
**“A STUDY OF LINKAGES BETWEEN
HUMAN RESOURCE MANAGEMENT PRACTICES
AND
SMEs PERFORMANCE IN VADODARA DISTRICT”**

A Thesis Submitted to Gujarat Technological University

For the Award of

Doctor of Philosophy

in

Management

By

Ms. RANJITA BANERJEE

(Enrolment No. 119997392045)

Under the Supervision of

Dr. RAJESH KHAJURIA



GUJARAT TECHNOLOGICAL UNIVERSITY

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ABSTRACT

“A Study of Linkages between Human Resource Management Practices and SMEs Performance in Vadodara District”

Submitted By: Ms. Ranjita Banerjee, Asst. Professor, CKSV Institute of Management, Vadodara

Supervised By: Dr. Rajesh Khajura, PhD-Management, Director- CKSV Institute of Management, Vadodara

Keywords: SME, linkages, HRM practices, performance, employee outcomes, organizational outcomes

Background: Micro, Small and Medium Enterprises (MSMEs) form the backbone of a developing economy like India, in all spheres of development. It contributes **45% of industrial output, 40% of exports**. The sector produces over 8000 products varying from traditional to hi-tech items employing about 59 million persons in over 26 million units throughout the country. Total employment generated by the MSME sector is over 805 lac, representing around 40% of India’s workforce (MSME Annual Report 2014-15). By promoting SMEs, India can target for inclusive growth by developing rural India alongwith urban India. Thus, the researcher’s interest in taking up a study on SMEs.

Aim: Theories on Human Resource Management are often developed and tested in large organizations. However, studies on HRM within SMEs occur less often. Heneman *et al’s* (2000) study concludes that ‘the lack of information about human resources in SMEs is problematic for theory, research and practice.’ Further, there are a number of studies that conclude that there has been limited work done on HRM practices in the MSME sector Heneman *et al* (2000). Vadodara being a manufacturing and industrial hub, is home to many MSMEs. The lack of prior research in the SME sector motivated the researcher to undertake a detailed study of the prevailing HRM practices in SMEs of Vadodara district, and to find if there exists a linkage between HRM practices and performance of SMEs.

Research Methodology: The research design of the study is a combination of Descriptive as well as Exploratory Research. In the present study, Descriptive Research design involved a pre-planned and structured design by way of quantitative analysis through hypothesis testing and using the survey method through a one-to-one approach. In the present study, a survey had been conducted through primary study of 126 SME firms across the eight Industrial Estates of Vadodara district, comprising of 215 respondents. The 215 respondents in the study comprised of 83 owners (including entrepreneurs, Directors, CEOs, Chairman, Proprietor, Partner) and 132 employees who are Managing Heads like employees from senior management as well as HR Managers/ Supervisors/ Heads of Departments. Mann-Whitney Test, Kruskal-Wallis Test, Structural Equation Modeling and other techniques have been used to analyze the linkages between HR practices and SMEs performance. Additional information was gathered about the real-life related aspects like the problems, challenges or concerns faced by the SME sector as a part of the Exploratory Research to get into the insights of the problem. The number of respondents for the open-ended questions was 45 Managing Heads.

Results and Discussion: As an outcome of the present study, linkages were found between HRM practices and SMEs performance (Employee Outcomes & Organizational Outcomes) in the Vadodara district. The various major HR practices, as well as problems and challenges faced by the SMEs in the Vadodara district across the eight industrial estates were found out.

Conclusion(s): This detailed research across the eight industrial estates of Vadodara district showed linkages between HRM practices and performance of SMEs. The study concludes by establishing that HR Practices positively and directly affects Organizational Performance. It also concludes that Employee Outcomes positively and directly affects Organizational Performance and that there exists covariance between HR Practices and Employee Outcomes.

Scope of Future research: There is significant scope to broad-base this study across SME hubs across the other leading districts of Gujarat as well as other States.

ACKNOWLEDGEMENT

‘Gratitude is the fairest blossom which springs from the soul’- Henry W Beecher

Om Ganpatay Namah... Feeling gratitude and not expressing it is like wrapping a present and not giving it! In my **PhD journey**, a lot of people have helped me to reach the level of PhD Thesis submission...and reach towards the end of the long tedious journey. It is my privilege and opportunity to express my gratitude towards each one of them.

Firstly, I express my deepest gratitude to my **PhD guide Dr. Rajesh Khajuria**, Director, CKSV Institute of Management, whose continuous inspiring and motivating words had kept me over the toes throughout the period. Thankyou Sir for being a rock support during all the DPCs, Research Weeks and throughout the period by giving various ideas to upgrade my entire PhD experience. I also take the opportunity to thank **Mrs. Bela Khajuria** for always inspiring me.

Secondly, my deepest gratitude to my **DPC Members, Dr. Satendra Kumar and Dr. Dalpat Sarupria**, for their expert guidance right from freezing the topic to the final editing of the Thesis. Their constant guidance in the DPC and Research Week helped me to design a road-map for the process. I salute the spirit of knowledge-dissemination of respected **Dr. Satendra Kumar Sir**, who happens to be my Guide’s guide...my privilege to have him as one of my DPC Members and guiding so meticulously, throughout.

Next, I would like to say a BIG THANKYOU to **my father Sh. Manoranjan Barari (Banerjee)**, who accompanied me in each of the SMEs I visited during my survey period of almost one year, as they were all different and new Industrial Estates, and I knew no one. Thankyou baba for your patience and encouragement throughout the period. I would like to thank my **dear mother Mrs. Karobi Barari (Banerjee)** who would proudly say everyone that ‘...my daughter is doing

Doctorate!' Thankyou ma for being even more enthusiastic than me to complete my PhD!

A BIG THANKYOU to my Big B, my elder brother, **Mr. Ranjan Banerjee**, for his very scrupulous observation to improve my study. Thank you so much to teach me so many things in Excel and Word so that my representation could be more palatable and logical. A big thankyou to my dear sister-in-law **Ms. Romy Banerjee** and my lovely niece **Rishika Banerjee**, to always enquire from Mumbai about my progress. It encouraged me a lot!

Next, I express my deepest gratitude to **all the SME owners and Managing Heads** who were my **respondents** and spared their valuable time to fill the five page questionnaire as well as to interact with me. The study could not have completed had you all not permitted me to undergo the survey. Hats off to the attitude shown by the entire fraternity.

I would like to express my special THANKS to **Dr. Dhaval Maheta** and **Dr. Hitesh Parmar** of South Gujarat University, for the Research workshops conducted by them and the teachings shared by them, which helped to have a great clarity of the entire Research Methodology, which earlier seemed to be very complicated. My special THANKS to **Dr. Sunita Sharma** of M S University, who had helped me a lot to enhance the HR perspective in my study. Thankyou!

I was privileged to have got the full support of the various industry Associations of Vadodara...the **DIC Office, VCCI Office** as well as **FSSI**. My special thanks to **Sh. Nilesh Shukla** and **Sh. Antani** of VCCI and **Sh. Vinod Desai** and **Sh. Chandrakant Jagtap** of the FSSI Office to have given me the direction of the various industrial estates to start my pilot-study. I express my deepest gratitude to **Mr. Hemal Vasavda**, for converting the Questionnaire for employees in Gujrati script, during the pilot-study, which was of great help.

I express my gratitude to my **PhD batch-mates** and **peers**, who started the PhD together, and the way we helped and motivated each other...**Mrs. Preeti Singhal, Mrs. Savitha K, Mr. Sameer Rohadia** and **Mr. Prakash Patel**. Thankyou...at

last we all came towards the end of PhD! My gratitude to **Dr. Kerav Pandya** and **Dr. Kunjal Sinha**, for their guidance. My gratitude to especially **Mrs. Anjali Bhadsavle**, **Mr. Hitesh Thakkar**, **Mr. Chetan Patel** and **Mrs. Reshma Mulye** for arranging the DPC Meetings throughout the five year period, as well as maintaining all my PhD documents so carefully and for all the assistance during the process. I would also like to thank **all my students** during the entire process of PhD, with whom I shared my primary industry experiences.

I express my heartfelt gratitude to my Institute **Shree Mahavir Jain Vidyalay (SMJV) Trust** which supported me throughout the process and gave a **Scholarship amount of Rs. 10,000/-** to all the Research Scholars, who are pursuing PhD under the **PhD Research Centre, CKSVIM**, headed by **Dr. Satendra Kumar**. This was a great gesture shown by an educational institute and Trust to motivate the Research Scholars. I am also deeply indebted to **Gujarat Technological University** and the **PhD Section** in particular, for undergoing a vigilant process of the PhD Program and for helping us to work with deadline. My deepest indebtedness to my **PhD Examiners** for their meticulous evaluation.

Lastly, I thank the **Almighty, Goddess Saraswati, Goddess Durga, Bapa...**without whose blessings I could never have completed my Thesis in the present state. Please always bestow your blessings on me and my family always.

Lastly, I thank all, who have helped me directly or indirectly, and request them to pardon me for not being able to mention the names separately, but who will always be remembered and cherished. At the end, I would like to say '*Micchaami Dukdamm*', if knowingly or unknowingly I have hurt anyone during the process of my study, I fervently request them to pardon me. The Acknowledgement pages may have exceeded a little, but an extensive work like PhD, is not possible without the help and blessings of many people...and not expressing it is like wrapping a present and not giving it! I feel lucky to have been a part of this experience!

Thankyou All and Happy Reading!

- Ranjita Banerjee

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LIST OF ABBREVIATIONS

Abbreviations	Full-Forms
MSME	Micro, Small & Medium Enterprises
MSMED Act	Micro, Small & Medium Enterprises Development Act
GDP	Gross Domestic Product
MoSPI	Ministry of Statistics and Programme Implementation
SEM	Structural Equation Modeling
CSO	Central Statistics Office
EM	Entrepreneurs Memorandum
MSEFC	MSE-Facilitation Council
VCCI	Vadodara Chamber of Commerce and Industry
GCCI	Gujarat Chamber of Commerce and Industry
FSSI	Federation of Small Scale Industries
ERP	Enterprise Resource Planning
DMIC	Delhi-Mumbai Industrial Corridor
PSU	Public-Sector Unit
MSE	Medium Scale entrepreneurs
SIDC	State Industrial Development Corporations
NSIC	National Small Industries Corporation
SIDO	Small Industries Development Organization
SIDBI	Small Industries Development Bank of India
SEZ	Special Economic Zones

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CHAPTER – 1

Introduction, Definition of Terms and Structure of Thesis

1.1. Introduction

Economies worldwide have emphasized on the over-arching role of Small & Medium Enterprises (SMEs) for achieving economic growth and development...mainly due to the sector being one of the most ‘vibrant’. Micro, Small and Medium Enterprises (MSME) sector in India has emerged as a highly vibrant and dynamic sector. Estimated to employ over 805 lac individuals, this sector provides large employment opportunities at comparatively lower capital cost as compared to large industries, and helps in industrialization of rural and backward areas. It thus helps to reduce regional imbalances, encourages decentralization, assures inclusive growth and equitable distribution of national income and wealth. In addition, the SMEs are complementary as well as supplementary to large industries as ancillary units and thus the sector contributes enormously to the socio-economic development of the country.

The Report of the Committee on India Vision 2020, Planning Commission of India (2002), affirms that International experience confirms that SMEs are better insulated from the external shocks, more resistant to the stresses, and more responsive to the demands of the fast-changing technology adoption, globalization and entrepreneurial development.

Micro, Small & Medium Enterprises (MSME’s) form the backbone of a developing economy like India, in all spheres of development viz. economical, technological, regional, socio-cultural, political and global. The share of MSME sector in total GDP was

about 38% (precisely 37.54%) in 2012-13, according to the MSME Annual Report 2015-16. SMEs form the genesis of several innovations in manufacturing and service sectors and also the major link in the supply chain to corporate houses and the PSUs. According to the MSME Annual Report 2015-16, the share of MSME manufacturing output in total manufacturing output in 2012-13 was 37.33%.

To exemplify the quantum of opportunities held by this sector, it would be worthwhile to note that in India, MSMEs contribute **45% of industrial output, 40% of exports**. The sector produces over 8000 products varying from traditional to hi-tech items employing about 59 million persons in over 26 million units throughout the country (MSME Annual Report 2014-15). The total cumulative employment in the Khadi and Village Industries (KVI) sector is estimated to have increased to 15.5 million persons in 2015-16 as against 13.4 million persons in the corresponding period of the previous year, according to the MSME Annual Report 2015-16. With India on a strong growth path, the MSME sector is expected to create 100 million jobs over coming years. The Government also envisages major labour reforms in order to ease manufacturing in India. All this creates significant incentive and opportunity to examine the prevailing HRM practices and extract maximum potential from this sector.

Theories on Human Resource Management are often developed and tested in large organizations. Studies on HRM within SMEs occur less often. The majority of publications on HRM within small and medium-sized enterprises are based on qualitative studies. Heneman *et al.* conclude that ‘the lack of information about human resources in SMEs is problematic for theory, research and practice’ (Heneman *et al.*, 2000). There is dearth of information about human resource management practices in MSME’s (Chandler and McEvoy, 2000; Heneman and Tansky, 2003)...thus, the researcher’s interest in undertaking the study and finding the linkages between HRM practices and the business performance of MSME’s with special reference to SME’s in Vadodara district.

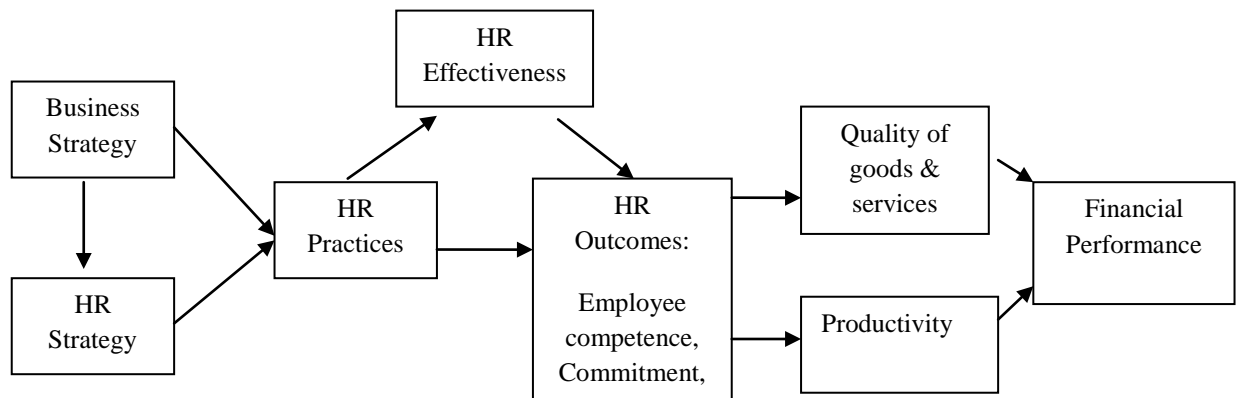
In the present study, the samples are selected from **eight Industrial Estates** out of a total of 12 Industrial Estates (**ie. 67% of Industrial Estates**) in Vadodara District. The eight Industrial Estates comprise of **GIDC Makarpura, Sardar Estate, Patel Estate, Gorwa**

BIDC Industrial Estate, Chhani Estate, Mujmahuda (Sahjanand), Vadodara City area and Padra Industrial Estate.

1.2. The Linkage between HRM and Performance-Introduction

The study of Human Resource Management (HRM) is concerned with the choices that organizations make from among the plethora of policies, practices and structures for managing employees. Nevertheless, in a more strategic sense, HRM is explained in terms of carefully designed combinations of practices and policies geared towards improving organizational effectiveness, resulting into better performance outcomes. As Wright and McMahan (1992) define HRM as ‘the planned HR deployments and activities intended to enable an organization to achieve its goals’. They have proposed that it is the pattern of HR practices that contribute to firm performance and goal attainment.

The present study encircles the strategic linkage between HRM and performance. The representation of the HRM-performance relationship put forward by Guest *et al* (2000), as shown in Figure 1.1, serves as a useful visual representation of this strategic linkage.



(Source: Guest *et al*, 2000)

Figure 1-1 - Model of the Link between HRM and Performance

1.3. Significance of the Study

The study is significant because the following results have been achieved from the study:

1. To understand the **linkages between HRM practices and SME's performance in Vadodara district**. Although a lot of studies have been done in the large enterprises regarding the linkages between performance and human resource management practices, there is dearth of such studies in SMEs. The findings in the study will contribute to theory building in the areas of linkages between HR practices and performance in the SME sector.
2. Investigate the **current state of HR practices** in the SMEs in the Vadodara district. HRM practices in the large-sized firms have been widely studied. But unlike large-scale firms, research indicates that HRM practices like recruitment, motivation and retention are one of the biggest problems for small firms (Gatewood and Field 1987, Hornsby and Kuratko 1990). Thus, the present study is significant as it tries to find the HRM practices which are practically prevalent in the SME firms in the Vadodara district.
3. **Identify the important HR practices** practiced in the SMEs. The HR practices which are mostly practiced by a majority of the SME firms across the various estates have been identified. These practices will be seen as important HR practices in the SMEs. The findings in the study will contribute to theory building in the areas of HR practices in the SME sector.
4. Identify the **problems and challenges** faced by the entrepreneurs/ Managing Heads of the SMEs in general. The SME owners and Managing Heads face a plethora of problems from various facets of the internal and external environment. The study will help in understanding such problems of the SME firms through open discussions and interactions with the SME owners/ Managing heads to get a real understanding of the sector. This will surely help in a good theoretical framework as well, opening the doors for future research.

5. **Identify the major policies as well as new policy initiatives prevalent in the SMEs.** A detailed study of the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, has been done including all the new initiatives undertaken by the government as well as other bodies, obtained from various secondary sources of data, to get an understanding of the real scenario. This is significant as it may help budding entrepreneurs who wish to start a factory of a small or medium size to get some directions about the policy initiatives in a single platform.
6. Understand the various Functional areas prevalent in the SME sector, with special focus on Human Resource Management.
7. Recommendations for improvising the SME sector, being one of the most vibrant sectors in the economy. The study is significant also from the context as several recommendations have been given, based on the research undertaken and from the findings of the study, which can be imbibed by SME owners/ Managing heads/ Chambers of Commerce and Industry as well as industry associations to improvise the SME sector.

1.4. Definition of Important Terminologies

The definition of the following terminologies have been outlined in this section of the thesis.

The following terminologies have been defined as under:

1.5. Micro, Small & Medium Enterprises (MSMEs)

Government of India under the Ministry of Micro, Small and Medium Enterprises have in October 2006 enacted Micro, Small and Medium Enterprises Development (MSMED) Act 2006.

The concept of ‘Enterprise’ as against ‘Industries’ was elaborated in the way that ‘enterprises’ can be broadly classified into:

- Enterprises engaged in manufacturing production of goods pertaining to any industry
- Enterprises engaged in rendering of some service

For the **Manufacturing Enterprises** it was defined in terms of investment in plant and machinery (excluding land and buildings), whereas for the **Service Enterprises** it was defined in terms of their investment in equipment. Under the Act, Micro, Small and Medium Enterprises are classified as shown in Table 1.1 (MSME Annual Report 2009-10).

TABLE 1.1 - Micro, Small and Medium Enterprises Defined

Enterprises	Investment in Plant & Machinery (Manufacturing)	Investment in Equipment (Services)
Micro	Up to Rs. 25 lakhs	Up to Rs. 10 lakhs
Small	Above Rs. 25 lakhs up to Rs. 5 crore	Above Rs. 10 lakhs up to Rs. 2 crore
Medium	Above Rs. 5 crore up to Rs. 10 crore	Above Rs. 2 crore up to Rs. 5 crore

(Source: MSME Annual Report 2014-15)

The researcher in the present study has focused only on Small and Medium Enterprises only. Micro enterprises are excluded from the purview of the study.

1.6. Human Resource Management Practices

It is deduced by HR commentators and practitioners that there can be no universal prescription for HRM practices and policies. It is basically based on the business needs of the firm within its context (culture, structure, technology and processes) (Armstrong Michael, 2006). Thus, 'best fit' is more important than 'best practice'. Thus, various 'best practice' ingredients of various successfully running benchmarked organizations can be picked and mixed to develop an approach that aligns most appropriately to the identified business needs of the firm. Human Resource Management Practices can thus be said to be a bundle of such practices which are found to enhance the productivity and efficiency of the employees.

Good HRM practices leads to effective manpower planning, reducing the selection-errors; managing people effectively through an open Performance Management System (PMS); creating good Performance Development Plans (PDPs) for its employees; developing their staff through proper coaching, mentoring, training and development; developing an effective Compensation Management System which enables better retention of its staff as well as has good motivational strategies to keep its staff vibrant and effective. In small enterprises owner managers are responsible for decisions related to human resources. Their managerial style has a direct influence on the HRM practices (Koch de Kok, 1999).

Based on Literature Review (Paauwe & Richardson, 1997; Guest, 1997), the **major HR practices** identified in the present study are:

- Recruitment and Selection
- Training and development
- Performance Management System
- Employee participation
- Employee decision-making
- Welfare Measures

1.7.Firm's Performance

The performance outcomes of a firm can be captured in variety of ways. The distinction adopted by Dyer and Reeves (1995) proposed that measures of performance could be broken down into four categories:

- Employee outcomes, which deals with the consequences of the practices on employees (eg. Attitudes, behaviour, absenteeism and turnover etc).
- Organizational outcomes, focus on more operational measures of performance (eg. productivity, quality and shrinkage)
- Financial/ Accounting Outcomes, which refers to the actual financial performance measures (eg. expenses, revenues and profitability) and finally,

- Market-based outcomes, which reflect how the financial markets value a firm, particularly through its stock price or variations of it.

The **Performance dimensions** identified in the study based on literature review (Dyer & Reeves, 1995; Paauwe & Richardson, 1997) are:

- **Employee Outcomes** like Competence, Employee attitudes (commitment, co-operation); Employee behaviour (Regularity, Punctuality, Discipline); Employee-involvement.
- **Organizational Performance Outcomes** (like Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Quality, Utilization of resources, Reduction of defects, % change in Net Profit Margin, ROI (in % Average performance of 2 yrs)

1.8.Managing Heads

The respondents in the present study are the owners / entrepreneurs of the SME firms as well as the employees of the firms including Managing Heads of the SMEs/ heads of any of the functional areas of the SMEs like HR, Accounting, Finance, Production or simply the Supervisor. It has been observed in the SMEs that the person designated as ‘Supervisor’ or ‘Manager’ is responsible for all or many of the functional areas of SMEs. He is the person whom all the labours report about their daily work or problems or issues. Thus, a person designated as ‘Supervisor’ or ‘Manager’ also is a Managing Head under the purview of the study.

