.418	***	par_117
e60	.611	.065	9.458	***	par_118
e61	.600	.059	10.101	***	par_119
e62	.838	.070	12.042	***	par_120

**Squared Multiple Correlations: (Group number 1 - Default model)**

	Estimate
js5	.412
js7	.711
js1	.747
js2	.713
grs2	.598
grs1	.542
grs3	.525
grs6	.592
grs7	.578
grs8	.618
grs5	.578
grs9	.640
oc3	.486
oc2	.355
oc1	.360
js6	.549
gtd1	.365
gei4	.448
oc5	.817
oc4	.570
em5	.587
em4	.493
em3	.666
em2	.465
em1	.448
gtd7	.586

	Estimate
gtd6	.462
gtd5	.544
gtd4	.613
gtd3	.525
gtd2	.441
js4	.546
js3	.630
gr5	.518
gr4	.678
gr3	.583
gr2	.539
gr1	.508
gei5	.432
gei3	.660
gei2	.577
gei1	.907

**Model Fit Summary**

**CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	120	1600.292	783	.000	2.044
Saturated model	903	.000	0		
Independence model	42	9042.898	861	.000	10.503

**RMR, GFI**

Model	RMR	GFI	AGFI	PGFI
Default model	.092	.803	.773	.696
Saturated model	.000	1.000		
Independence model	.481	.212	.173	.202

**Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.823	.805	.901	.890	.900
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

***Parsimony-Adjusted Measures***

Model	PRATIO	PNFI	PCFI
Default model	.909	.748	.819
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

***NCP***

Model	NCP	LO 90	HI 90
Default model	817.292	706.759	935.574
Saturated model	.000	.000	.000
Independence model	8181.898	7879.858	8490.429

***FMIN***

Model	FMIN	F0	LO 90	HI 90
Default model	5.352	2.733	2.364	3.129
Saturated model	.000	.000	.000	.000
Independence model	30.244	27.364	26.354	28.396

***RMSEA***

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.059	.055	.063	.000
Independence model	.178	.175	.182	.000

***AIC***

Model	AIC	BCC	BIC	CAIC
Default model	1840.292	1880.604	2284.746	2404.746
Saturated model	1806.000	2109.352	5150.516	6053.516
Independence model	9126.898	9141.007	9282.457	9324.457

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	6.155	5.785	6.550	6.290
Saturated model	6.040	6.040	6.040	7.055
Independence model	30.525	29.515	31.557	30.572

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	159	165
Independence model	31	32