The present study ascertains the major HRM Practices and performance dimension of the SMEs in Vadodara district through a survey of 126 SME firms of the 8 Industrial Estates (out of total of 12 Estates), respondents being 215 Managing Heads.

1.9. Structure of the Thesis

Chapter 1 gives an overview of the general introduction, rationale of the study, significance of the study and also definition of important terminologies.

Chapter 2 provides a detailed overview of the Micro, Small and Medium Enterprises (MSMEs) and its inter-play and importance for economic stability and inclusive growth. The chapter displays various statistical data from the secondary sources regarding the essence of the MSME sector in the economy. Chapter 3 discusses the MSMEs in Gujarat State, with special reference to Vadodara district.

Chapter 4 discusses the various functional areas of SMEs with special reference to HRM function. Chapter 5 does a detailed discussion of the new policy initiatives as well as the applicability of the Micro, Small and Medium Enterprises Development (MSMED) Act 2006. Chapter 6 does a detailed literature review of the various aspects like HRM practices, performance as well as the linkages between HRM practices and firm's performance, with special reference to small and medium enterprises.

Chapter 7 discusses the Research Methodology including the hypotheses. Chapter 8 discusses on Quantitative data analysis and interpretation. Chapter 9 discusses on the problems and challenges identified through interviews and interactions. Chapter 10 talks about the findings and discussions. The last chapter, Chapter 11 contains the conclusions of the study; it also discusses on the limitations of the study, recommendations as well as implications for future research in the direction.

Figure 1.2 provides a detailed schematic structure of the thesis.

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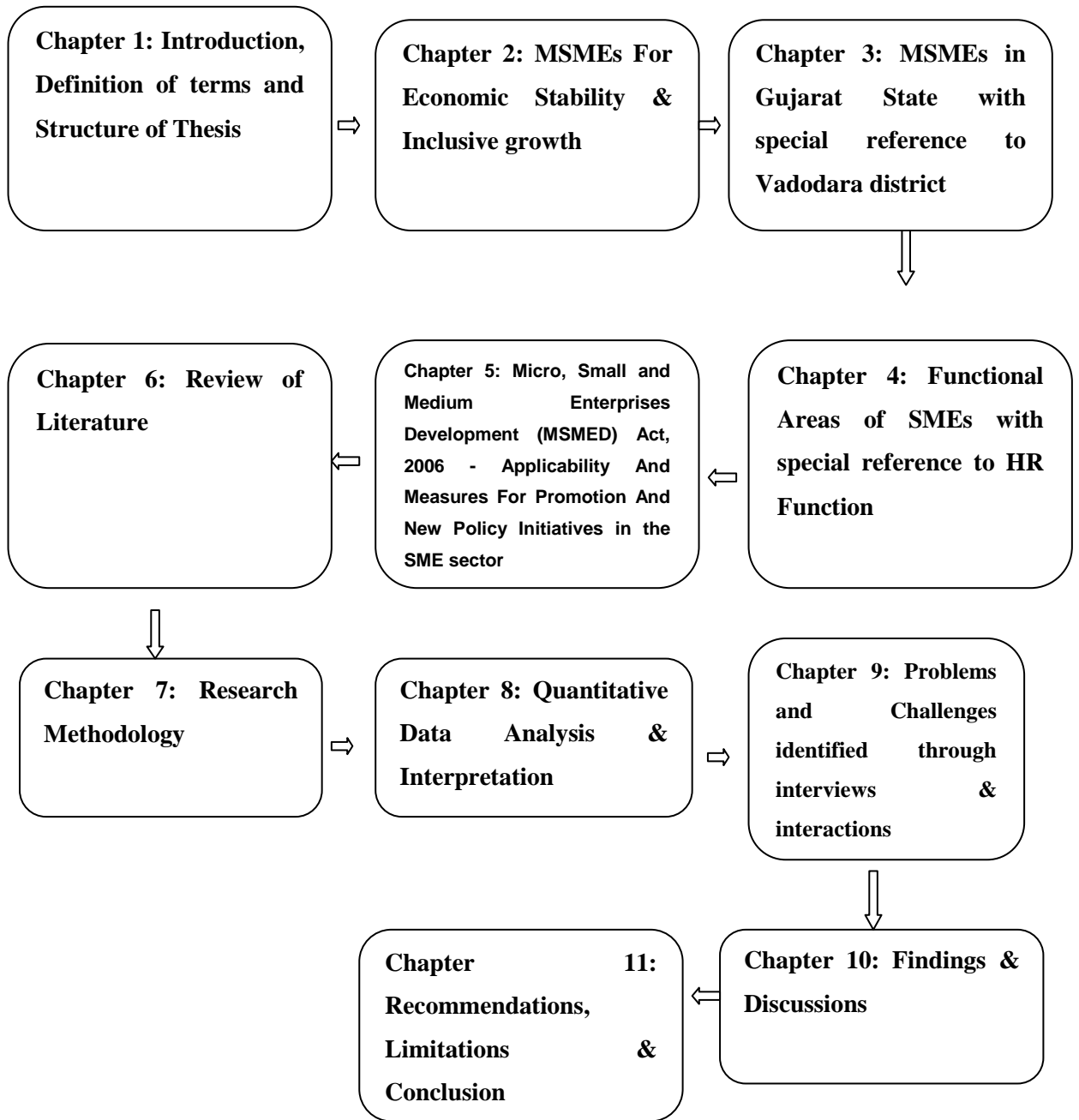


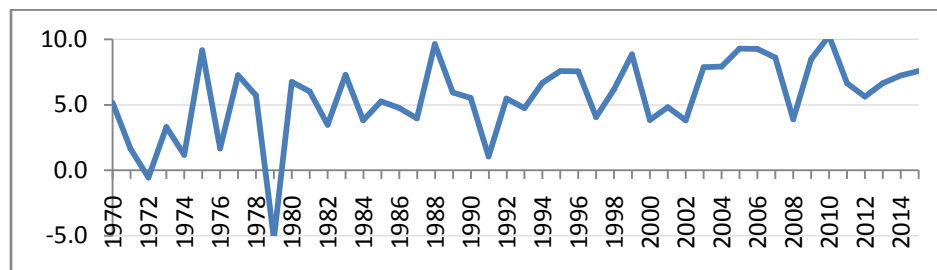
Figure 1-2 Schematic Structure of the Thesis

CHAPTER – 2

Micro, Small And Medium Enterprises-for Economic Stability and Inclusive Growth

2.1.India's Economy....The Background

India has a diverse economy encompassing traditional village farming, modern agriculture, handicrafts, a wide range of modern industries and a multitude of services. GDP Annual Growth Rate in India averaged 6 percent from 1951 until 2015, reaching an all time high of 11.40 percent in the first quarter of 2010 and a record low of -5.20 percent in the fourth quarter of 1979. In 2009 it displayed less economic growth mainly due to the global recession, however, India weathered the 2008 crisis well. Holistic development in India is possible only with the joint functioning of the Public and Private sector both, alongwith the combined efforts of the large, medium, small and micro enterprises, across various sectors. (Figure 2.1 shows India's GDP Annual Growth Rate).



(Source :World Bank, <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=IN>)

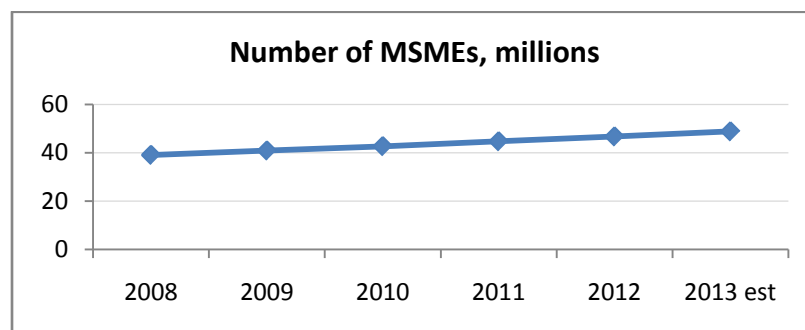
Figure 2-1 : India GDP Annual Growth Rate

2.2.MSME-for Economic Stability and Inclusive Growth

The Micro, Small and Medium Enterprise Sector, better known as MSME, has emerged as one of the most dynamic and vibrant sectors not only in the Indian economy, but in the global economy as well. It has been accepted as the engine of economic growth and for promoting equitable development. The MSME's constitute over 90% of the total enterprises in most of the economies and are credited with generating the highest rates of employment growth and account for a major share of industrial production and exports.

It is worthwhile to note that India's 1.3 million MSMEs contribute 45% of industrial output, 40% of exports and 42 million in employment. The sector creates 1 million jobs every year and produces more than 8000 quality products for the Indian and international markets. (MSME Annual Report 2014-15). SMEs play a critical role in generating millions of job opportunities especially at the low-skill level. The concern, however is, that SMEs in India, due to their low scale and poor adoption of technology, have very poor productivity.

Although they employ 40% of India's workforce, they only contribute 17% to the Indian GDP. One of the reason is probably, that too many firms stay small, unregistered and unincorporated in the unorganised sector so that they can avoid taxes, regulations and receive subsidies. "The firms have little incentive to invest in upgrading skills of largely temporary workers or in investing in capital equipment," says the Economic Survey 2015. Figure 2.2 corroborates this belief.



(Source:http://articles.economicstimes.indiatimes.com/2013-06-09/news/39834857_1_SMEs)

Figure 2-2 SME Growth From 2008 To 2013

2.3. Some Important Statistical Inferences Related to SMEs

This Section of the chapter discusses some important statistical facts and inferences of this vibrant sector MSMEs, gathered from various secondary sources.

2.3.1. Contribution of Manufacturing Output of MSMEs in GDP

The MSME sector is a nursery of entrepreneurship, often driven by individual creativity and innovation. As per the revised methodology suggested by Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MoSPI), the estimated contribution of manufacturing sector MSME to GDP, during 2012-13, is 7.04%. However, taking into account the contribution of services sector MSME, the share of MSME sector in GDP of the country, during 2012-13, is 37.54%. The labour to capital ratio in MSMEs and the overall growth in the sector is much higher than in the large industries. The geographic distribution of the MSMEs is also more even. Table 2.1 shows the contribution of MSMEs in manufacturing output and GDP.

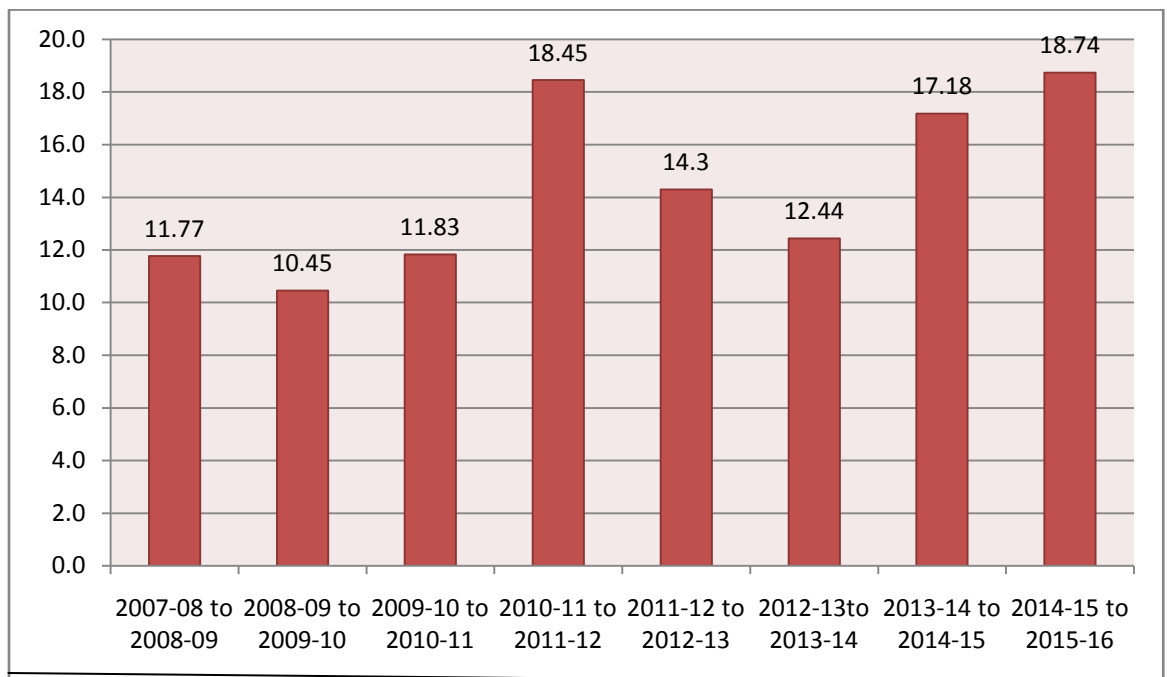
TABLE 2.1- Contribution of MSMEs In Manufacturing Output & GDP

Year	Gross Value of Output of MSME Manufacturing Sector (Rs. in '000 crore)	Percentage Share of MSME	
		Total Manufacturing Output in %	Share of MSME Sector in total GDP in %*
2006-07	1198.8	42.02	35.13
2007-08	1322.9	41.98	35.41
2008-09	1375.7	40.79	36.12
2009-10	1488.4	39.63	36.05
2010-11	1655.6	38.48	36.69
2011-12	1790.8	37.52	37.97
2012-13*	1810.0	37.33	37.54

(Source: Compiled from MSME Annual Report 2013-14& * MSME Annual Report 2015-16)

2.3.2. Trends in MSME Growth

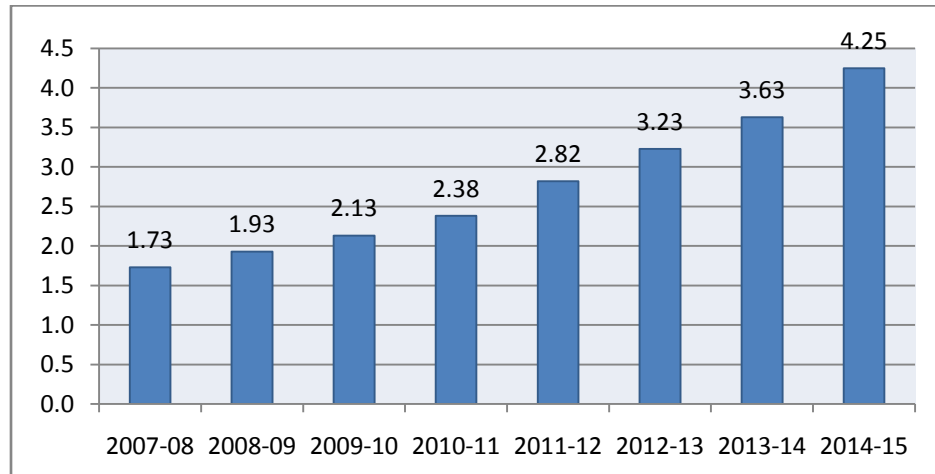
MSMEs has shown constant growth rate of more than 11% every year till 2010-11. The highest growth in recent time was recorded during 2011-12 (18.45%), whereas during year 2012-13 and 2013-14 growth rate was around 14% and 12%, respectively. However, recent data for 2015 i.e., from April-September, 2015 showed impressive growth of 18.74% (year-on-year growth) (Refer Figure 2.3).



(Source: MSME Annual Report 2015-16, Govt. of India)

Figure 2.3 - All India Growth Rate of MSMEs (%)

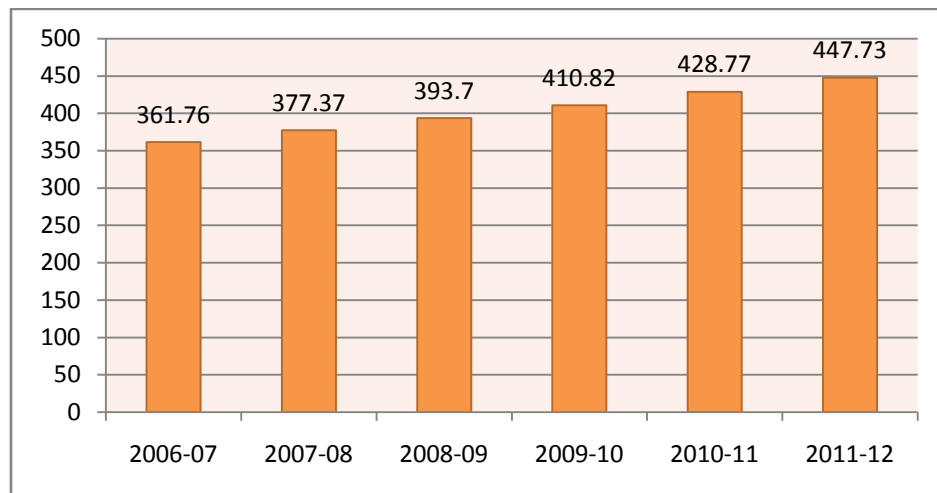
Figure 2.4 shows the number of Entrepreneurs Memorandum (EM-II) filed during 2007-08 to 2014-15, which shows a remarkable increase from 1.73 lakh in 2007-08 to 4.25 lakh in 2014-15.



(Source: MSME Annual Report 2015-16, Govt. of India)

Figure 2.4- Number of EM-II Filed During 2007-08 To 2014-15 (lacs)

Figure 2.5 depicts the number of working enterprises over the period from 2006-07 to 2011-12, which also shows a remarkable increase in the number of MSME firms.

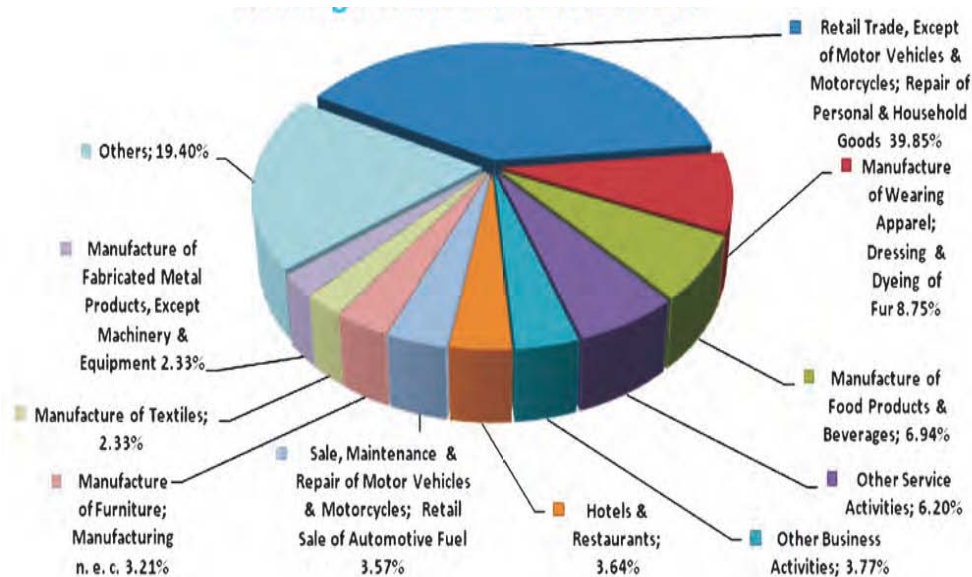


(Source: MSME Annual Report 2012-13, Govt. of India)

Figure 2.5- Number of Enterprises in MSME Sector (lacs)

2.3.3. Leading Industries in MSME Sector

There are over 6000 products ranging from traditional to high-tech items, which are being manufactured by the MSME sector in addition to providing wide range of services. The leading industries across the various sectors with their respective shares are as depicted in Figure 2.6.

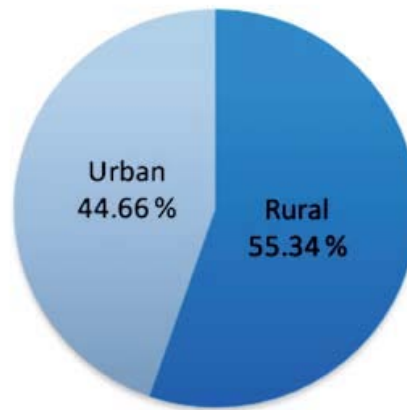


(Source: MSME Annual Report 2014-15)

Figure 2.6- Leading Industries in MSME Sectors

2.3.4. Distribution of Working Enterprises by Area

The distribution of working SME enterprises by area in the latest Census Survey indicated that rural area with 200.19 lakh of working enterprises accounted for 55.34% of the total working enterprises in MSME sector whereas urban area located 161.57 lakh working enterprises (i.e. 44.66% of the working enterprises in MSME sector) were from urban area (Refer Figure 2.7).

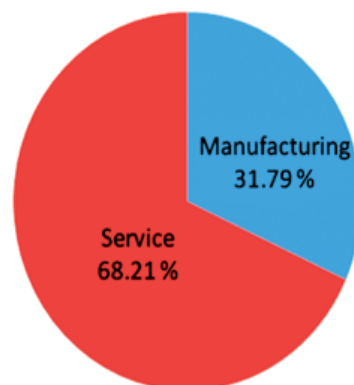


(Source: MSME Annual Report 2013-14)

Figure 2.7 - Distribution of Working Enterprises by Area

2.3.5. Nature of Activity

The nature of activity of MSMEs depicts that 31.79% of the enterprises in the MSME sector were engaged in manufacturing, whereas 68.21% of the enterprises were engaged in the services. As per the revised methodology suggested by Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MoSPI), the estimated contribution of manufacturing sector MSME to GDP, during 2012-13, is 7.04%. However, taking into account the contribution of services sector MSME, the share of MSME sector in GDP of the country, during 2012-13, was 37.54%. (Refer Figure 2.8)

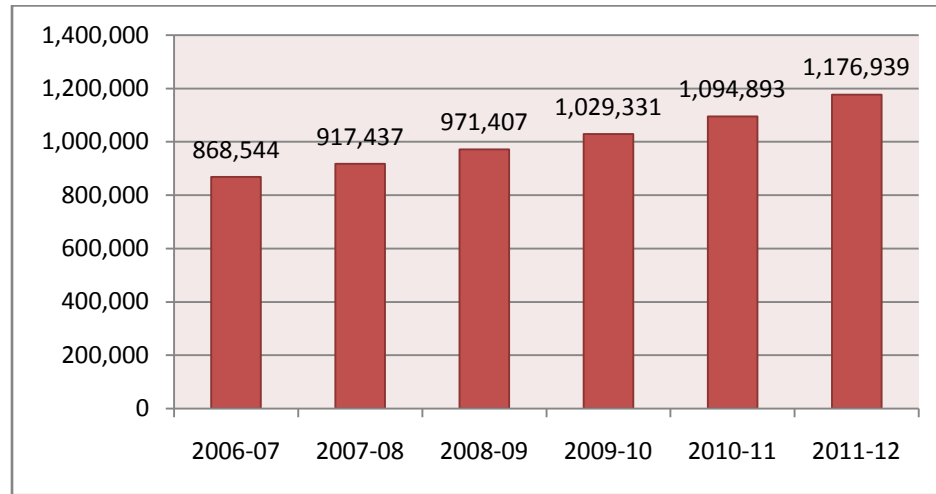


(Source: MSME Annual Report 2013-14)

Figure 2.8 - Activity-wise : MSMEs

2.3.6. Fixed Assets in MSME Sector

The market value of fixed assets of MSMEs from the period 2006-07 to 2011-12 shows a remarkable increase from Rs. 8,68,543crores to Rs.11,76,939 crores. (See Figure 2.9)

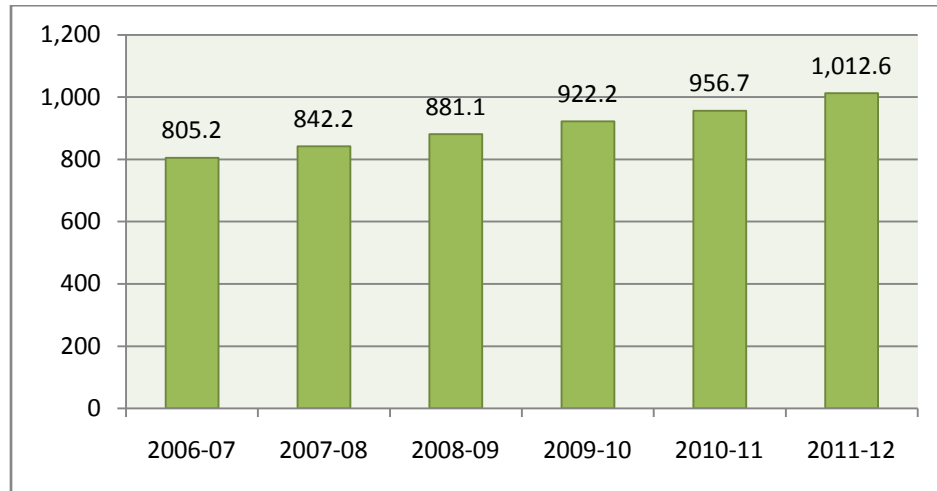


(Source: MSME Annual Report 2012-13)

Figure 2.9 - Market value of Fixed Assets (Rs crores)

2.3.7. Contribution of MSMEs in Employment

The Government monitors the employment in the MSME sector in the country by conducting All India Census of the sector, periodically. As per the latest Census (Fourth Census), as well as data extracted from Economic Census 2005 conducted by CSO, MoSPI, for activities excluded from Fourth Census, namely wholesale/retail trade, legal, educational & social services, hotel & restaurants, transports and storage & warehousing (except cold storage), the total employment in the MSME sector is 1012.59 lakh in 2011-12. Figure 2.10 shows the contribution of MSME's in employment. The estimated numbers of enterprises and employment, as per Fourth All India Census of MSME, have increased at an annual compound growth rate of 28.02% and 26.42% respectively as compared to third All India Census of SSI, during the period 2001-02 to 2006-07.

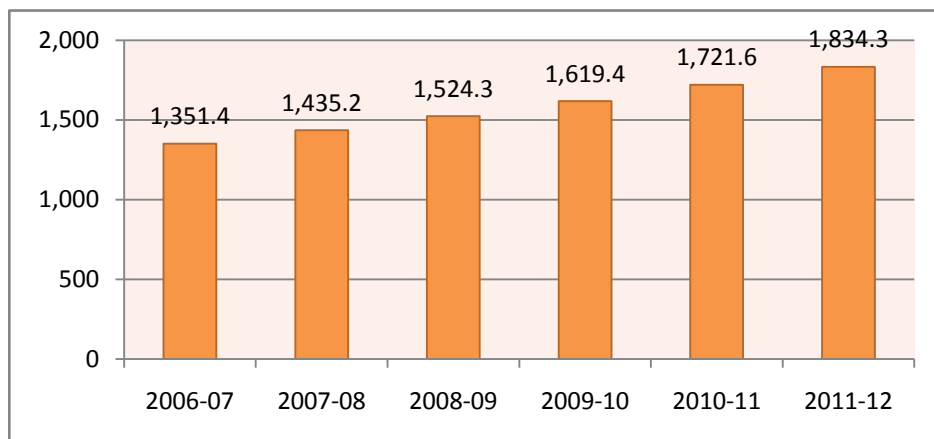


(Source: MSME Annual Report 2012-13, Govt. of India)

Figure 2.10 - Contribution of MSMEs in Employment (nos, lacs)

2.3.8. Gross Output in MSME Sector

From Figure 2.11 it can be deduced that the MSME sector holds a very significant position for the country's growth and development by virtue of its contribution in Gross Output. Thus, MSMEs are immensely important for the national objectives of growth with equity and inclusion.



(Source: MSME Annual Report 2012-13)

Figure 2.11 - Gross Output, Rs '000 crore

2.4. MSMEs for Economic Stability and Growth

You Jong (1995) stated that different countries with different endowments have different comparative advantages in the production of goods by MSMEs or by Large Enterprise (LEs). In some countries they can be produced efficiently by LEs while in other countries they are most economically produced by MSMEs. He concluded that whether a good can be manufactured most economically in MSMEs or in LE's (Large Enterprises), would depend on three things: type of goods produced, kinds of raw materials and other endowments used, and methods of production adopted.

Castel-Branco, C (May 2003) had however a different opinion in contrast to the general belief of SME driven development. He criticized standard approaches to SME driven development, with incidence on LDCs. He opined that for those who think that promotion of SMEs creates a fairer and more democratic capitalism, they should rather look at comparable working conditions, trade union organization, ability to implement (and also oppose) progressive labour legislation.

Eshetu Bekele & Mammo Muchie (2009) on a 6-year follow-up study of a random sample of 500 small businesses selected from five major cities of Ethiopia, identified key predictors of viability and long term survival. They deduced that promoting Micro, Small and Medium Enterprises (MSMEs) is required for sustainable rural livelihood. This study showed that MSME's have the potential to fill the gap by alleviating extreme poverty among the masses, and by generating employment opportunities for the poor.

An article in the leading new-paper Times of India, titled: "SMEs to become partner vendors of large EPC" (19th June 2016) deduced that EPCs (i.e Engineering, Procurement and Construction) companies will need the support of credible SMEs which can prove to be reliable suppliers to them, to achieve a compounded annual growth rate of 20.26% over the period of 2014-2019.

2.5.Summary of the Chapter

The Chapter highlights the essence of MSMEs in an emerging economy like India. The various reviews suggest that SME's across the globe plays a very crucial role in the development, growth as well as for sustainability of the economy.

The private sector including MSME's, the corporate sector and the government, at large, all have a critical role to play in achieving the objective of faster and inclusive growth in the economy. The MSME sector plays a very vital role here in bringing in regional and balanced growth and economic stability. Thus, it plays a major role in curbing the vicious circle of poverty, unemployment and illiteracy (as a trickle down benefit, by curbing the first two problems).

CHAPTER – 3

MSMEs in Gujarat State-With Special Reference to Vadodara District

3.1.Introduction

Gujarat is India's one of the most developed states. It is India's seventh largest state in terms of geographical area. The State constitutes 6.2% of the size of the country. It accounts for 4.93% of India's population, according to the 2011 Census, with over 60 million people. According to the 2011 Census, the sex ratio is 918 and Literacy Rate is 79.3 (Male 87.2, while Female 70.70). The Human Development Index is 0.527, which makes it in the eleventh rank in the country (Census 2011, HDI Report).

Since its formation as a separate state, way back in 1960s, Gujarat has always been known for its industrial development. As per the results of the Annual Survey of Industry (2009-10), Government of Gujarat , Socio-economic Review (2010-11) carried out by the Central Statistical Organization (CSO), Gujarat accounts for 18% of fixed capital investment, 17.22% of gross output and 15.20% of net value added in industrial sector in India. This Survey further reinforced the position of Gujarat as the most industrially developed state in India in respect of first ranking in industrial investment and second in terms of value of production and value addition in industrial sector.

District Industries Centers (DICs) in all the districts of the state and the institutions such as Gujarat Industrial Development Corporation (GIDC) and Gujarat State Financial Corporation (GSFC) have been instrumental in accelerating the pace of development of SSIs. The Small and Medium Enterprises as classified by the MSMED Act 2006, are

required to file Entrepreneurs Memorandum (EM) Part-I to District Industries Centre for starting an industrial project. On completion of the project, the entrepreneur concerned is required to file Entrepreneurs Memorandum (EM) Part-II. On line submission & Processing of EM-I & EM-II has been made available in website w.e.f. 01/07/2013.

3.2.Growth of MSMEs in Gujarat

There were only 2169 small industries in 1961 at the time formation of the state. This number increased to manifold over the years, due to the congenial business environment and entrepreneurial spirit in the State.

3.2.1. Growth of MSMEs Registration in Gujarat

There are 261760 MSMEs Registered in Gujarat till March 2014. Tables 3.1 and Table 3.2 presents the details of the year wise and district-wise registrations of MSMEs in Gujarat from 2-10-2006 to 31-3-2014, respectively.

TABLE 3.1 - Growth in registrations of MSMEs

Year wise Registered MSMEs in Gujarat	
Year	No of units
2006-2007	4,131
2007-2008	13,186
2008-2009	17,867
2009-2010	19,993
2010-2011	27,940
2011-2012	51,781
2012-2013	68,235
2013-2014	58,627
Total	261,760

(Source: Industries Commisionerate, Gov of Gujarat; http://ic.gujarat.gov.in/?page_id=414)

TABLE 3.2 - District-wise Number of MSMEs in Gujarat

Sr. No.	District Name	No of Units	No. of SSI Units (% Share)
1	Ahmedabad	69,014	26.36
2	Amreli	943	0.36
3	Anand	2,511	0.95
4	Banaskantha	1,370	0.52
5	Bharuch	5,431	2.07
6	Bhavnagar	4,389	1.67
7	Dahod	456	0.17
8	Dang	5	0
9	Gandhinagar	2,862	1.09
10	Jamnagar	4,966	1.89
11	Junagadh	1,352	0.51
12	Kachchh	1,636	0.62
13	Kheda	1,053	0.4
14	Mehsana	2,049	0.78
15	Narmada	754	0.28
16	Navsari	2,475	0.94
17	Panchmahal	1,207	0.46
18	Patan	611	0.23
19	Porbandar	628	0.23
20	Rajkot	20,431	7.8
21	Sabarkantha	1,987	0.75
22	Surat	116,183	44.38
23	Surendranagar	2,116	0.8
24	Tapi	430	0.16
25	Vadodara	12,312	4.7
26	Valsad	4,589	1.75
	Total	261,760	100

(Source: Industries Commisionerate, Gov of Gujarat; http://ic.gujarat.gov.in/?page_id=414)

3.2.2. Distribution of clusters in major product lines in the State

Table 3.3 shows the distribution of clusters in major product lines in the State.

TABLE 3.3 - Distribution of Clusters In Major Product Lines in Gujarat

District	Products
Ahmedabad	Dyes and Chemicals, Textile Machinery, Pharmaceutical Machinery, Moulded Plastic Products, Readymade Garments, Diamond Processing, Machine Tools, Castings & Forging, Steel Utensils, Wood work and Furniture, Paper Products, Leather Footware, Washing Powder & Soap, Marble Slabs, Power driven Pumps, Autoparts, Electronic goods.
Anand	Diary and food Processing Machines
Bharuch	Chemicals and Bulk Pharmaceuticals
Bhavnagar	Ship-Breaking, Steel Re-rolling, Machine Tools, Plastic Processing, Diamond Processing,
Gandhinagar	Powerloom
Jamnagar	Brass articles, parts and components, wooden Furniture
Mahasana	Cotton Cloth Weaving
Morvi	Ceramic Tiles and Sanitaryware
Rajkot	Diesel Engines and parts, Machine Tools, Submergible Pumps, Gold and Silver Jewelry, Salt Processing, Electronic, Watches and Clocks, Oil Mills, Textile Printing, Clay Floor Tiles, Electric Motors, Casting and Forging, Machine Tools and Diamond Processing
Surat	Diamond Cutting and Polishing, Textile Machinery, Powerlooms, Zari, Wood Products and Furniture
Surendranagar	Textile Machinery, Salt, Sanitary Fittings, Ceramics
Vadodra	General Engineering, Pharmaceuticals (Bulk Drugs), Plastic Processing, Wood Work and Furniture
Valsad	Dyes and Intermediates, Chemicals and Bulk Pharmaceuticals
Veraval	Fish Processing

(Source: ISED Small Enterprise Observatory, 2013)

3.3. MSME and Gujarat State Industrial Policy 2015

Two major pieces of legislation to regulate the MSME environment in Gujarat are the central Act, MSME Development Act 2006, and Gujarat State Industrial Policy 2015 (initially Gujarat State Industrial Policy 2009) supplemented by Notification of Rules of MSE-Facilitation Council (MSEFC). Gujarat implemented the MSME Act w.e.f 2nd October, 2006.

3.3.1. MSME Support through Gujarat Industrial Policy 2015: Thrust Areas

The Gujarat Industrial Policy 2015 aims at promoting Gujarat as a globally competitive and innovative industrial destination that stimulates sustainable development and inclusive growth. The primary mission of the New Industrial Policy 2015 of Gujarat is to provide proactive support for the development of SMEs, value addition on local primary sources and increasing the share of manufacturing in state GDP (Gujarat Industrial Policy 2015 Report). Considering SMEs as the backbone of the economy of the State, it offers venture capital assistance, interest subsidy and quality certification to the sector, in subsidized rate, with the aim to make it more competitive. The Policy also recognizes the importance of ‘Cluster Development Method’ and establishment of Industrial Estates/ Parks to advance MSMEs. MSMEs are enabled to explore new markets by supporting them through various Trade Fairs, many of which have been initiated and organized by various Chambers of Commerce, like Gujarat Chamber of Commerce and Industry (GCCCI), Vadodara Chamber of Commerce and Industry (VCCI), Federation of Small Scale Industries (FSSI) and FICCI, to mention a few. In order to ensure development of MSMEs, the Government provides monetary assistance to large industries to support the establishment of ancillary and auxiliary industries, in line with mega-projects.

The major thrust areas and schemes in support of MSMEs are as under (Source: Compiled from Gujarat Industrial Policy 2015 Report):

- **Providing capital investment subsidy**, through an application by the MSME entrepreneur to the concerned DIC.
- **Providing assistance for interest subsidy @ 5%** with the maximum amount of Rs. 25 lakhs p.a. for a period of 5 years in Municipal Corporation areas. In addition to this, interest subsidy for various sections like for enterprises outside Municipal Corporation areas, SC/ST entrepreneurs, physically challenged entrepreneur, women entrepreneur, young entrepreneur etc.
- **Providing assistance for Venture Capital:** The entrepreneur setting up an MSME with innovative technology will be assisted to raise promoter contribution in the form of equity or loan through, under certain terms and conditions.
- **Assistance for Quality Certification** to introduce quality product in competitive market. The scheme includes subsidy upto 50% of all charges including consultancy fee upto a maximum amount of Rs. 50,000 for obtaining ISO Certification. The scheme further includes subsidy to an MSME for installing Enterprise Resource Planning (ERP) system, as well as for obtaining certification for ISI/ WHO-GMP/ Hallmark Certification or other national/ international certifications approved by Quality Council of India.
- **Assistance for Technology Acquisition** from a recognized institution by an MSME for its product / process, during the operative period of the scheme, by way of 50% of the cost payable subject to a maximum of Rs. 50 lakh, including royalty payment for first two years. Assistance under this scheme is also provided to set up a New Enterprise with new technology.
- **Assistance for Patent Registration:** Individual or any legal entity is eligible for assistance under the scheme, subject to 75% of cost/ expenditure incurred upto a maximum of Rs. 25 lakhs for obtaining Patent registration of developed product.
- **Assistance for saving in consumption of energy and water:** This assistance is given to existing MSMEs as well as new enterprises taking action for saving in consumption of energy and water; upto 75% cost of energy/ water audit

conducted by a recognized institution / consultant subject to a maximum of Rs. 50,000/- during the operative period of the scheme.

- **Assistance to SME for raising capital through SME exchange:** To encourage SMEs to raise equity capital through SME exchange, in line with the new guidelines of SEBI, assistance is provided to SMEs under this scheme.
- **Rehabilitation of Sick Enterprises:** The Sick Enterprises, after getting a registration issued by the Industries Commissioner, may be assisted by banks / financial institutions as per their prevailing policy.
- **Scheme for Awards to MSMEs:** With the aim to provide public recognition for outstanding achievements, the scope of awards to MSMEs in both manufacturing and export awards is expanded, for their productivity, quality, providing employment, innovation, product development etc. Further, awards for Women Entrepreneurs, Young Entrepreneur (below 35 years) and SC/ ST entrepreneur have also been introduced in the New Industrial Policy 2015 for MSMEs.
- **Scheme for assistance for Start Ups/ Innovation,** to an individual/ group of individuals having innovative idea/ concept; upto Rs. 10,000 per month to the innovator as sustenance allowance for one year, after recommendation of the project.

It feels proud to state that, as per estimates of the ISED Small Enterprise Observatory (2013), the State has the First Rank of integrated overall performance of MSMEs at the national level. According to the Fourth Census of MSMEs, Gujarat stands first in terms of the asset base of the MSME sector.

3.3.2. Promotional Schemes for the MSME Sector in Gujarat

Some of the promotional schemes for the MSME Sector offered in Gujarat are as follows to foster the Sector (Source: ISED Small Enterprise Observatory, 2013):

State level Schemes

1. Shri Vajpayee Bankable Yojana
2. Jyotigramodyog Vikas Yojana (margin money bankable scheme)

3. Manavkalyan Yojana
4. Carpet Industries Programme
5. Village tannery and flaying centre
6. Gramodyog Vikas Kendra
7. Promotion of co-operative sector (package yojana)
8. Cluster development scheme
9. Handlooms schemes
10. Cottage industries training centres
11. Intensive Handloom Development Programm

Centrally Sponsored Schemes

1. Prime Minister's Employment Generation Programme (PMEGP)
 2. Centrally Sponsored Schemes for Handloom Weavers
 3. Mill Gate Price Subsidy
 4. Handlooms Weavers Comprehensive Welfare Scheme
1. Mahatma Gandhi Bunkar Bima Yojana (MGBBY)
 2. Health Insurance Scheme

3.4. Vadodara- The Gateway to the Golden Corridor

Vadodara, better known as 'SanskarNagari' (City of Culture), is the heart of Gujarat State. It is also famous as 'The Gateway to the Golden Corridor' as all the rail and roads connecting to Delhi, Mumbai and Ahmedabad, pass through the city, including the Delhi-Mumbai Industrial Corridor (DMIC). It is the exclusive producer of Dolomite and Fluorspar in the State of Gujarat, thus offering tremendous growth and scope for processing industries. It is one of the four major industrial districts of Gujarat.

The district has 12 tehsils, 15 towns and 1,548 villages of which the major towns are Vadodara (District Headquarter), Savli, Waghodiya, Padra, Dabhoi, Karjan and Sankheda. The district has major PSUs (Public-Sector Units) as well as a host of private

large, medium, small and micro industrial units. Proximity of the district with key industrial centers of Gujarat such as Ahmedabad, Bharuch and Surat could be considered a major driver for growth of the economy.(MSME Development Institute, GOI, ‘Brief Industrial Profile of Vadodara District’, 2012)

3.5.MSMEs in Vadodara District

Micro, Small and Medium Enterprises (MSMEs) forms the back-bone of the industrial matrix of the district. The portfolio of the major exportable items manufactured in the district include Azithromycin, Caprolactum, Ammonia, Fluconazole bulk, , Melamine, Polybutadiene Rubber, Pharmaceuticals, Chemicals, Tyres for Automotive vehicles and tractors, Steam\Gas Turbines up to 500 MW, Automotive Radiators, and Fertilisers& Pesticides. The existing clusters of Micro and Small Enterprises includes Pharmaceuticals,, Chemicals & Fertilisers, Biotechnology, Cotton Textiles, Machine tools, Glass, Engineering, Tobacco, Fisheries and Dairy products. Table 3.4 shows the number of MSMEs in the district as per the FSSI Directory.

TABLE 3.4 - Number of MSMEs in the Vadodara District as per the FSSI Directory

No.	Estate	Total No. of MSME Units
1	Makarpura GIDC	1403
2	Sardar Estate	126
3	Patel Estate	144
4	GorwaBidc	89
5	Chhani Estate	85
6	Mujmahuda	23
7	Vadodara City	215
8	Padra Ind. Area	27
9-	Misc.(Waghodia GIDC, POR-Ramangamdi)	134

(Source: FSSI Directory, 2005; Estate-wise counting by author)

Table 3.5 displays the number of units, investment and employment details of the Micro and Small Enterprises and artisan units in the district.

TABLE 3.5 - Micro & Small Enterprises And Artisan Units in Vadodara District

NIC Code	Type of Industry Industry	No. of Units	Investment (Lakh Rs.)	Employment
20	Agro based	1,055	2,205	3,611
22	Soda Water	--	--	--
23	Cotton Textile	1,925	1,642	5,184
24	Woolen, silk & artificial Thread based clothes	--	--	--
25	Jute & Jute based	--	--	--
26	Readymade garments & Embroidery	--	--	--
27	Wood/wooden based furniture	601	332	2,659
28	Paper & Paper products	770	3,677	4,901
29	Leather based	173	98	503
30	Rubber, Plastic & Petro products	1,153	5,758	11,936
31	Chemical & Chemical based	1,411	12,269	12,749
32	Mineral based	885	3,076	14,319
33	Metal based(Steel Fabrication)	2,173	8,176	14,958
35	Engineering Units	1,481	10,132	10,446
36	Electrical Machinery & Transport Equipment	861	2,342	7,393
97	Repairing & Servicing & Others	5,718	4,895	12,495
1	Others	--	--	--

(Source: District Industries Centre, Vadodara)

3.5.1. Growth of MSMEs in Vadodara District- An Analysis

Bodies like District Industries Center (DIC), Vadodara Chamber of Commerce and Industry (VCCI), Confederation of Indian Industries (CII), Federation of Small Scale Industries (FSSI), FICCI , GCCI as well as many nodal agencies are engaged into a plethora of activities to encourage and develop the small and medium industries as well as ancillary and auxiliary industries in the district. Assistance from Government Departments and other Support Wings has resulted into the gradual and steep growth of MSMEs over the years.

Table 3.6 shows the progress and growth in registration of Micro, Small and Medium Enterprises in the Vadodara district from the period 2006-2014. The table shows a steady-fast increase in the number of registered units in the district over the period from

2006-2014. The credit surely goes to the various facilities given to the sector as well as the amicable business environment in the district.

TABLE 3.6 - Progress & Growth in Registration of Micro, Small And Medium Enterprises in Vadodara District during 2006-2014

Year	No. of Registered Micro Units	No. of Registered Small Units	No. of Registered Medium Units
02/10/06to31/03/07	104	199	4
2007-08	637	267	12
2008-09	862	283	13
2009-10	673	219	14
2010-11	696	179	12
2011-12	2224	172	11
2012-13	2834	242	15
2013-14	3536	359	30
Total	11566	1920	111

(Source: Compiled by author based on statistics from District Industrial Potentiality Survey Report of Vadodara District 2014-15, MSME Development Institute, GOI)

3.5.2. Problems in the SME Sector in Vadodara District

The MSME Development Institute, Govt. of India, prepared a detailed report on ‘District Industrial Potentiality Survey Report of Vadodara District 2014-15’ (2015), highlighting, in addition to other details, the problems faced by the SME sector in the district.

Some of the problems, as mentioned in the ‘District Industrial Potentiality Survey Report of Vadodara District 2014-15’ are as follows:

1. **Low awareness in MSMEs about various schemes of Government of India, Government of Gujarat and other Government Departments, agencies, Institutes or Stake holders function for the development of MSMEs because of lack in corporate governance or due to lack of communication.**
2. **Global recession of 2008 had slowed down the overall growth of the MSMEs. Due to failure of banking and insurance company globally, the global credit**

squeeze had reasonably affected the export textile and jewellery goods, which created temporary shutdown of production in the sector.

3. **Lack of skilled human resources** has also affected the sector at noticeable level. Technology intervention is still very low in the sector. Artisans and weavers are still unaware of latest designs and current market trends. They continue to manufacture products with old designs which fail to generate consistent demand in the consumer markets. Information dissemination about availability of recent technologies, literature on modern machinery etc. can be worked out.
4. Another major problem related to **payment durations normally faced by the MSME entrepreneurs**. Mostly they are causing delay in payments and bad debts, which causes trouble in the working capital ratio. Low credit period provided by the suppliers and on other side late payment made by the customers also creates imbalance in the working capital.
5. One of the major concerns is **low credit availability to the MSMEs**. Though, credit to MSMEs fall under the category of priority sector lending, but with the expansion of the priority sector lending to accommodate fast growing areas such as home loans, education loans; the percentage share of credit to MSMEs have been fallen down. There is strong need to increase the target of commercial bank lending to MSMEs from 20 % year on year growth to 30% which will enhance the credit facilities to MSMEs.
6. **Delay payment issue of Medium Scale entrepreneurs (MSEs)** about the payments not received in stipulated time period for the supply of Goods and/or Services to larger units or Government's Departments. Most of the MSEs feel that remedial measures are taken at slower speed, which creates working capital crunch\problem for the MSEs.

3.6.Summary of the Chapter

The chapter tried to throw some light on the present scenario of the MSMEs in the state of Gujarat, with special reference to Vadodara district. It gave a bird's eye-view of the various statistics of the present scenario with respect to the various major industries in the state as well as the Number of Units, Investment and Employment in the SMES in the Gujarat State; as also the Distribution of Clusters in Major Product Lines in Gujarat. It gave an orientation of the various state-level schemes offered in the state towards the MSME sector vide the latest New Industrial Policy 2015 of Gujarat. The Chapter also gave an orientation of the growth and development of the MSMEs in the Vadodara district, with the latest available statistics. It also discussed the various problems faced by the sector, based on some recent reports and other secondary sources of information.

CHAPTER – 4

Functional Areas of Small And Medium Enterprises (SMEs) With Special Reference to HR Function

4.1.Prologue

This chapter focuses on the functional areas of MSME, with special reference to the HR function, including other functional areas in brief viz. Finance, Banking Institutions, Taxation liabilities, Marketing mechanisms and promotional strategies, Marketing Research. The functional overview of the various facets of SMEs helps to get a holistic view and extract the maximum potentialities of this vibrant sector.

4.2.Human Resource Management in Small Businesses

4.2.1. HRM as a multi-faceted process in SMEs

Human Resource Management is a multi-faceted process involving various strategic approaches to manage a company's most valued assets- the 'human resources' in the organization. It includes a plethora of activities across various areas like human resource planning, recruitment, selection, motivational techniques, performance management system, training and development and the like. In a small business the role of HR is very crucial as it requires the management of multi-skilled people due to requirement of limited number of people who are required to be multi-tasked.

The majority of publications on HRM within small and medium-sized enterprises are based on qualitative studies. Heneman *et al.* conclude that 'the lack of information about human resources in SMEs is problematic for theory, research and practice' (Heneman et al.,2000). Thus, there is dearth of information about human resource management practices in MSME's.

4.2.2. HRM Practices in a Small Business

For a small business, there is no formal HR Department in majority of the cases, however; with the help of HRM and OD consultants, small businesses can be professionally guided.

The following HR practices are assumed to be quite important for small businesses (Inputs from Desai Vasant, 2011 and other readings):

- **Manpower planning:** MPP or HRP in a small business is usually a one man show or a matter of group decision involving the head of the organization as the number of people is usually less. There is as such no formal way of job analysis, or job description, job-specification but it is done in line with the strategic requirements.
- **Recruitment, Selection and Placement:** Many small businesses go ahead with the referral as a selection method to keep a check on the loyalty part of the employees. The selection of employees in small businesses can be through public or private employment exchanges, training institutes, local colleges, newspaper advertisements, professional associations etc.
- **Performance Appraisal:** T V Rao (2005) in his paper approved of designing a simple and effective PMS (Performance Management System) for the small and medium organization and to invest in some amount of training. He focused on creating a learning environment and being sensitive to factors that help to retain talent. As in small businesses multi-tasked people are required to function effectively hence an effective PMS has to be designed to motivate the key people with monetary or non-monetary incentives.
- **Training and development:** Mostly on-the-job training is followed in small businesses. In certain businesses off-the-job training and specialized training is recommended for. On-the-job training helps the organization to cut costs to the company, alongwith the added advantage of skilling its people in its own work environment and work-processes.

- **Employee compensation:** Fringe benefits like health plans, pension plans, bonus, profit sharing as well as other means of rewarding the employees and especially high performers have to be specially taken care of by the SME entrepreneurs. Few key people hold multiple responsibilities in the small businesses and they have a strong local network; hence it is very important for the business house to compensate these high performers in a commensurate manner.
- **Motivation:** Attention should be paid by small businesses with regard to factors for enhancing higher morale and productivity of their employees. Focus of entrepreneurs towards motivational aspects in SMEs is quite necessary, as it is managed with few people, as compared to large organizations.
- **Communication:** Forms of communication, whether oral or written, should have clarity, flexibility, be more open, and enhance efficiency and productivity.

4.2.3. Industrial Relations and Labour Laws

For industrial peace and worker co-operation, labour laws and legislations have to be followed. The laws are mostly same as that is applicable to large enterprises. The legislation can be categorized as:

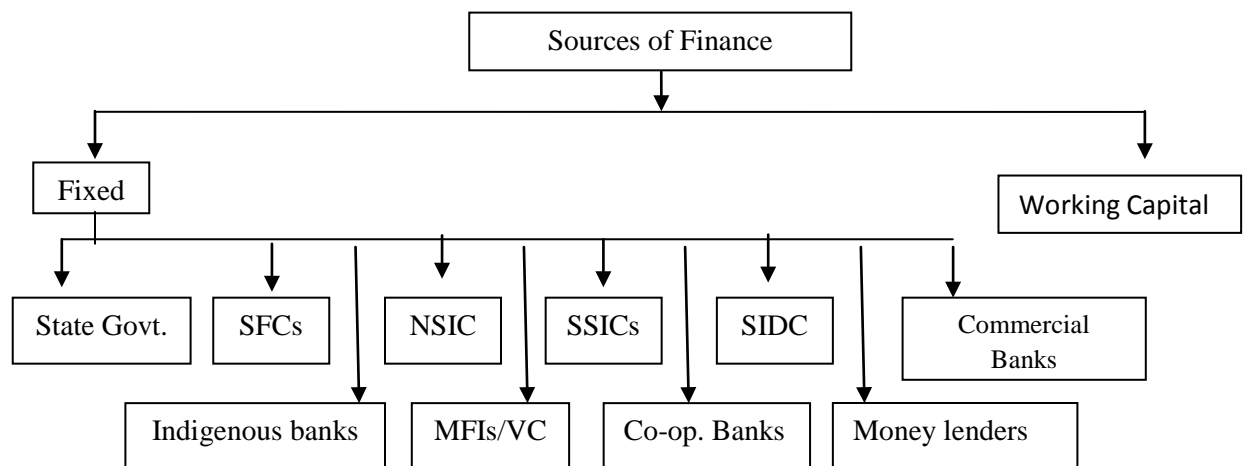
- a) Laws regulating to working conditions
 - Factories Act, 1948
 - Laws applicable to specific industries like Mines Act 1952, Indian Merchant Shipping Act, 1923 and Plantation Labour Act 1998
- b) Laws regulating wages
 - Minimum Wages Act, 1948
 - Payment of Wages Act, 1936
- c) Laws relating to social security measures
 - Workmen's Compensation Act, 1923
 - Employee's State Insurance Act, 1948
 - Employee's Provident Fund Act and Family Pension Fund Act, 1952
- d) Laws relating to worker's associations and disputes
 - Trade Union Act, 1926
 - The Industrial Disputes Act, 1947

- e) Laws relating to women and child workers
- f) Laws relating to environment and pollution control
 - Water (Prevention and Control of Pollution) Act, 1974
 - Air (Prevention and Control of Pollution) Act, 1981
 - Environment (Protection) Act, 1986

4.3. Financial Management in Small Business

4.3.1. Sources of Finance for Small-Scale Sector

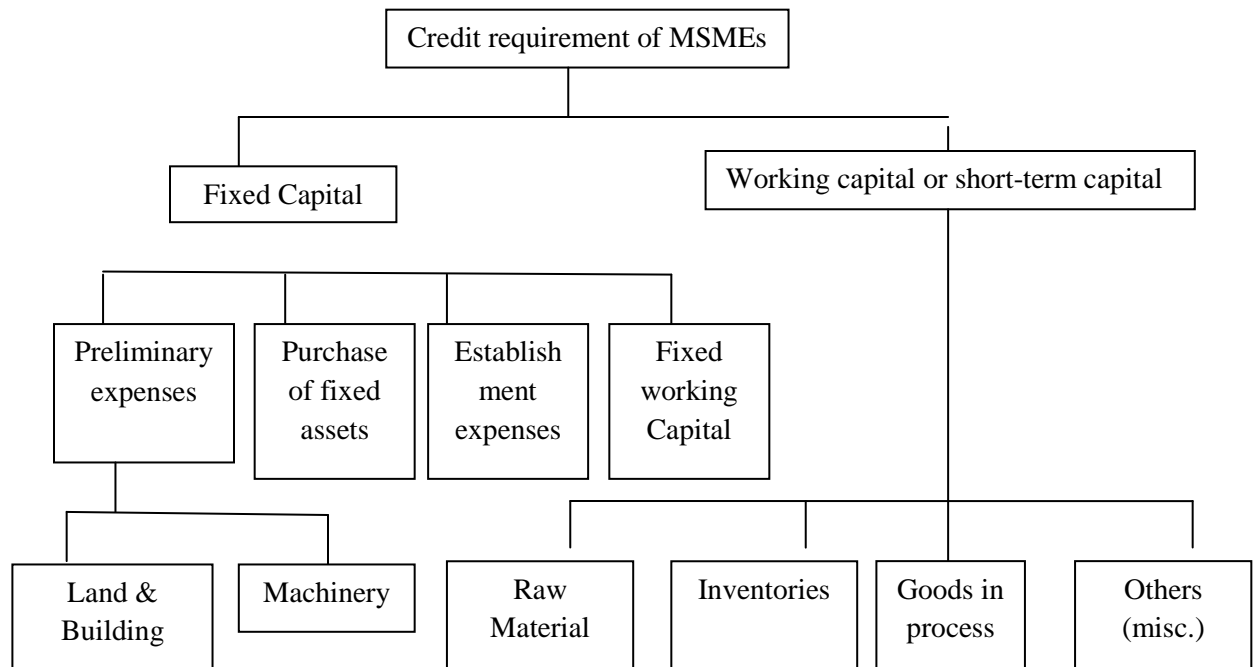
In SMEs a substantial proportion of total assets comprise of entrepreneurs personal funds. The sources that provide funding requirements are usually the commercial banks or agencies like State Financial Corporations (SFCs), National Small Industries Corporation (NSIC), Gujarat Industrial Investment Corporation (GIIC), State Industrial Development Corporations (SIDCs), the State Bank of India (SBI) etc. Figure 4.1 displays the various sources of finance available to SMEs.



(Source: Small Scale Industries and Entrepreneurship, VasantRao)
(Note: MFIs:Micro Financial Institutions; VCs: Venture Capitalists)

Figure 4.1 - Sources of Finance

Figure 4.2 displays the various major credit requirements of SMEs.



(Source: Small Scale Industries and Entrepreneurship, VasantRao)

Figure 4.2 - Credit Requirements of MSMEs

4.3.2. Institutional Support Structure

The Small Scale Industries Board was set up way back in 1954, as an apex advisory body constituted by the Government of India, to render advice on various issues pertaining to the MSME Sector. The office of the Development Commissioner (Small Scale Industries), known as the Small Industries Development Organization (SIDO) was also set up in 1954 under the recommendations of the Ford Foundation team of the Government of India (Since 1991 SIDO is working under the Department of SSI & A&RI).

- **Small Industries Development Organization (SIDO):** The major functions of SIDO comprises of evolving policies and programs related to the SME sector, co-ordinating policies of state governments, liaisoning with different State/ Central ministries, Planning Commission, RBI and other financial institutions. It also monitors government sponsored programs.

- **Institutional Credit Framework:** The Government has come up to create a planned credit framework for credit dispensation for the MSME sector. SIDBI, for example, is one of the primary financial institution for promotion, finance and development of this sector. At the state-level, SFCs and SIDCs are the main source of long-term finance for this sector.
- **Schemes of assistance:** The financial assistance varies from a multitude of various reasons like establishment of new projects, increasing operational efficiency through technology upgradation, rehabilitation of various units, import of assets etc.
- **Small Industries Development Bank of India (SIDBI):** SIDBI serves for various functions of the MSME Sector like for promotional and development activities of the sector, human resources development activities, technology upgradation, environment and quality management etc.

4.4. Marketing Management in Small Businesses

Marketing can be defined as a process which identifies, anticipates and satisfies customer needs efficiently and profitably in line with the business and strategic objectives.

4.4.1. Common Marketing problems faced by small businesses

- **Lack of brand image :** Due to lack of promotion and advertising mechanisms.
- **Product quality and standardization issues:** Due to shortage of adequate funds expenses in quality testing and quality management remains a question mark.
- **Lack of efficient sales and marketing people:** Dearth of qualified people due to less incentives and benefits.
- **Lack of credit facilities:** Buyer's market while marketing its product and a seller's market while buying raw materials.
- **Market size:** The small businesses usually have a local and limited market size. This is largely due to insufficient fund to create a wider and penetrating market mechanism and reach.

- **Lack of bargaining power in pricing:** Unlike the large organizations who create a niche due to their brand image and positioning, small businesses usually lack bargaining power.
- **Lack of research and product development:** Mostly the technology may be obsolete with the same production process going on year after year.
- **Lack of after-sales services**
- **Lack of marketing knowledge**
- **Lack of liaison and networking**

4.4.2. Institutionalized Marketing for Small Business Entrepreneurs

Due to lack of available funds, in most of the cases the small business entrepreneurs are not able to expend handsome amount towards marketing research activities. Thus, in order to encourage marketing and production of new products, the government in most of the countries and their wings, collect and disseminate information and research data through reliable marketing intelligence and research tools, on a regular basis.

Various market mechanisms like the concept of Special Economic Zones (SEZ), to encourage exports and industrial parks etc to reduce the operational costs etc are being suggested and operationalized to boost and encourage the entrepreneurs.

Further, working in consortiums to organize various fairs, exhibitions, export-oriented production activities and the like can be institutionalized if the small entrepreneurs come together and join hands with each other.

4.4.3. E-marketing for small businesses

E-marketing as an electronic method of marketing can affect the marketing strategies of a business house positively if it adds to the consumer base, consumer value, can enhance after-sales services as well as can result in new business models.

Making on-line marketing more viable for small businesses

- Create and invest in your company's website and regularly update it. This will help to increase networking

- Make the web-site more user-friendly and in order of the goals for going in for e-marketing
- Use various search mechanisms to identify one's target consumers
- Upload the necessary delivery forms, logistic details and other information and declaration necessary in order to enhance transparency.

4.5. Production and Operations Management in Small Businesses

Production management refers to the application of planning, organizing and directing the production process. It refers to the production or creation of goods and services. The Production Planning comprises of various elements like estimating, routing, scheduling and loading; whereas Production Control comprises of elements like dispatching, expediting, evaluating and corrective action.

4.5.1. Materials Management

Efficient materials management is the key to success of small businesses, especially because the stocks are limited in warehouses or shop-floors. The objectives of materials management can be enumerated as:

- Optimum pricing of purchasing materials
- Reduced transportation cost
- Better supplier relationships and networking
- Better management of inventories

4.5.2. Inventory Management

Inventory management includes the management of raw materials, components, as well as the inventories related to maintenance, repair and operating supplies, which do not directly become the part of the product. It also includes the finished-goods inventories in addition to the in-process inventories which are a part of the semi-finished products.

The techniques most commonly used for inventory control are:

- **ABC Analysis (Always Better Control):** ‘A’ items are of high value, ‘B’ items of medium value and ‘C’ items of low value, based on the annual consumption of inventories in monetary value. (Also known as Pareto Analysis).
- **High, Medium and Low (HML):** This classification is based on the unit value of the item. It is in line with the ABC Analysis.
- **Vital, Essential and Desirable (VED):** VED classification is based on the criticality of inventories and its effect on the production and other services.
- **Just in Time (JIT):** The JIT concept is very much applicable to the small businesses. It implies that virtually no inventories are held at any stage of production and that the exact number of units is brought to production at the right time.
- **Two Bin Systems (TBS):** As small businesses are expert in meeting the contingent requirements of the economy or local people, the TBS is also very applicable. One bin contains stock just enough to last from the date a new order is placed and the other bin containing stock enough to satisfy probable demand during the period of replenishment.

4.5.3. Total Quality Management (TQM)

TQM is a management approach which entails to the concept of fostering ‘continuous improvement’ in the production process. The five pillars of TQM are product, process, people, system and leadership. It stresses on the management philosophy of working systematically, with an integrative and consistent approach and involvement of maximum people possible. It focuses on a ‘systems’ and ‘process’ approach and team-work. It leads to incorporating various customer-focused strategies as one of the key quality management principles. The small businesses, in a bid to compete globally, are stepping ahead towards preparation and implementation of ISO and other quality assurances and national/ international quality certifications as well as on Environmental Management Systems. Government provides subsidies for MSMEs to go through the ISO Certification process.

4.6. Summary of the Chapter

For small businesses, strategic decision making is the key to organizational success. Changes in customers' needs, preferences, demand, new moves of competitors, new need of the economy, tapping the local requirement, handling changes in market fluctuations and the like are the key to organizational success for small businesses, by effectively tapping the challenges into opportunities. They can accomplish all these goals only by incorporating systems approach wherein the various functional areas viz. finance, production, operations, human resource and marketing, come together and work as a synergy to meet the strategic goals. Chapter 4 discussed the various functional departments of the SMEs at length. However, the fact remains, as was observed as well as told to the author by the owners and Managing Heads, that in SMEs the owners as well as Managing Heads, including HR Managers and Supervisors, are skilled enough to take care of all Functional Departments. The senior management becomes multi-skilled over time due to the nature of the work and knows the functioning of all departments.

CHAPTER – 5

Micro, Small And Medium Enterprises Development (MSMED) Act, 2006 & New Policy Initiatives in the SME Sector

5.1.Prologue

The Micro, Small and Medium Enterprises Development Act, 2006 was enacted with the objective to provide for facilitating the development and promotion of the Micro, Small and Medium enterprises. The Act is operational since October 2, 2006. As compared to the SSI Act under the IDRA, the MSMED Act 2006 is far more comprehensive.

5.2.Objectives of the MSMED Act, 2006

Ministry of Micro, Small & Medium Enterprises (M/o MSME) envisions a vibrant MSME sector by promoting growth and development of the MSME Sector, including Khadi, Village and Coir Industries (which is India's legacy hallmark), in cooperation with various Departments/ Ministries, State as well as Central Government, Industry Associations and other Stakeholders, by way of providing support to existing enterprises and encouraging creation of new enterprises.

The objectives of the MSMED Act, 2006 are:

- To facilitate the promotion and development of the Micro, Small and Medium Enterprises (MSMEs).
- To make the MSMEs more competitive, nationally as well as globally

- To concentrate on various related matters of MSMEs.
- To extend the scope of benefits from SSI undertakings and ancillary industries to MSM enterprises.

5.3. MSME Defined under the Act and Organizational Set-up

In India, the MSMED Act 2006 defined the Micro, Small and Medium Enterprises based on the investment in plant and machinery in the Manufacturing as well as Service industry. Table 5.1 defines MSMEs according to the MSMED Act, 2006.

TABLE 5.1 - Micro, Small and Medium Enterprises Defined

Enterprises	Investment in Plant & Machinery (Manufacturing Industry)	Investment in Equipment (Service Industry)
Micro	Up to Rs. 25 lakhs	Up to Rs. 10 lakhs
Small	Above Rs. 25 lakhs up to Rs. 5 crore	Above Rs. 10 lakhs up to Rs. 2 crore
Medium	Above Rs. 5 crore up to Rs. 10 crore	Above Rs. 2 crore up to Rs. 5 crore

(Source: MSME, Annual Report 2014-15)

The Ministry of MSME (M/o MSME) has two main Divisions called Small & Medium Enterprises (SME) Wing and Agro & Rural Industry (ARI) Wing. The SME Wing is responsible for the administration, vigilance and administrative supervision of the National Small Industries Corporation (NSIC) Ltd., a public sector enterprise and National Institute for Micro, Small and Medium Enterprises (NI-MSME), the autonomous national level entrepreneurship development/training Organization. The SME Wing is responsible for the Performance and Credit Rating Assistance.

The Agro & Rural Industry (ARI) Wing is primarily responsible for the two statutory bodies viz. the Khadi and Village Industries Commission (KVIC), Coir Board and a Society called Mahatma Gandhi Institute for Rural Industrialization (MGIRI).

The Micro, Small and Medium Enterprises – Development Organization (MSME-DO) [earlier known as SIDO], headed by the Additional Secretary & Development

Commissioner (MSME), is the apex body for formulating as well as implementing the policies for the MSMEs in the country. (MSME Annual report 2015-16)

5.4. National Board for Micro, Small And Medium Enterprises – NBMSME (Apex Consultative Body)

With the aim to facilitate co-ordination and inter-institutional linkages, and in line with the MSMED Act, 2006, a National Board for Micro, Small & Medium Enterprises (NB MSME), has been constituted as an apex advisory body to render advice to the Government on all issues pertaining to the MSME sector. The Head Office of the Board is located at Delhi. It is the apex Consultative Body with a wide representation of stakeholders. Quarterly meetings of National Boards are made compulsory MSME Annual Report 2015-16. The Minister In-charge of MSME of the Government of India is the Chairman.

5.5. National Institute for Micro, Small and Medium Enterprises (NI-MSME)

In order to ensure that young entrepreneurs are encouraged and suitably equipped to go into new ventures, the Ministry has set up a National level Entrepreneurship Development Institutes namely, National Institute for Micro, Small and Medium Enterprises (NI-MSME) to undertake the task of entrepreneurship and skill development training on a regular basis. NI-MSME has been rendering its services for MSMEs since the last five decades (precisely since the last 53 years). The Institute has identified thrust areas that need emphasis and exploration. These are: Entrepreneurship Development, Technology Up-gradation & Transfer, Policy Issues, NGO Networking, Environment Concerns, Cluster Development, Management Consultancy, Quality Management Services, Financial Services, and Information Services (Source: MSME Annual Report 2015-16).

5.6.National Small Industries Corporation (NSIC) Limited

National Small Industries Corporation (NSIC) Ltd. is an ISO 9001-2008 certified Government of India Enterprise under Ministry of Micro, Small & Medium Enterprises (MSME). NSIC has been working to fulfill its mission of promoting, aiding and fostering the growth of small industries in the country as well as abroad, by promoting modernization, technology upgradation, fostering quality conformance and consciousness; developing vertical, horizontal or ancillary linkages with medium / large enterprises as well as by fostering exports. NSIC operates through countrywide network of 168 offices and 07 Technical Centres in the country (as of 2015-16).

5.7.Initiatives Undertaken By the Ministry of MSME in the Recent Years

During the year 2015, Ministry of MSME launched various initiatives to improve the ease of doing business and to make Micro, Small and Medium Enterprises more globally competitive. Some of the noteworthy initiatives included ease of registration of the business in the form of Udyog Aadhar Memorandum (UAM), Framework to revive sick MSMEs, promoting innovation in rural entrepreneurship through ASPIRE scheme, fund for regenerating traditional industries, financial support in the form of credit guarantee and credit linked capital subsidy.

The various noteworthy initiatives undertaken by the Ministry of MSME in the recent years as of 2015-16 are as follows (Source: <http://MSME.gov.in/mob/home.aspx>, as on July 2016 and MSME Annual Report 2015-16):

- **Ease of Registration Process of MSMEs- Udyog Aadhar Memorandum (UAM):**
With the aim to simplify forms to enable ease of registration of MSMEs, the M/o MSME has notified a simple one-page Registration Form Udyog Aadhar Memorandum (UAM), to enable easy and smooth registration of MSMEs. The UAM replaces the cumbersome filing of Entrepreneur's Memorandum (EM Part I & II), and is a path-breaking step to promote 'ease of doing business' by enabling on-line filing, and instantly receiving a unique Udyog Aadhar Number (UAN). Under the UAM, more than 2.30 lakh units have been registered as on 17.02.16 (according to the

MSME Annual Report 2015-16).

- An '**Investor Facilitation Portal**' (IFP) launched by the Department of Industrial Policy and Promotion (DIPP), is a single window online platform which acts as the first point of contact for any probable investor in the State of Gujarat. This portal reduces contact between the investor and officials of different departments to a nil thus reducing the steps required in getting an approval. It has the following main features:
 - A comprehensive list of Pre-Establishment as well as Pre-Operation approvals required for setting up a business
 - A customized list of approvals required by the investor specific to their business by keying in certain details in the form of 19 questions
 - Online facility for filling of all required forms and payments
 - Online availability of certificates and licenses to view as well as download
 - Dashboard to view all the applications and their status
 - A unique account for each investor for all communications across departments via the IFP
 - A robust on-line grievance redressal mechanism
 - A helpline number for all enquiries as well as an 'Investment Facilitation Cell'
 - Common Application Form across all departments to reduce gestation period
 - Incentives under various policies provided under the single window online portal

- **Prime Minister Employment Generation Program (PMEGP):** It is a credit-linked scheme to facilitate participation of financial institutions for SME funding for higher credit-flow. The objective is to encourage start-ups in rural as well as urban areas to generate continuous and sustainable employment opportunities.

- **National Manufacturing Competitiveness Programme (NMCP):** Under the NMCP, Government encourages various components to improve the processes, designs, technology and market access of MSMEs through interventions like lean manufacturing, quality management systems, design clinics, etc.
- **ASPIRE (A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship):** The objective of this scheme is to promote innovation and rural entrepreneurship by making easy availability of funds, technology business incubators and the like.
- **Scheme of Fund for Regeneration of Traditional Industries (SFURTI):** The objective is to make traditional industries more productive, competitive and sustainable by organizing the traditional industries and artisans into clusters.
- **Performance and Credit Rating System:** The idea is to create a rating system for MSEs to generate an awareness about the strengths and weaknesses of operations and credit-worthiness of the enterprises. The system helps to create easier/ cheaper access to credit for the rated enterprises. The scheme thus indirectly helps to create a spirit of competitiveness, innovation, enterprise and excellence among the SMEs.
- **Assistance to Training Institution:** With the motto to promote entrepreneurship and skill-development through capital grant for creating / strengthening of infrastructure and program support to Training institutions enabling such training and skill development.
- **Marketing Assistance:** To encourage MSMEs to organize/ participate in exhibitions and show-casing their products and services in the local as well as the global market by organizing Buyer-Seller Meets, Exhibitions, Intensive Campaigns as well as other marketing promotion events.
- **Credit Linked Capital Subsidy Schemes (CLCSS):** The scheme enables the MSMEs to enhance their productivity by adopting various capital-intensive and technology-intensive production methods through subsidies/ capital flow.
- **Credit Guarantee Fund Scheme:** To get collateral free credit from financial institutions/ banks, which can help to enhance the quality and timely delivery of products / services through easy funding.

- **Micro & Small Enterprises Cluster Development Program (MSE-CDP):** This scheme helps to enhance and develop cluster infrastructure projects for various utility services like power distribution, water, drainage, environment management systems, tele communication etc.
- **Tool Rooms:** The Technology Development Centres are assisting to train MSMEs owners and youth to upgrade their technology in order to face the competition.
- **International Co-operation:** This scheme promotes MSMEs to acquire new markets overseas as well as their branch offices/ business counterparts here in India.
- **Surveys, Studies and Policy Research:** The scheme encourages organizations/ institutions to undertake research projects and surveys encompassing various facets of policy eco-system.
- Other Schemes like Coir UdyamiYojana (CUY), Coir VikasYojana (CVY), Mahila Coir Yojana (MCY) etc. have further assisted the artisans / small enterprise owners to focus on marketing strategies, adopting modern technologies, credit-linked subsidies etc to enhance the particular industry.
- **Fiscal benefits:** Various tax-rebates, exceptions, subsidies, tax-holidays etc had been initiated for the MSME sector to enhance and protect it. Taxation benefits like income-tax, excise-duty, sales tax, electricity duty, octroi and the like helps to increase investments in various productive activities with relation to small businesses and ancillary industries.

Small businesses are given preferential treatment while framing taxation policies on account of the various problems and risks which they face as compared to their larger counter-parts viz. technology obsolescence, financial and infrastructural bottlenecks, competitive global environment etc. Concessions in excise duties, sales-tax etc. can entail to better marketing, raw material and investment support. Fiscal incentives are provided in the form of exemptions, rebate, refund, postponement of tax levies, subsidies, tax concessions, tax holidays etc.

5.8.E-Governance Initiatives / Digital Initiatives

In line with the Government's 'Digital India' campaign, several e-governance initiatives have been undertaken by the Ministry of MSME, some of whom are mentioned below (Source: MSME Annual Report 2015-16):

- **E-Office Initiative** has been introduced to achieve paperless office in the Ministry. Movement of e-files as well as digitalization of existing physical files into electronic files has been completed. The Office of the DC (MSME) has been successfully using e-office software since 1.1.2016.
- **Udyog Aadhar Memorandum (UAM)**, to enable easy and smooth registration of MSMEs.
- **Proposal for ISO 9001:2015 Certified Organization:** The Office of Development Commissioner-MSME (DC-MSME) has taken up the proposal for adoption as an ISO 9001:2015 certified organization, after successful completion of ISO 9001:2008 of the entire Ministry.
- **Mobile Friendly Website:** With this, entrepreneur friendly content can be easily accessed through any mobile and tablet <http://MSME.gov.in> and <http://dcMSME.gov.in>
- **Aadhar Based Biometric Attendance System:** for all employees of the Ministry and DC-MSME to ensure punctuality and to do away with the manual traditional system.
- **Development of on-line softwares** for the O/o DC-MSME. : The new developments include the following on-line softwares:
 - PPPS (Physical Performance of Plan Schemes)
(<http://MSMEdi.dcMSME.gov.in/DcWebManager/user-login.aspx>)
 - EET (Energy Efficiency Technology Up-gradation)
(http://nmcp.dcMSME.gov.in/Admin/EET_Userlogin.aspx)
 - National Award(<http://MSMEdi.dcMSME.gov.in/na.aspx>)
 - MY MSME App (MSME Helpline) (Android App & Desktop Version)
(<http://cluster.dcMSME.gov.in/helpline/welcome.html>)

- ISO-9000(<http://MSMEdi.dcMSME.gov.in/iso9000.aspx>)
- Single login online Application Schemes (Desktop Version & Android App) (<http://MSMEdi.dcMSME.gov.in/dcsmseapp.aspx>)

5.9. Micro, Small & Medium Enterprises Development (Amendment) Bill, 2015

After almost nine years of the MSMED Act, 2006, the Micro, Small and Medium Enterprises Development (Amendment) Bill, 2015 was introduced in the Lok Sabha on 20.04.2015. The Amendment Bill is intended to move in line with the enormous changes faced in the economy, nationally as well as internationally. The objectives of the proposed amendments are to:

- i. Enhance the existing limit for investment in plant and machinery considering changes in price index and cost of inputs consistent with the emerging role of the MSMEs in various Global Value Chains.
- ii. Include medium enterprises apart from small enterprises in section 7(9) to enable the aforesaid category of enterprises to avail the benefits and become competitive.
- iii. Empower the central Government to revise the existing limit for investment by notification, considering the inflation and dynamic market situation.

5.10. Summary of the Chapter

It can be ascertained from the plethora of new initiatives and policies incorporated recently as of 2015-16, as well as since the last few years, by the Ministry of MSME, that a lot has been done to encourage the MSME Sector, realizing its importance in an emerging economy like that of India. Lots of aid and grants-in-aid for the sector is being incorporated by both, the Central and State Governments.

Many initiatives are being undertaken by the Ministry to upgrade the technology as well as human resource aspect in the sector. Various schemes have been initiated at the District/ State level by various Governments due to sheer encouragement provided from

the Centre. The chapter discussed in detail the various intricacies of the MSMED Act, 2006, and various policy initiatives undertaken by the Government.

CHAPTER – 6

Review of Literature

6.1. Prelude

The Review of Literature in the chapter has been arranged chronologically starting from the year 1984 to the recent developments in the year 2014-15; thus show-casing the developments related to the study/ sector over the last three decades. The chapter has been divided into mainly **two parts**. Firstly, the literature on MSMEs and the HR scenario has been discussed. Secondly, a detailed literature on the HR practices and performance of SMEs has been discussed.

The literature has been divided according to the following scheme arranged chronologically:

- **Part- I: SMEs and the HR Scenario – Literature Review**
 - Articles from Journals
 - From Books/ Published Reports
 - From Thesis / Dissertation
- **Part-II: HRM Practices and SMEs Performance – Literature Review**
 - Articles from Journals
 - From Books/ Published Reports
 - From Thesis / Dissertation

In this Chapter alone, over **72 literature** has been reviewed at length; which includes **47 articles from national/ international journals, 16 literature from Books/ Government or Institutional Reports** and **9 literature from Thesis/ Dissertation**, about the HR scenario and firm's performance in the SME sector, in the **world over and in India**.

In the thesis, all the chapters have been backed generously by literature review, making the total reference in the thesis to about **200 articles from journals/ books/ thesis**.

6.2. SMEs and the HR Scenario – Literature Review

HRM practices in SMEs are either formal or informal. A formal HR system can be said to be the extent to which HR practices are systematized, documented as well as have identifiable policies, rules and regulations, and is not dealt in a case-by-case method as is in the case of informal mechanism (Nguyen & Bryant, 2004). A study in the U.S by Hodgetts and Kuratko (1998) found that each year the number of business failures in small businesses have been increasing by thousands, and surprisingly the main reason as cited by the owners had been ‘managerial incompetence’.

6.2.1. Literature from Journals

Chandler and McEvoy (2000) state that even if it is indicated by published researches that effective HRM is one of problems that SMEs face, there is lack of research identifying practices used by SMEs. This implies that more researches concerning HRM in SMEs are in needed (Heneman & Tansky, 2003). In small enterprises owner managers are responsible for decisions related to human resources. Their managerial style has a direct influence on the HRM practices (Koch de Koch, 1999).

It is deduced by HR commentators and practitioners that there can be no universal prescription for HRM practices and policies. It is basically based on the business needs of the firm within its context (culture, structure, technology and processes) (Armstrong Michael, 2006).

McEvoy (1984) studied the personnel practices of 84 small businesses near a large Midwestern metropolitan area (in the American Midwest, comprising of about 13 states) came to the conclusion that small businesses lacked creative staffing practices. His study also deduced that managers of small firms lacked training in formal personnel management practices and that they did not consider the use of generally accepted HRM practices as essential for improving productivity. His study further inferred that functional areas like Production, Finance and Marketing were given more preference in

small businesses, as compared to the Personnel Management functions. His study concluded deducing that lack of HRM practices was the leading cause of failures in small firms.

Hornsby J S *et.al* (1999) tried to understand the HR practices and trends in the U.S small businesses. HR practices were studied in 341 small businesses in Mid-West and South-east U.S. The HR practices considered in the study were in the five areas viz. Job analysis and description, recruitment and selection, training, performance appraisal, benefits and incentives. The respondents were also asked to rate the frequency of its use as well as effectiveness of the specific HR practice, which brought out the effectiveness of the HR practices as well, as an outcome of the study. ‘Job-observation method’ was found out to be the major job-analysis method; ‘news-paper and walk-ins were found out to be the most effective recruitment methods; whereas ‘interviews’ was found to be the most used selection method. Over 72% firms had some sort of incentive plan but offered very little variety in the type of incentive plans; 61 percent firms appraised their employee’s performance; 94 percent firms provided some sort of training; coaching was found out to be the most effective way of training in small businesses in the survey. However, it was also found out that that there was a disinterest in utilizing some of the modern tools to develop human resources at the work-place among small businesses.

Budhwar, P.S., and Khatri, N. (2001) in their study on 137 Indian manufacturing firms deduced that, there existed a number of significant correlations between a set of contingent variables (i.e. age, size, ownership, life cycle stage and HRM strategies of an organization, type of industry and union membership) and four HRM functions of recruitment and selection, training and development, compensation and employee communication.

Maryse J. Brand & Erik H. Bax (2002) summarized the linkage between Strategic HRM in general and HRM in smaller firms in particular, in industrialized high growth countries, it took the Dutch situation as a specific case. They concluded that although general support exists for the idea that Strategic HRM is relevant for small firms, the available knowledge is highly descriptive and fragmented and yields no theoretically

supported guidelines for SMEs and/or institutions that are working with SMEs. In order to provide a theoretical base for such guidelines, they introduced the Strategic Labour Allocation Process – model (SLAP-model) which links the firm’s internal labour supply and demand to the firm’s strategy and the significant developments in its environment.

According to **Cardon and Stevens (2004)**, as resources are likely to be scarce in small firms, hence there may be a very small number of formal HR departments or professionals, increased difficulty in recruiting and retaining employees due to lack of financial resources, and an increased reluctance to engage in costly or restrictive practices.

Pearson, Terry R et al (July 2006) in their research paper ‘Urban vs. rural: Human Resource Management in SMEs’, focused on the descriptive study of SHRM philosophy climate and skills development in the selected SMEs in the state of Karnataka. The study concluded that the development of human resources cannot be left to individual initiative; it has to be built into planned programs and implemented as a conscious and sustained effort.

According to **Behrands (2007)**, smaller businesses often abstain from any systematic and professional approach when selecting new employees. They rarely use any long-term planning of human resource requirements, job-profiles and other related issues, and usage of formal selection instruments is normally limited to the conducting of interviews.

Singh M &Vohra N (2009) deduced in their study that the level of formalization of HRM practices in SMEs in India was low. They also concluded that owner-managers played a central role in the HR functions of their enterprises. They further deduced that as compared to small enterprises, the level of formalisation was found to be higher for medium enterprises.

6.2.2. Literature from Books / Published Reports

Planning Commission, Government of India (Dec 2002), in its 'Report on the Committee on India Vision 2020', envisioned a very high employment potential in textile and garment production units in the SSI sector. The report concluded that a healthy and rapidly expanding small sector is needed for vibrant growth of the Indian economy. The Report concluded that SSIs were found to be more resistant to the stresses as well as are more responsive to the demands of the fast-changing technologies and entrepreneurial responses. The Report suggested for a comprehensive package of venture capital, credit, liberalization of controls & policies coupled with HR related aspects like technical training, marketing and management measures, to ensure the continuous expansion of this sector.

Boxall and Purcell (2008) argue that only firms which have grown beyond about 150-200 employees employ HR specialist. They further found that there is also lack of researches as to from when the SMEs employ an HR person to take care of HR functions.

Matthias Fink & Sascha Kraus's (2009) book on 'The Management of Small and Medium Enterprises' investigates the underlying mechanisms and practices of management within SMEs, based on a large number of conceptual and empirical research contributions. The book offers various new tools and strategies useful for SME entrepreneurs as well as new venture managers as well as research scholars and academicians.

Senyucel Z (2009) in the book titled 'Managing the human resource in the 21st century' highlights the changing roles of HR practitioners for today's organizations. The writer believes that there are three roles for the HR Practitioners to adopt: Traditional, Assistant and Campaigner Role; irrespective of the size of the organization. As a campaigner, HR managers perceive themselves as visionaries who see what needs to be done and try to influence employee's decision towards their own desirable direction. The advantage of this role is its emphasis on communication between management and employees or between different heads of departments, as the case may be.

MSME Annual Report, 2009-10, GOI, recommended six major thematic areas including credit, marketing, labor, rehabilitation and exit policy, infrastructure, technology and skill development and taxation. The implementation of these areas was to be monitored by the Prime Minister's Council on Micro and Small Enterprises to be set up in the Prime Minister's Office. The Ministry promoted MSMEs through cluster-based approach and also focused on entrepreneurship and skill development of MSMEs. However, initiatives regarding HR practices in SMEs in particular, seemed missing in the report.

Prime Minister's Task Force Report on MSME, Govt. of India, (Jan 2010), recommended that simplified labour laws should be practiced in MSMEs as the transaction costs for complying with these laws is disproportionately high for these units. Further, the Report also came up with the recommendation that due to the large size of the unorganized sector within MSMEs, the labour related issues for this sector should be focused more on welfare rather than legislation by use of the Unorganized Workers Social Security Act, 2008. The Report also concluded that that the turnover rate is very high in the sector, although it employs substantial manpower. The Report recommended on the need to foster linkages between MSMEs and research & development institutes in the country, in order to enhance the performance of this sector.

MSME Annual Report, 2010-11, GOI, focused on the implementation of Cluster Development Programs for the MSME Sector (MSE-CDP). The main objective of such Cluster Programs was to provide extensive support to the MSMEs. Various state-wide 'soft-interventions' had been initiated like export promotion, marketing development, technology upgradation, seminars, workshops, study visits etc; as well as 'hard-interventions' like setting Common Facility Centres and infrastructure upgradation across various states. Various schemes had been initiated by the Government by providing grants with a ceiling, with the intention to undertake diagnostic study, feasibility study or to undertake financially viable projects for business development.

Development Commissioner, (MSME) Ministry of MSME, GOI, (2010-11), in its report on 'Initiative of the Ministry of MSME's in recent years', declared to take up skill development as a high priority as an HR initiative. Under the Entrepreneurship Skill

Development Programs conducted by various organizations of the Ministry of MSME, about 3.5 lakh people underwent the training programs during 2009-10. Further, the Ministry also provided assistance to the Training Institutions established by Partnership Institutions (PIs) of National Level Entrepreneurship Development Institutes (EDIs) and franchisees of National Small Industries Development Corporation (NSIC).

Cooper and Burke (2011) in their book deduced that there are significantly more SMEs than larger organizations, they also employ more people and exist in every country. Eventually they expand and enter their success time to the next step of larger enterprises in the future.

‘Effective Human Resources Management in Small and Medium Enterprises: Global Perspectives’ written by **Machado Carolena & Melo Pedro (2013)**, addresses various issues like management philosophies, culture and management practices and issues related to HRM in SMEs. The book provides useful inputs for academics, researchers, managers as well as SME owners, in both private and public sectors.

Shoaib Nawaz’s (2014) book titled ‘Guideline to develop HR Policies for SME (Case study of TurkPlast)’ provides new policies for existing HR Departments of SMEs to increase their firm’s ROI as well as strategies to motivate the employees of the SME firms. The book discusses in detail a case-study of an organization ‘Turk Plast’ with an understanding as to how HR policies needs to be tailor-made according to the type and requirements of SME firms. The book gives useful guidelines for the organizations, especially SMEs, who yet do not have an HR department and wish to establish one.

MSME Annual Report (2015-16) shows several thrust areas and new initiatives for the skill development of the labours as well as the executives or entrepreneurs of MSMEs. A lot of initiative for imparting training as well as for performance measurement of SMEs is being noticed in the Report. In order to ensure that young entrepreneurs are encouraged and suitably equipped through skill development training to go into new ventures, the Ministry of MSME has set up a National level Entrepreneurship Development Institutes namely, National Institute for Micro, Small and Medium Enterprises (NI-MSME). With the aim to promote and accelerate entrepreneurship and training infrastructure as well as

training programs, the Ministry has been implementing an important scheme viz. “Assistance to Training Institutions (ATI)”. As reported by KVIC (Khadi and Village Industries Commission), 6 workshops, 59 awareness camps and 51 (PMEGP) exhibitions have been organized during 2015-16 (upto 31.01.2016) and 24811 persons have undergone EDP training during 2015-16 (upto 31.01.2016). The MSME Annual Report 2015-16 positively shows a remarkable change in the focus and activities, when compared to the previous Annual Reports, in the areas of skill-development through training programs and training infrastructure, performance measurement of SMEs through third-party national/ international bodies, international co-operation as well as survey research and assessments.

6.2.3. Literature from Thesis

Shaikh M (2011) in his thesis titled ‘A study on the strategic role of HR in IT industry with special reference to select IT / ITES organizations in Pune city’, aimed to find out the extent to which strategic role is performed by the human resource function in the IT/ ITES organizations. The study tried to assess the extent to which the different roles are performed by the HR department across these organizations. It also tried to understand the differences in the perception about the quality of services provided by the HR department and the perception differences among the employees as well as the HR staff. It was found that there existed differences in the perceptions; the employees did not rate the work of HR staff as that of high quality, while the HR staff perceived to be of high quality.

Husien W A (2012) in his thesis on ‘Role of strategic human resources management on SMEs performance in Iraq’ aimed to determine the role of SHRM in Iraq SMEs. 87 respondents were investigated in the research within the SME industries in Baghdad, Iraq. The findings indicated that SHRM components like alignment, performance appraisal line manager, training, compensation and employee participation are significant to SMEs performance, particularly in Iraq.

6.3.HRM Practices and SMEs Performance – Literature Review

It is a matter of great discussion among HR researchers regarding how the overall set of HR practices is associated or linked with firm performance and competitive advantage (Ferris et al., 1999). The well-known ‘resource-based view’ with respect to human resources which provides a unique source of competitive advantage on account of its inability to be replicated or imitated, is well-established (Barney 1991; Wright *et. al* 1994; Boxall 1996, Ferris *et.al* 1999). There is an increasing empirical evidence suggesting that HR bundles which are mutually reinforcing, synergistic and overlapping facilitate employee commitment and involvement (MacDuffie, 1995; Guthrie, Spell & Nyamori, 2002; Camps & Luna-Arocas, 2010). Bundles are superior to any of the individual human resource activities of which they are composed in enhancing and facilitating positive changes in productivity (Ichniowski, et al, 1993).

Previous studies identified training efforts as one of the primary factors to improve organizational performance. High performing organizations tend to spend more time on training especially on communication and team skills (Lau & Ngo, 2004; Wimbush, 2005). The study by Erdil & Gonsel (2012) further corroborated the strong link between training in multiple functions and organizational performance.

Thus, the resource-based view has initiated a plethora of research work on how HRM practices contribute to firm’s performance by leveraging desired attitudes as well as behaviors (Wright *et al* 1994; Lado & Wilson, 1994; Becker & Gerhart, 1996)

6.3.1. Literature from Journals

Wright and McMahan (1992) deduce and argue that researchers should examine ‘bundles’ of HR practices and their collective effect, rather than the effect of isolated HR practices, on firm performance.

Deshpande, S. P. & Golhar, D. Y.’s (1994) study emphasized on the importance of the role of HRM practices in SMEs. They came to the conclusion that there was a substantial lack of information in a number of areas in small firms, especially in the areas of: the extent of the utilization of traditional human resource management functions; the level of support systems; and the education, experience and expertise of the employee(s)

responsible for human resource actions in SME's. Their empirical data revealed that smaller organizations do not have formal HR departments nor do they adopt traditional HRM practices. Their study revealed that small business owners need to realize that personnel practices shall be able to reinforce the basic worker characteristics.

Arthur J B (1994) in a cross-sectional study of 30 US steel mini-mills, found that commitment based HR systems was associated with lower scrap rates and higher labour efficiency, than the control-based systems. The 10 variables taken in the study were: decentralization, participation, skilled workers, level of supervision, benefits, wages, social events, bonus, etc. Some of the outcome variables were labour efficiency, scrap rate and employee turnover. The analysis was done using Regression methods.

The representation of the HRM-performance linkage is put forward by **Paauwe and Richardson (1997)** depicted in Figure 6.1.

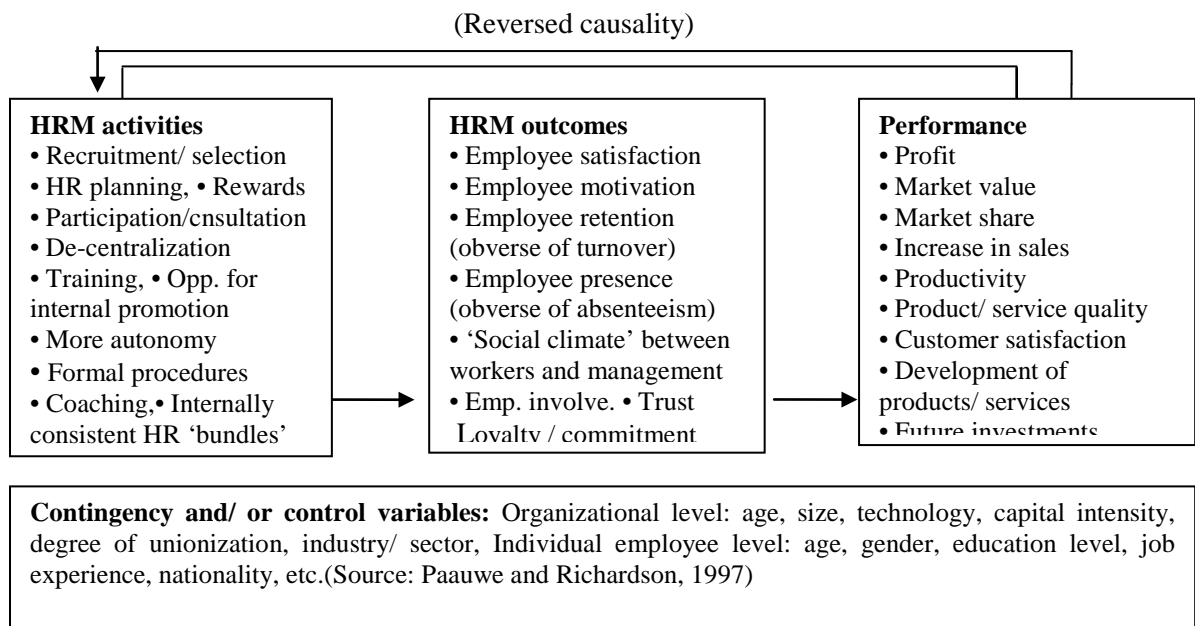
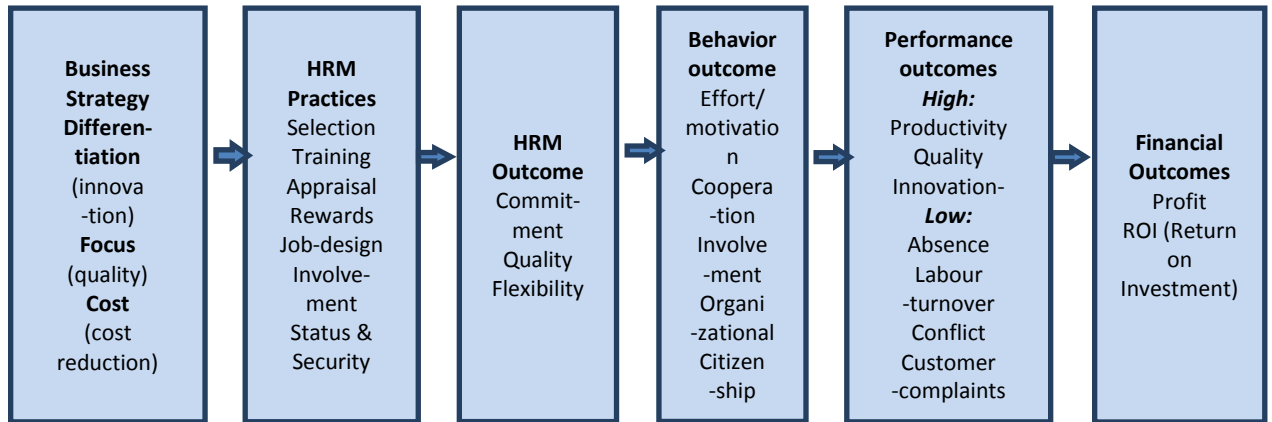


Figure 6.1 – Paawe & Richardson Model (1997)

Guest's (1997) model has 6 boxes, intervened with each other, as shown in Figure 6.2:

- Starting with a Porter-like strategy typology– distinguishing differentiation/innovation, focus/quality and cost reduction oriented business strategies;
- Which result into HRM practices,

- Resulting to HRM outcomes including behaviour outcomes;
- The cumulative effect leads to performance outcomes...thus resulting to financial outcomes.



(Source: International Journal of Human Resource Management, 8:3, 263-276, Guest's Model, 1997)

Figure 6.2 - Guest's Model (1997)

Boselie, J. P., Dietz, G. and Boon, C. (2005) studied 104 major articles, to find the Commonalities and contradictions in 'linking mechanisms' between HRM and performance, and concluded that the empirical research deduced that HRM in its 'system' form have been found to 'matter' (in a positive sense) for organizational performance. However, they also concluded that it was not possible to compare results from different studies due to variety of methods being used as well as disparity of research designs, and enduring uncertainties for measuring HRM, performance, and the relationship between these two, across the various studies.

Ijose Olumide (2005) in his study on 'Strategic human resource management, small and medium sized enterprises and strategic partnership capability', laid out a conceptual framework for studying the relationship between SHRM practice of SMEs businesses and their performance as corporate strategic partners. The research throws light on how SMEs can adjust themselves to the requirements of big businesses in times of even changing

market conditions by adapting SHRM capabilities. The author designed a conceptual model wherein SMEs can adapt their HRM practices in support of efficient strategy execution.

Prahlad Kasturi, et al, (2006) in their study on ‘HRM systems architecture and firm performance: Evidence from SMEs in a developing country’ concluded that the attitude of the firm’s owner(s) towards its employees is a major determinant of the firm’s profitability. However, their study also revealed that the effect of HRM philosophy on productivity is smaller, but still highly significant. This calls upon the need of further studies in this area.

Erdil O & Günsel A (2006) in their study on ‘Relationship between Human Resource Management Practices, Business strategy fit and Firm performance’ surveyed about 300 firms, among 1000, which was based on convenience sampling, of SME firms located around Gebze and Kocaeli (Turkey). They suggested that managers should develop training-focused HR practices to achieve competitive advantage. The study also concluded that there was significant relationship between the two traditional HR practices of selection and firm performance, and training and firm performance.

They concluded that there exists significant links between all five HR practices and HRM firm strategy fit. The five main HR practices which were included in the study were: Selective hiring, Use of teams and decentralization, Compensation/ Incentive contingent on performance, Extensive training and sharing information.

Carlson et.al (2006) in their study on understanding the impact of HR practices on performance of family-owned SMEs identified few HR practices like employment security, employee ownership and empowerment, high compensation, incentive pay, training and skills development as few of the HR practices which have a great impact in the performance of the organization. The five HRM ‘best practices’ in the study were training and development, performance appraisal, recruitment package, maintaining moral and setting competitive compensation levels.

Bowen Michael, Morara Makarius and Mureithi Samuel (2009) in their study on 'Management of Business challenges among Small and Micro Enterprises in Nairobi-Kenya', a total of 200 interviews with business owners and managers or those involved in the start-up and day to day running of these businesses were interviewed. The study sought to determine if there is a relationship between business performance and level of training in the line of business. 51% of the respondents said that they received training and nearly all of them (49.5%) said that their businesses was doing well, one may conclude that relevant training can produce positive results in the running of businesses. Competition, insecurity, debt collection, lack of working capital and power interruptions were reported as the top five challenges and difficulties faced by micro and small businesses. 50.5% said that having good communication skills is necessary as most of the customers of small businesses anticipate to receive personalized services from the SME owners/ managers. This survey has clearly showed that managers with relevant training run successful businesses as compared to their untrained counterparts, which thus reveals the relationship between HRM practices and firm's performance. 32% of the respondents considered training and giving incentives as strategies employed to counter the challenge of competition.

Guest (1997) and Paawe Jaap (2009) deduced in their study that the distance between some of the performance indicators (e.g. profits, market value) and HR interventions is simply too large and potentially subject to other business interventions (e.g. research and development activities, marketing strategies). Thus, the need of identifying performance indicators that are far more proximal in terms of what HR practices can actually affect, eg. changes in employee attitudes (motivation, commitment, trust) and behavior (employee turnover, absence), and subsequent changes in outcomes at organizational level (e.g. productivity and quality of services and/or products).

Brand, Maryse J. and Croonen, Evelien P. M (Oct 2010) in their study on Franchised and small units, found a negative relationship between unit size and performance, surprisingly. Their study investigated HRM behavior and performance using a sample of 171 units within one plural retailing system. They concluded that company-owned units

adopt the HR practices developed and prescribed by headquarters, leading to demonstrate HRM behavior that is typical for large firms; however, each individual franchised unit could largely adopt its own HR practices, which are typical for small firms.

Wyatt et al (2010) came up with their study that it is possible to implement selection tools in SMEs that are designed using a ‘best practice’ methodology. They deduced that tools such as Role Plays (RPs) and Situational Judgment Test (SJT) can be good predictors of job performance in smaller organizations. These types of Selection Tools had been proved to be quite relevant for SMEs in context to performance.

Further, findings of the study done by **Rathnaweera R (2010)** showed that providing training for employees is positively related to higher employee satisfaction, employee commitment and higher employee retention...which are dimensions of employee outcomes.

Cheng Ling Tan and Aizzat Mohd. Nazurdin (2011), in their study from a sample of 171 large manufacturing firms in Malaysia came to some important conclusions about the role of HRM practices on knowledge management and organizational innovation. One of the important findings of their study was that only one of the five HRM practices, namely ‘training’ was found to have both direct and indirect effect on all the three dimensions of organizational innovation (product innovation, process innovation, and administrative innovation). The results of the study offered several suggestions to manufacturing firms in Malaysia to focus on training programs. The study highlighted that when organizations display higher level of implementation of training programs, it resulted into the development of requisite skills of employees, in addition to their potential to learn and implement...which ultimately lead to organizational innovation.

Erdil and Günsel (2012) studied 63 SME firms located around Kocaeli and Gebze (Turkey). Their findings suggested, among others, that in terms of communication of strategy and feedback on performance, which are sub-dimensions of sharing information, results indicate that there exists no significant relationships between communication of strategy and firm performance.

Gill P. et al (2014) employed a non-parametric Structural Equation Modeling (SEM) technique to analyze the impact of compensation on alignment with the organization and opportunity for development and recognition. It was found that these dimensions shared a strong relationship and provided preliminary evidence that compensation shares a causal relationship with alignment with the organization. In other words, the study concluded that by improving the levels of compensation, the firm could improve the overall level of employee engagement.

Kanu A. M (2015) in his research sought to investigate the impact of recruitment & selection practices on the performance of 59 SMEs in the construction industry in Sierra Leone. The research employed qualitative as well as quantitative research methods. It employed in-depth interviews of owner managers and a cross-sectional survey of owner managers and SMEs performance. The SME performance indicators were growth in profit, sales and increased productivity. The results of the study revealed significant relationships between recruitment & selection practices and SMEs performance. Thus, the study was significant in a bid to sensitize SME owner managers to implement measures regarding effective recruitment & selection practices, which was significant as the development of SMEs in Sierra Leone was marred by poor recruitment & selection practices. This research recommended that future research should examine the impact of recruitment and selection on SMEs performance in the construction industry and weigh them against the findings of this research, as well as the degree to which findings of this research may possibly be generalised to SMEs in other countries.

6.3.2. Literature from Books / Published Reports

Armstrong & Baron (2007) in their book mainly discussed how Strategic HRM can make a significant impact to bottom-line performance, with research evidence and practical guidance. The research includes interviews with HR Managers and Chief Executives from a variety of organizations. The book throws light on how HR practitioners can become business partners engaged in improving bottom-line performance via strategic HRM.

Robert Carton & Hofer Charle's (2008) book, 'Measuring organizational performance : Metrics for entrepreneurship and Strategic Management Research' offers a framework to understand the implications of selecting variables to understand organizational financial performance. As these measures use accounting data, they can be used by researchers as well as practitioners and entrepreneurs for assessing increases in shareholder value for both public as well as private firms, including small and family businesses.

Van de Vorde (2009), in his book titled 'HRM, Employee well-being and Organizational Performance- A Balanced Perspective', clarified the role of work satisfaction in the relationship between strategic climate and productivity at the business level. It proved that satisfied employees result in higher profits through enhanced customer satisfaction. It also concluded that work satisfaction in fact works as an outcome indicator, rather than as an intermediary. The study emphasizes the need to include employee climate scores in HR scorecards to manage work satisfaction as well as productivity.

Darwish T (2013), in his book 'Strategic HRM and Performance: Theory & Practice' discusses about the transition from HRM to SHRM; thus moving from an employee or individual performance level to organizational performance level. The book gives a detailed theoretical perspective on the various approaches and aspects of the linkages between HRM practices and performance.

6.3.3. Literature from Thesis

Murphy Kevin S (2009), in his thesis on 'High Performance Work Practice System', defined the construct of High Performance Practice System for unit level managers in theme restaurants. This study differed from its previous counter-parts in a way that it established a new HPPS construct for unit level managers, as well as the identification of appropriate evaluation criteria for determining the performance in the US casual restaurant themed segment/ industry.

Muhammad A R (2007) in his thesis on ‘HRM sophistication and SME performance: A case of readymade garment manufacturers and exporters in Lahore, Pakistan’ suggested for more research in the area of the linkages between HRM and SME performance. Sample category were the firms between 20 and 100 employees in Ready-made Garments Manufacturers and Exporters (RGME) industry in the area of Lahore Pakistan,; sample size was 90 SMEs (almost 45% of total population in this area). The study aimed to examine the level of formalization and factors influencing such formalization, which can have some effect on the firm’s performance.

Rathnaweera R (2010) in his study in Sri Lankan public sector banks found that bundles of HRM practices are positively related to better employee satisfaction. The hypothesis were empirically tested on a sample of 209 employees working in different departments and branches of two public sector banks in Sri Lanka, using correlation analysis and multiple regression analysis. The survey further found that compensation and social benefits had the strongest effect on employee satisfaction, commitment and retention of PSB in Sri Lanka. It further revealed that providing training is also positively related to the three outcome variables.

Alnaqbi W (2011) in his thesis on ‘The relationship between Human Resource Practices and Employee retention in public Organizations: An exploratory Study conducted in the United Arab Emirates’, tried to focus the extent to which HRM practices and other factors such as job satisfaction, organizational commitments and leadership practice in the UAE affect employee retention in public organizations, in a comparative study of Sharjah and Dubai. Both quantitative and qualitative research approaches were employed. The findings, among others were that, lack of empowerment and management style are factors that influence the retention of employees; which call for a need to provide employees with job-description.

Mishra A K (2012) in his study on ‘A critical study of Human Resource Development practices in Durgapur Steel Plant’, surveyed across 93 executives of the Durgapur Steel Plant, to find HRD Climate and Organizational Diagnosis in the Plant. The questionnaire related to training effectiveness was given to 47 line managers and 22 HR personnel from

across the departments and hierarchy. Data regarding profit, turnover, labor productivity, manpower were collected from various secondary sources like Annual Reports etc. While a direct relation and exact degree of relation between the two variables under study (Independent HRD practices and Dependence Organizational Outcomes) is not so visible, however, there is an impact. Significance of the intervening variable HRD climate was also brought out, which affected various performance outcomes viz. employee outcomes, organizational outcomes as well as financial outcomes.

White S (2012) undertook a research to examine the relationship between HRM practices, transformational leadership and firm performance among knowledge workers employed in a biotechnology company in Canada. While the bundle of HRM practices was not a predictive influence on operational or financial performance in the model proposed in this study, it did have a significant influence on employee performance, which is important in explaining employee commitment and subsequently performance. Further, analysis of the black-box revealed positive relationships between transformational leadership and operational performance; as well as between HR Practices and employee performance. It further came out from the study that HRM practices play a mediating role in the relationship between leadership and employee performance as an organizational outcome.

Rojanapuwadol S (2012) in the research on ‘Development of HRM Practices in SMEs : A Case Study from the Founders and CEOs’ Point of view’ used qualitative research, case studies and depth interviews in the study. The aim was to study the development of HRM practices and strategies applied from the start-up phase to the growth-phase of SMEs. The study showed that during the formative years the SMEs relied more on various types of networks in recruitment; and also provided formal training during these formative years. More emphasis was put on psychological rewards rather than financial rewards, to function more cost-effectively. These activities were mostly carried out by the owner. However, during the stage of growing, on account of multiplicity of issues, an HR person was mostly deployed to take care of HR related aspects.

6.4. Summary of the Chapter- Identifying the Research Gaps

The chapter gave a detailed orientation of literature regarding HRM Practices and linkages with SMEs performance, in India and abroad. The chapter also oriented towards the HR Practices and other aspects governing SMEs over the last three decades. A 360 degrees literature review was done, across a longitudinal series, across different years, arranged chronologically, to get an idea about the developments over time. In-depth study from journals, books, reports as well as thesis and dissertations helped to get a rich overview of the theoretical, conceptual and empirical evidences of the topic under study.

It was interesting to note that one of the earliest studies done in the year 1984 by McEvoy concluded that small businesses lacked in HR practices like creative staffing practices, training in formal personnel management practices and that they did not consider the use of generally accepted HRM practices as essential for improving productivity.

The research-gap identified in the chapter on Literature Review were mainly:

1. There is lack of research in HRM related practices in SMEs.
2. The linkages between HR practices and SMEs performance needs to be established.
3. There is dearth of knowledge about the HR practices in SMES.

Thus, the chapter helped in identifying the research-gap in this important area of HRM practices and its linkage with firms' performance in the SMEs.

CHAPTER – 7

Research Methodology

7.1.State of The Art of the Research: A Brief Overview

The chapter focuses on the methods used to gather and analyze data. It focuses on the research design, time period of conducting the survey, method for approaching the sample and the collection of data. The empirical research in the thesis is comprised of primarily quantitative data analysis based on a structured questionnaire. In addition to this, a chapter has also been included in which the information was collected based on semi-structured interviews through interactions and discussions with the managing heads, to get an overview of the major problems and challenges faced by the Managing heads of the SMEs, and also to know the reasons thereof. The results and findings from the quantitative analysis are discussed in Chapter 8 whereas the outcomes from the interactions and discussions related to the problems and challenges faced by the SMEs are discussed in Chapter 9.

It was seen from the responses of the respondents that good HR practices or management practices in the SME firms have not always resulted in higher financial returns or increased Return-on-Investment or profit margins, due to some external factors, beyond the control of the Managing Heads. These reasons could be understood due to the interactions and discussions with the owners/ Managing Heads through some open-ended semi-structured questions to know the problems and challenges faced by the firms. Thus, the interactions with the Managing heads have complemented or supported the findings to understand the underlying facts about the SME sector in a better way. In the present

chapter, the objectives and the hypotheses for the quantitative study have been discussed in detail. The rationale for each of the hypothesis is also discussed.

In the present study, a survey has been conducted through primary study of 126 SME firms across the eight Industrial Estates of Vadodara district. The 215 respondents in the study comprise of 83 owners (including entrepreneurs, Directors, CEOs, Chairman, Proprietor, Partner) and 132 employees who are Managing Heads like employees from senior management as well as HR Managers/ Supervisors/ Heads of Departments. Structural Equation Modeling and other techniques have been used to analyze the linkages between HR practices and SMEs performance. On the other hand, only 45 respondents consented willfully to interact and discuss about the problems and challenges faced by the SMEs.

7.2. Rationale of the Study/ Research Gap

Since MSMEs employ about 59 million persons in over 26 million units throughout the country (MSME Annual Report 2014-15), their success is critical for the economy. It is a matter of challenge for the sector to keep its work-force motivated so that they can perform effectively and efficiently...thus, the need for sound HRM practices becomes inevitable. Research results support the assumption that with a higher quality of HRM in the organization a better performance can be reached (Paauwe, 2004; Bowen & Ostroff, 2004; Pfeffer, 1994; Boselie, Dietz & Boon, 2005).

One remarkable study of personnel functions in smaller firms found that the areas of accounting, finance, production, and marketing all take precedence over personnel management. (McEvoy 1984). In many cases, the owner of a small business himself handles the personnel functions. A survey conducted by Hess (1987) showed that small business owners rank personnel management as the second most important management activity next to general management/ organizational work.

Deshpande and Golhar (1994) investigated empirically the various HRM issues in 100 large and small manufacturing firms. They concluded that what is perceived as important by managers may not actually be practiced by them; thus necessitating future research to investigate this issue.

Bowen and Ostroff (2004) through their research study gave a theoretical framework on how HRM practices can lead to outcomes which the organization desires, through conceptual studies. They proposed that HRM will create a strong situation for improving firm's performance when the HRM system is perceived as high in distinctiveness, consistency and consensus.

Boselie, J. P., Dietz, G. and Boon, C. (2005) studied 104 major articles on linkages between HRM and performance and concluded that the empirical research deduced that HRM in its 'system' form have been found to 'matter' (in a positive sense) for organizational performance.

However, there is lack of empirical research showing the linkages between HRM practices and performance of Small & Medium Enterprises (SMEs). Heneman *et al*, conclude that 'the lack of information about human resources in SMEs is problematic for theory, research and practice' (Heneman *et al*, 2000).

Thus, the lack of information of empirical evidences about human resource management practices in SMEs created interest in the researcher to find the linkages between HRM practices and the performance of SMEs in the district of Vadodara.

Thus, based on the major outcomes from the literature review, the rationale of the study are as under:

- There is lack of information about the major HRM Practices implemented in small firms.
- There is lack of information about the linkages between HRM Practices and SMEs performance.
- There is lack of empirical evidences to corroborate how HR in its 'system' form or as a single practice affects SMEs performance.

7.3. Problem Statement

“To study the linkages between HRM Practices and SMEs performance in Vadodara district”

7.4. Research Questions

1. Is there any linkage between HRM practices and performance of SMEs?
2. Is there any linkage between HRM Practices and Employee Outcomes in SMEs?
3. Is there any linkage between Employee Outcomes and Organizational Performance outcomes of SMEs?
4. What are the major HRM practices being practiced in the SMEs in the Vadodara district?
5. What is the essence of the SME sector in the economy?
6. What are the various policy initiatives and strategies undertaken in the sector to improve its performance?
7. What are the various problems and challenges faced by the SMEs?

7.5. Objectives of the Study

The primary objective of the study is to investigate the linkages between HRM practices and performance of SMEs in the Vadodara district. The objectives of the study are as under:

Primary Objectives

1. To find the linkages between HRM Practices and Performance of SMEs in the Vadodara district.
2. To find the linkages between HRM Practices and Employee Outcomes in SMEs.
3. To find the linkages between Employee Outcomes and Organizational Performance outcomes of SMEs.

Secondary Objectives

4. To identify the state of HR practices and the major HRM practices being practiced in the SMEs in the Vadodara district.
5. To understand the various aspects of SMEs with respect to its presence in the present scenario and functional areas of SMEs with special reference to HR functions.
6. To understand the various policy initiatives and strategies undertaken in the sector, with special reference to the MSMED Act 2006.
7. To get an overview of the MSMEs in the Gujarat State, with special reference to Vadodara district.
8. To identify the various problems and challenges faced by the SMEs.
9. To give recommendations and suggestions to improve the SME sector.

7.6. Significance of the Study

The study is significant because the following results are achieved from the study:

1. Understanding the linkages between HRM practices and SMEs performance in the Vadodara district and contribute to theory building of this important linkage.
2. Investigate the current HR practices which are practically prevalent in the SMEs in Vadodara district.
3. Identifying the various problems and challenges faced by the entrepreneurs/ Managing Heads of the SMEs in general.
4. Identifying the major policies as well as new policy initiatives prevalent in the SMEs, through a detailed study of the MSMED Act, 2006 and other policy initiatives.

5. Give recommendations for improvising the SME sector. which can be imbibed by SME owners/ Managing heads/ Chambers of Commerce & Industry, industry associations etc to improvise the SME sector.

7.7. Research Design

The research design of the study is a combination of Descriptive as well as Exploratory Research. Descriptive Research is a type of conclusive research that has as its major objective the description of something- usually market characteristics or functions (Malhotra & Dash, 2011). In the present study, Descriptive Research design involved a pre-planned and structured design by way of quantitative analysis through hypothesis testing and using the survey method through a one-to-one approach. Additional information was gathered about the real-life related aspects like the problems, challenges or concerns faced by the SME sector as a part of the Exploratory Research to get into the insights of the problem. It was executed through some open-ended questions in a semi-structured interview, through discussions and interactions with the entrepreneurs and Managing Heads. Exploratory Research has as its primary objective the provision of insights into, and comprehension of, the problem situation confronting the researcher (Malhotra & Dash, 2011).

7.8. Research Approach

Descriptive and Exploratory research design has been used to carry out this research. Research approach basically refers to the overall orientation to the research. Quantitative research techniques gather numerical data and use statistical analysis to arrive at meaningful conclusions. Whereas qualitative techniques analyze on the basis of words and concepts quantification. Qualitative aspects allow researchers to understand the views, attitudes, behaviors and perspectives of the persons/ research subjects concerning an organization or the behaviors of people in a social or professional setting. Quantitative approach on the other hand, help in understanding the study through the use of numerical data and statistical analysis.

This study employs Quantitative approach to ascertain linkages between HRM practices and the performance of the SMEs. Additionally, open-ended questions were included around employee related issues, Firm's success factors, and challenges faced by SMEs in general.

Thus, the research is both deductive as well as inductive. Deductive research is theory-testing, which is often linked to the quantitative analysis. Whereas, inductive research is theory-generating which can be linked to the qualitative interviews gathered from the respondents to identify the generic problems and challenges faced by the sector.

In the present study by using brain-storming discussion through the open-ended questions asked to the respondents and detailed interactive sessions held with the Managing Heads helped to come up with some real challenges/ issues that the SMEs are facing across the various estates in the Vadodara district.

7.9. Sources of Data

- **Primary data** are originated by the researcher for the specific purpose of addressing the problem at hand. In the present study, primary data has been collected by way of administering a structured questionnaire and getting it filled by the respondents through one-to-one approach. Further, a few open-ended questions in the semi-structured interview helped to gain some primary data from the respondents related to the problems and challenges faced by the sector.
- **Secondary data** are data which have already been collected for purposes other than the problem at hand. Secondary sources in the study included information from journals, books, thesis/ dissertations, website references as well as Governmental / Institutional Reports, Annual Reports or Publications and Directories.

7.10. Method for Selecting/ Approaching the Sample

Non-Probability Sampling method of Quota Sampling was administered in the study. The total territory (Vadodara District) was divided into **quota (strata/control category) of each Industrial Estate**, based on the Federation of Small Scale Industries (FSSI) 2006

Directory and **10%** firms have been selected from each Industrial Estate based on a mix of **Convenience Sampling** as well as **Snowball Sampling**. As the FSSI Directory's database was old (published in 2006), hence it could not be adopted as the sampling frame. Further, some firms mentioned in the Directory had closed down whereas some firms whose names were not mentioned in the Directory were present in the estate. Hence, using the Directory as the sampling frame was not viable. Thus, using Non-Probability Sampling method of Quota Sampling using a mix of Convenience Sampling and Snowball Sampling was found out to be the most appropriate method in the present study.

As we know, Quota sampling is a Non-Probability Sampling technique, which uses a two-stage restricted judgmental sampling. The first stage consists of developing control categories, or quotas, of population elements. In the second stage, sample elements are selected based on convenience or judgment. Convenience sampling attempts to obtain a sample of convenient elements. Often, respondents are selected because they happen to be in the right place at the right time. In snowball sampling, an initial group of respondents is selected, usually at random. After being interviewed, these respondents are asked to identify others who belong to the target population of interest. Subsequent respondents are selected based on the referrals (Malhotra & Dash, 2011). In the present study a combination of **Non-Probability Sampling techniques** were used.

The sample size comprised of **215 respondents from 126 SME firms across eight Industrial estates of Vadodara district** (out of the twelve estates in the district) for the quantitative analysis. However, only **45** Managing heads including owners, gave their consent or willingness to answer and discuss the qualitative aspects like problems, challenges and issues faced by the SME sector, in general or SMEs in particular .

The eight estates comprised of **GIDC Makarpura, Sardar Estate, Patel Estate, Gorwa BIDC Industrial Estate, Chhani Estate, Mujmahuda, Vadodara City area and Padra Industrial Estate**. Refer Table 7.1 to get an idea of the sample distribution and bifurcation.

TABLE 7.1 - Sample Distribution & Bifurcation

Samples taken from eight Industrial Estates out of a total of twelve Estates in the district (i.e.67% of Industrial Estates)			
126 SME Firms		215 Respondents (Managing Heads)	
Small Enterprises	Medium Enterprises	Owners/ Entrepreneurs	Employees including Senior/ Middle Level Management
84 (67%)	42 (33%)	82 (38%)	133 (62%)

(Source: Primary data)

Refer Table 7.2 to get an idea of the distribution of samples across the eight Industrial Estates.

TABLE 7.2 - Distribution of Samples across Industrial Estates

Samples Taken From Eight Estates Out Of A Total Of Twelve Estates In The District (i.e 67% Of Industrial Estates Included In The Survey)						
No	Estate	Total No. Of MSME Units (As Per FSSI Directory)	Only SMEs (70% Of MSMEs*)	Target Sample Size (10% of SMEs)	Samples Accomplished (SME Firms)	No. Of Respondents (Owners/ Managing Heads)
1	GIDC Makarpura	1,403	982	64	64 (6.5%)	109
2	Sardar Estate	126	88	9	8 (10%)	13
3	Patel Estate	144	100	10	10 (10%)	10
4	Gorwa BIDC	89	62	6	8 (14%)	16
5	Chhani Estate	85	60	6	9 (15%)	18
6	Mujmahuda	23	16	2 [#]	4 (25%)	8
7	Vadodara City	215	150	15	15 (10%)	24
8	Padra Ind. Area	27	19	2 [#]	2 (100%)	3
9	Others (Waghodia , POR)	134	94	9	6	14
				Total:	126 SMEs	215

(Source: Compiled by author based on manual counting from FSSI 2006 Directory;

* As per feedback from FSSI Head, VCCI Head & DIC Head)

7.11. Research Instrument – Overview of the questionnaire based study (Content Validity)

Data was collected using a **structured questionnaire** through the **one-to-one approach** as an interactive discussion through personal contact is one of the most suitable methods to gain insights into a problem. During the pilot-study period, about 8 to 10 SMEs were visited in the GIDC Makarpura estate, and the basic questionnaire was shown and discussed with the entrepreneurs/ owners/ supervisors/ HR managers/ managing heads as well as employees at length. The Preliminary Questionnaire was simultaneously discussed with the academicians and research experts to **check the validity of the content of the questionnaire**. These discussions helped to frame the final questionnaire, on which the present study was based.

By consulting the experts like the SME owners, HR Managers and other Managing Heads and research experts, the questionnaire was re-designed which included re-framing of questions, addition as well as deletion of variables, which have been duly incorporated by the researcher. Questions related to income of the employees, over-time allowances and actual profits accrued by the firms were deleted in the final questionnaire, which were there in the preliminary questionnaire. Finally, a single questionnaire was framed wherein owners/ entrepreneurs as well as other Managing Heads, who represented the employees, were identified as the respondents, and the instrument was thus finalized.

7.12. Definition of Variables

Guest (1997) and Paawe Jaap (2009) deduced in their study that the distance between some of the performance indicators (e.g. profits, market value) and HR interventions is simply too large and potentially subject to other business interventions (e.g. research and development activities, marketing strategies). Thus, the need of identifying performance indicators that is far more proximal in terms of what HR practices can actually affect, eg. changes in employee attitudes (motivation, commitment, trust) and behavior (employee turnover, absence), and subsequent changes in outcomes at organizational level (e.g. productivity and quality of services and/or products).

The present study intended to find the linkages between HRM Practices and SMEs performance in the Vadodara district. Based on Literature Review (Dyer & Reeves, 1995; Paawe and Richardson, 1997), SMEs performance was evaluated in two sets, one measuring the performance through employee-outcome characteristics and the other through organizational performance characteristics over the last two years for the firm. The study was prompted on account of lack of previous research in the SME sector regarding the linkages between HRM practices and performance in the Vadodara district. In the present study, the independent variables are the HR Practices, whereas the dependent variables are the Performance dimensions. A control variable is a variable that is held constant or whose impact is removed in order to analyze the relationship/ linkages between other variables without interference. Refer Table 7.3 to get an overview of the Independent, Dependent and Control variables in the present study.

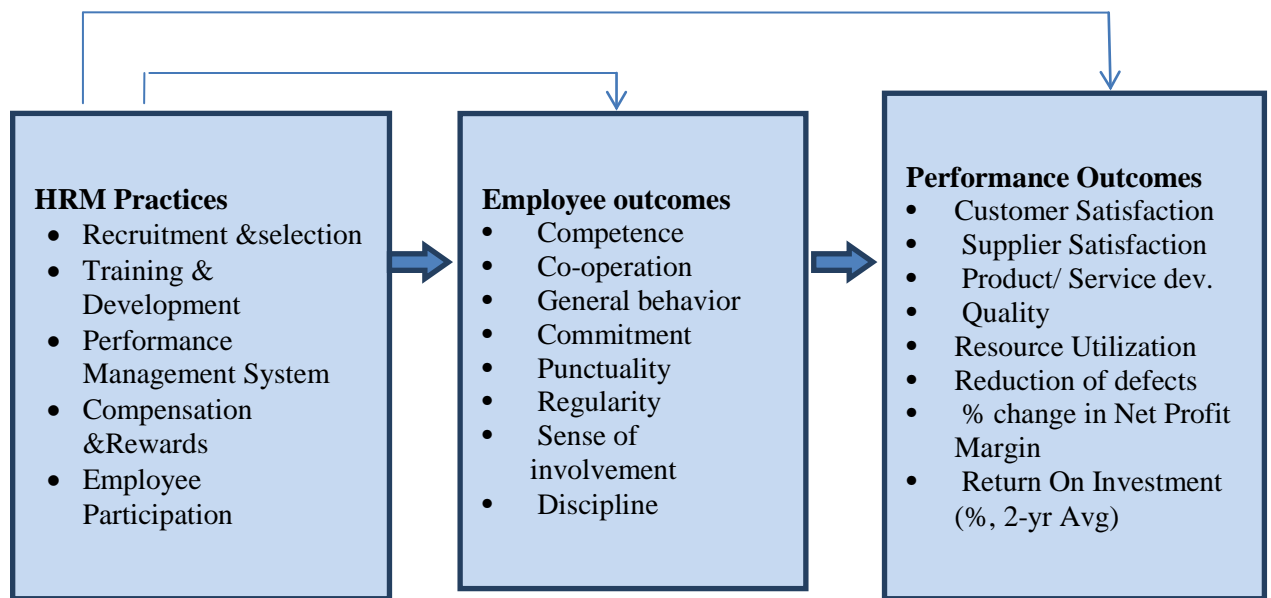
TABLE 7.3 - Overview of Independent, Dependent and Control Variables

Independent Variables	Dependent Variables	Control Variables (or Contingency Variables)
<p>HR Practices (Inspired by the studies of Paauwe & Richardson, 1997 and Guest, 1997)</p> <ul style="list-style-type: none"> • Recruitment and Selection • Training and development • Job-rotation • Performance Management System • Compensation & Reward System • Employee Feedback Mechanism • Delegation and Authority • Employee participation in decision-making • Welfare Measures • Open Communication 	<p>‘Performance’ dimensions (Inspired from the study undertaken by Dyer and Reeves, 1995)</p> <p>(a) Employee Outcomes: Competence, Employee attitudes (commitment, co-operation); Employee behavior (Regularity, Punctuality, Discipline); Employee-involvement.</p> <p>(b)Organizational Performance Outcomes: Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Quality, Utilization of resources, Reduction of defects, % change in Net Profit Margin, ROI (in % Average performance of 2 yrs)</p>	<p>(Inspired from the study of Paawe and Richardson, 1997)</p> <p>Organizational level variables like size of the firm (small or medium), age of the firm, industry / sector.</p> <p>Individual employee level variables like age, gender, education level, job experience.</p>

(Source: Author, based on Literature Review)

7.13. Hypothesized Model

Based on Literature Review and inspired by the studies of Paauwe and Richardson (1997), Guest (1997) and Dyer and Reeves (1995) a Hypothesized Model has been developed by the author as shown in Figure 7.1.



(Source: Author; Inspired from the studies of Paawe & Richardson, 1997; Guest, 1997 and Dyer & Reeves, 1995)

Figure 7.1 - Hypothesized Model Showing Linkages Between HRM Practices, employee Outcomes & Organizational Performance Outcomes

7.14. Research Hypotheses

A hypothesized Technology Acceptance Model was tested using structural equation modeling using AMOS 18 software.

The major hypotheses in the study and their literature back-drop are as follows:

Linkage 1:

H1: HR Practices positively and directly affects Organizational Performance.

The thesis focuses on the linkages between HRM practices and performance in SMEs. The representation of the HRM-performance relationship have been put forward by Guest, 1997; Paauwe and Richardson, 1997; Guest *et al*, 2000; Boselie, J. P., Dietz, G. and Boon, C., 2005; PaaweJaap, 2009, in their studies.

Selset *al* (2003) in their study on Belgian SMEs (organizations with atmost 100 employees) studied the link between HRM and firm performance. The results showed a strong effect of intensive HRM on the profitability of Small and Medium sized companies. Their study revealed that HRM intensity has a strong positive effect on productivity and through this productivity, an effect is seen on the gross margin/ personnel costs. Their study concluded that the total effect of HRM intensity on profitability is positive and very strong...which was quite different from the earlier conclusions of the 'black-box'. HRM practices like, Effective training & development, selection, rewards and performance appraisal have positive relationship with product quality, Productivity efficiency and overall perceived performance (Khan, 2010).

The present study has focused on finding these linkages between HRM practices and performance of SMEs in the Vadodara district. Organizational Outcomes in the present thesis includes dimensions like Customer Satisfaction, Supplier/ Vendor Satisfaction, Product/ Service Quality, Less Wastage & Proper utilization of resources and decrease in the average number of defects of products/ deficiencies in service over the last two years.

Linkage 2:**H2: Employee Outcome positively and directly affects Organizational Performance.**

A serious limitation which has been pointed out by recent research is that the link between HRM practices and organizational performance is somewhat like a 'black-box', due to the lack of clarity regarding 'what exactly leads to what' (Gerhart, 2005). The idea is thus to consider the variables which are mediating or moderating the end-point variables (Becker & Gerhart, 1996). Paauwe (2004) and Lepak *et al* (2006) in their study concluded that the HRM outcomes categorized as 'employee skills' like employee competencies, co-operation etc, 'employee attitudes' like motivation, commitment, satisfaction and 'employee behavior' like retention, presence etc, were usually the sets of mediating variables (leading to 'organizational performance' ultimately).

However, Wright *et al* (2005) pointed out that the studies considering HRM outcomes as mediating variables also produced mixed results with respect to causation. It is worth noting that the 'organizational performance variables' in the study conducted by Katou A (2008) included: effectiveness, efficiency, development, satisfaction, innovation and quality...financial performances were thus not considered in the scope of the study.

The researcher in the present thesis intends to find out the linkages between these variables viz. employee outcomes leading to organizational outcomes. The researcher believes that the present thesis shall be a major break-through in this particular study in the SMEs in Vadodara district.

Linkage 3:**H3: There exists covariance between HR Practices and Employee Outcome.**

An increasing body of work contains the argument that the use of good HR practices including effective Recruitment and Selection practices, Compensation and Incentive system as well as Performance Management System, Training & involvement activities can actually improve the knowledge, skills as well as abilities of a firm's employees. It can increase their motivation, enhance retention of quality employees as well as encourage non-performers to leave the firm (Jones & Wright, 1992).

In this thesis, an attempt has been made to find the linkages between HRM Practices and Employee Outcomes of SMEs. Employee outcomes included in the study are outcomes reflected through their competence to do their assigned work, co-operation with Management/ Heads, co-operation among employees, general behavior, commitment to complete assigned task, punctuality and regularity, sense of involvement and conformance to general code of conduct.

In addition to the three major hypotheses mentioned above, the study tests many other hypotheses in Chapter 8 which discusses in detail the quantitative analysis.

7.15. Time Period of the Survey

The questionnaire framing and finalization alongwith pilot study was done within a period of five months from March to July 2014. During the period of pilot study, a number of governmental offices were visited to get a Directory/ listing of the SMEs in the various industrial estates of Vadodara district. Some of the offices which were visited included the District Industries Centre (DIC), Vadodara Chamber of Commerce & Industry (VCCI) and Federation of Small Scale Industries (FSSI). The only systematic directory of small-scale industries, across various industrial estates, was found in the FSSI 2006 Directory. During the pilot-study period, 10 SMEs were visited in the GIDC Makarpura estate, and the basic questionnaire was shown and discussed with the entrepreneurs/ owners/ supervisors/ HR managers/ managing heads as well as employees at length. This discussion helped to frame the final questionnaire. The field survey was conducted during the period from August 2014 to July 2015. It took a little long time for the field survey as the method used to collect data was based on one-to-one interaction with the respondents for filling the questionnaire, across the eight Industrial Estates, after fixing an appointment. Further, the respondent was carrying the PhD in a part-time mode, which involved a long time for priority work related to the job/ work-place.

7.16. Scale and Research Techniques

The data collected regarding the Independent and Dependent variables is in Likert Scale, which is an ordinal scale (categorical data), hence its normality cannot be tested. As the basic assumption required for carrying out Parametric Test is violated, which is 'normality', hence in the present research only Non-Parametric Tests have been administered. Non-Parametric tests were used to draw some inference about the HRM Practices, Employee Outcomes, Firm's Performance and control variables using various tests like Chi-square, Mann-Whitney, Kruskal-Wallis, Logistic Regression, Factor Analysis etc. The linkages between HRM practices and performance dimensions have been found out using Structural Equation Modeling (SEM).

7.17. Statistical Analysis and Packages

The statistical analysis was done using the tools like Statistical Package for the Social Sciences (SPSS), AMOS 18 (Analysis of Moment Structures) and Microsoft Excel.

Microsoft Excel was used during the preliminary data-entry stage, which was later exported to SPSS. SPSS Statistics is a software package used for statistical analysis, like survey authoring and deployment, data mining, text analytics etc. AMOS enables to specify, estimate, assess and present models to show hypothesized relationships among variables. AMOS helps to build models more accurately than with standard multivariate statistical techniques. It also allows to build attitudinal and behavioral models that reflects complex relationships. The software provides Structural Equation Modeling (SEM), which is easy to use as well as enables to easily compare, confirm and refine models.

7.18. Summary of the Chapter

In the chapter of 'Research Methodology' an attempt had been made to give a holistic information on the aspects related to research design, research approach, definition of variables, sampling method, sample distribution, time-period and also the major hypotheses of the study alongwith the literature back-drop. In addition to the major three hypotheses and linkages mentioned in the chapter, the thesis discusses a number of other

hypotheses to establish the linkages/ association with HR practices, employee outcomes, organizational outcomes, control variables and the like, which have been tested judiciously and displayed in Chapter 8. Chapter 9 discusses the problems and challenges faced by the SME sector in general.

CHAPTER – 8

Quantitative Data Analysis and Interpretation

8.1.Prelude

The present chapter focuses on the detailed results and findings of the study based on quantitative analysis.

The data analysis in this Chapter is divided in three Sections:

- **Section I: Descriptive Statistics** (Eg. frequency distribution analysis, including percentages, mean, standard deviation, Reliability Tests etc).
- **Section II: Inferential Statistics** (Eg. Using non-parametric tests like Mann Whitney Test, Kruskal-Wallis Test)
- **Section III: Structural Equation Modeling** (To find the linkages between HRM Practices, Employee Outcomes as well as Organizational Outcomes).

A snap-shot of analysis is displayed in Table 8.1 which show-cases the achievements with respect to objectives and the tools used to achieve each objective.

TABLE 8.1 - Achievements With Respect To Objectives

Objectives	Analysis/ Tools	Achievements
<p>Primary Objectives</p> <ol style="list-style-type: none"> 1. To find the linkages between HRM Practices and Performance of SMEs in the Vadodara district. 2. To find the linkages between HRM Practices and Employee Outcomes in SMEs. 3. To find the linkages between Employee Outcomes and Organizational Performance outcomes of SMEs. 	<p>Structural Equation Modeling</p> <p>Regression</p>	<p>Hypothesis testing done.</p> <p>Null Hypothesis Rejected</p>
<p>Secondary Objectives</p> <ol style="list-style-type: none"> 4. To identify the state of HR practices and the major HRM practices being practiced in the SMEs in the Vadodara district. 	<p>Mean & Std. Deviation</p> <p>Multiple Responses, Cross-Tabulation & Chi-square</p> <p>Mann-Whitney & Kruskal-Wallis Test</p>	<p>Linkages established across various variables.</p>
<p>Secondary Objectives</p> <ol style="list-style-type: none"> 5. To understand the various aspects of SMEs with respect to its presence in the present scenario and functional areas of SMEs with special reference to HR functions. 6. To understand the various policy initiatives and strategies undertaken in the sector, with special reference to the MSMED Act 2006. 7. To get an overview of the MSMEs in the Gujarat State, with special reference to Vadodara district. 8. To identify the various problems, challenges or issues faced by the SMEs as a part of the qualitative study. 9. To give recommendations and suggestions to improve the SME sector. 	<p>Detailed Literature Review and studies from various Reports which gave an overview of the functional areas, new policy initiatives, scenario of SMEs in Vadodara district.</p> <p>Qualitative study (content analysis) to understand the problems & challenges faced.</p>	<p>Recommendations & suggestions given based on quantitative and qualitative analysis.</p>

(Source: Author)

Section I: Descriptive Statistics

8.2. Descriptive Statistics- Demographic Characteristics

Descriptive Statistics are used to describe the basic features of the data in a study and provides summaries about the samples. Put in another way, Descriptive Statistics helps describe, show or summarize data in a meaningful way and presents quantitative descriptions in a manageable form.

Descriptive Statistics was done to get an overview of the samples selected, using various frequency distribution analysis, including percentages, mean, standard deviation; Reliability Tests, Cross-Tabulation etc.

8.2.1. Industrial Estate

10% of firms have been taken from each Industrial Estate. Refer Table 8.3 for the distribution of samples across the various industrial estates in Vadodara district, with graphical representation in Figure 8.1.

TABLE 8.2 - Frequencies of Industrial Estates

Estate	Frequency	Percent
Mujmahuda	8	3.7
Gorwa BIDD	16	7.4
Chhani Estate	18	8.4
Sardar Estate	13	6
Patel Estate	10	4.7
Padra Estate	3	1.4
Vadodara City	23	10.7
Others	15	7
GIDC Makarpura	109	50.7
Total	215	100

(Source: Primary data; SPSS Output)

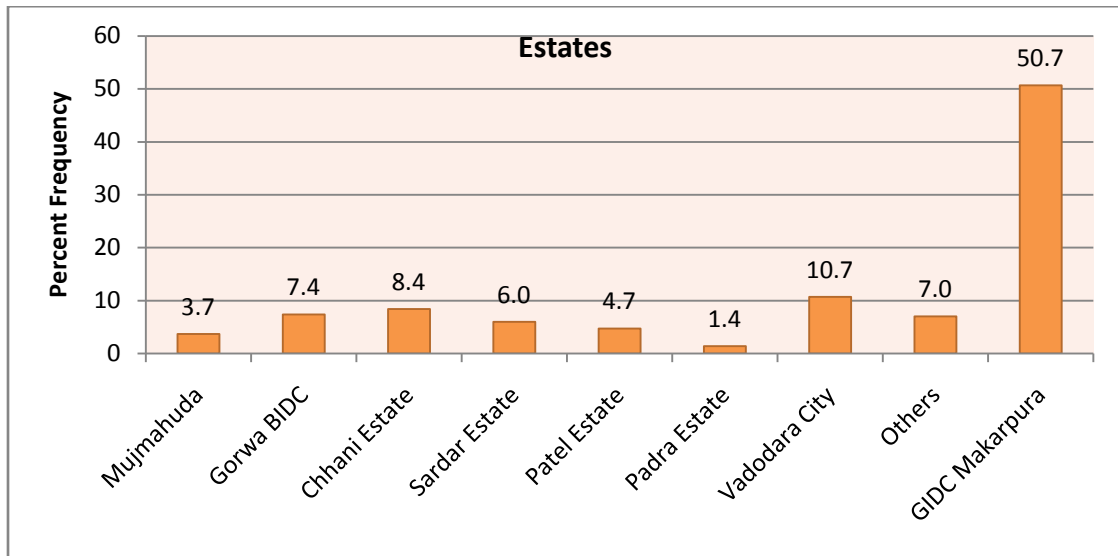


Figure 8.1 - Frequencies of Industrial Estates

8.2.2. Size Of The Firm

It can be seen from Table 8.4 and Figure 8.2 that out of 126 firms, 67% of the firms were small enterprises (84 Small enterprises) whereas 33% firms were medium enterprises (42 Medium enterprises). The MSMED Act, 2006 defines small enterprises as the manufacturing units with investments in plant and machinery above Rs. 25 lakhs and uptoRs. 5 crore and for medium enterprises above Rs. 5 crore and uptoRs. 10 crore(MSMED Act).

TABLE 8.3- Size of the Firm

Size of firm	Frequency	Percent
Small	84	67
Medium	42	33
Total	126	100

(Source: Primary data; SPSS Output)

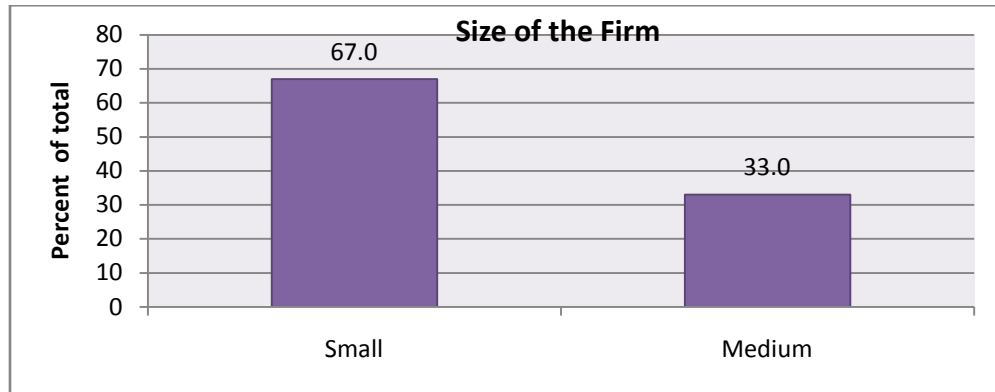


Figure 8-2 - Size of the Firm

8.2.3. Designation of Respondents

It can be seen from Table 8.5 (and Figure 8.3) that about 38% of the respondents were owners/ entrepreneurs (82 owners/ MD) whereas about 62% of the respondents were other employees including senior managers (133 other employees including senior management).

TABLE 8.4 - Designation of Respondents

Designation	Frequency	Percent
Owner/MD	82	38.1
Other employees including Senior Management	133	61.9
Total	215	100

(Source: Primary data; SPSS Output)

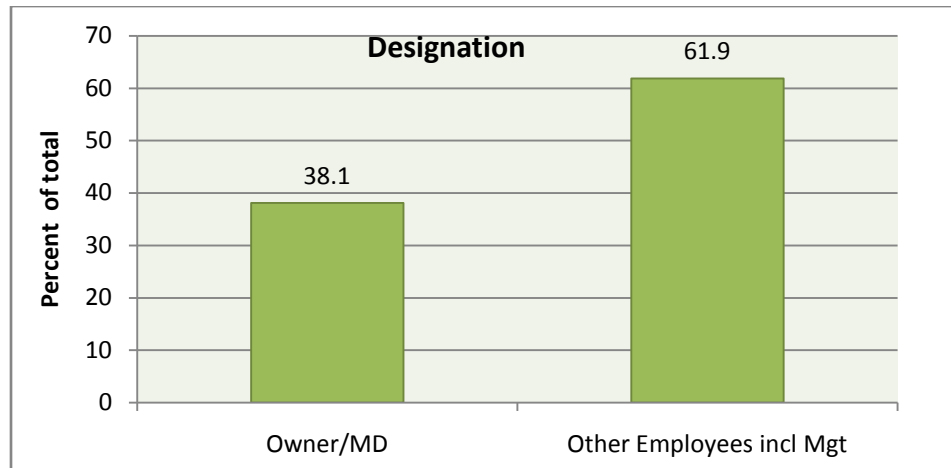


Figure 8.3 Designation of Respondents

8.2.4. Age of the Respondents

Table 8.6 (Figure 8.4) shows that the maximum number of respondents (31%) belonged to the middle age-group of 36-45 yrs; followed by the younger age-group of 26-35 years (27.4%) and a higher age-group of 46-55 years (26.5% respondents).

TABLE 8.5- Age of the Respondents

Age group	Frequency	Percent
18-25 Yrs	6	2.8
26-35 Yrs	59	27.4
36-45 Yrs	66	30.7
46-55 Yrs	57	26.5
Above 55 Yrs	27	12.6
Total	215	100

(Source: Primary data; SPSS Output)

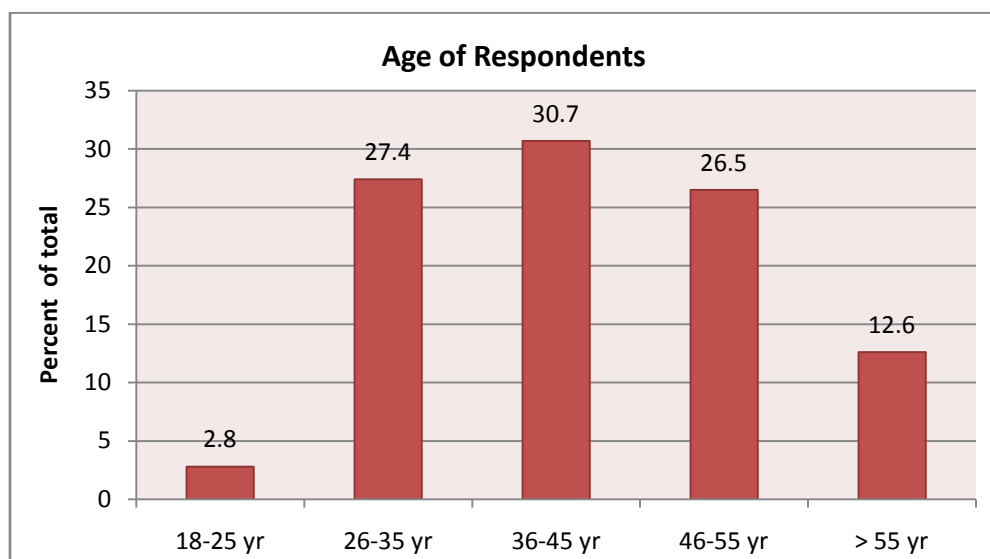


Figure 8.4 - Age of the Respondents

8.2.5. Gender of the Respondents

Table 8.7(Figure 8.5) shows that majority of the respondents (about 91%) are males. Only about 9% of the respondents are females. As the respondents were either the owners/ Managing Heads or senior management employees, it is noteworthy to note here that there is a lot of scope of improvement to enhance the gender diversity and increase the presence of women in the SMEs.

TABLE 8.6- Gender of the Respondents

Gender	Frequency	Percent
Male	196	91.2
Female	19	8.8
Total	215	100

(Source: Primary data; SPSS Output)

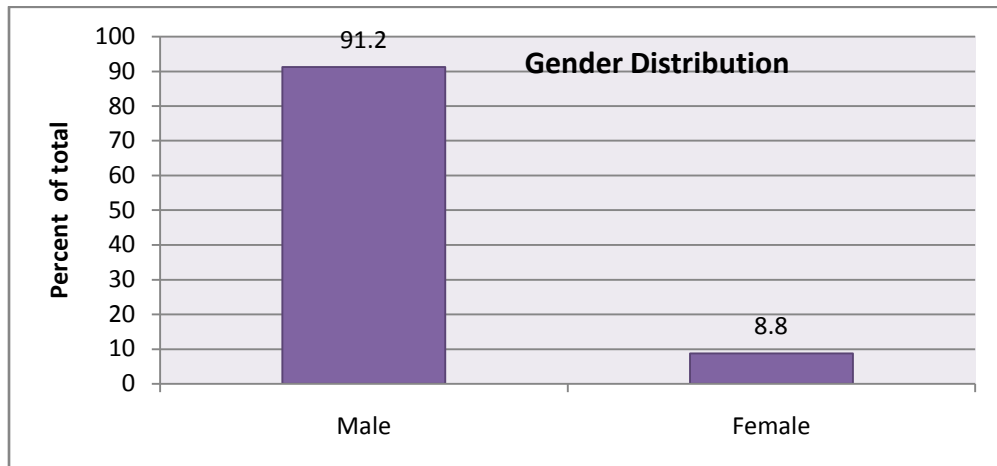


Figure 8.5- Gender of the Respondents

8.2.6. Educational Background

It is interesting to see from Table 8.8(Figure 8.6) that about 55% of the respondents (119 respondents) were Graduates and only about 28% of the respondents (61 respondents) possessed a Masters degree. It is also noteworthy to see that about 15.8% of the respondents (34 respondents) were either below Std. XII or Diploma holders.

TABLE 8.7- Educational Background

Educational Background	Frequency	Percent
Below Std.XII	17	7.9
Diploma	17	7.9
Graduate	119	55.3
Masters	61	28.4
Others	1	0.5
Total	215	100

(Source: Primary data; SPSS Output)

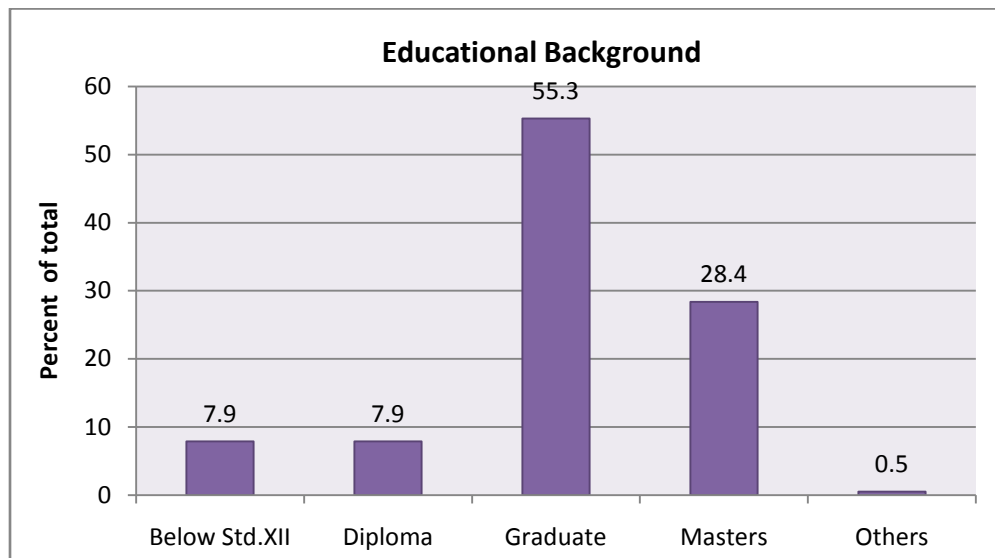


Figure 8.6 - Educational Background

8.2.7. Specialization of Managing Heads

It is interesting to see that majority (about 22%) of the respondents were from the fields of HR and Finance (47 respondents respectively). However, it was told by the respondents, that in SMEs the Managing heads/ senior management are multi-skilled and have a fair knowledge about all areas of work, irrespective of their educational backgrounds and specialization, due to the nature of work in this unique sector.

TABLE 8.8- Specialization of Managing Heads

Specialization	Frequency	Percent
None	1	0.5
HR	47	21.9
Marketing	38	17.7
Finance	47	21.9
Operations	18	8.4
Engineering	40	18.6
Others	24	11.2
Total	215	100

(Source: Primary data; SPSS Output)

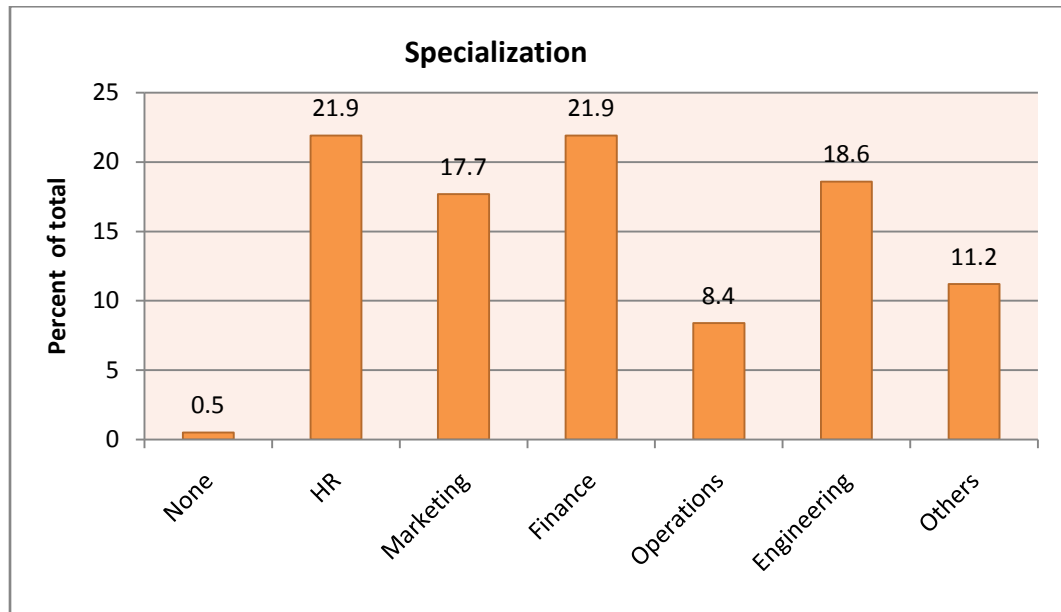


Figure 8.7: Specialization of Managing Heads

8.2.8 Years of Service in the Firm

From Table 8.10 and Figure 8.8 it can be deduced that about 22% of the employees are in the present firm since about 6 to 15 years. This throws some light on the retention rate in SMEs, as well as the fact that the respondents are well experienced.

TABLE 8.10 - Years of Service in the Firm

Tenure	Frequency	Percent
< 5 Yrs	42	19.5
6-10 Yrs	47	21.9
11-15 Yrs	47	21.9
16-20 Yrs	37	17.2
> 20 Yrs	42	19.5
Total	215	100

(Source: Primary data; SPSS Output)

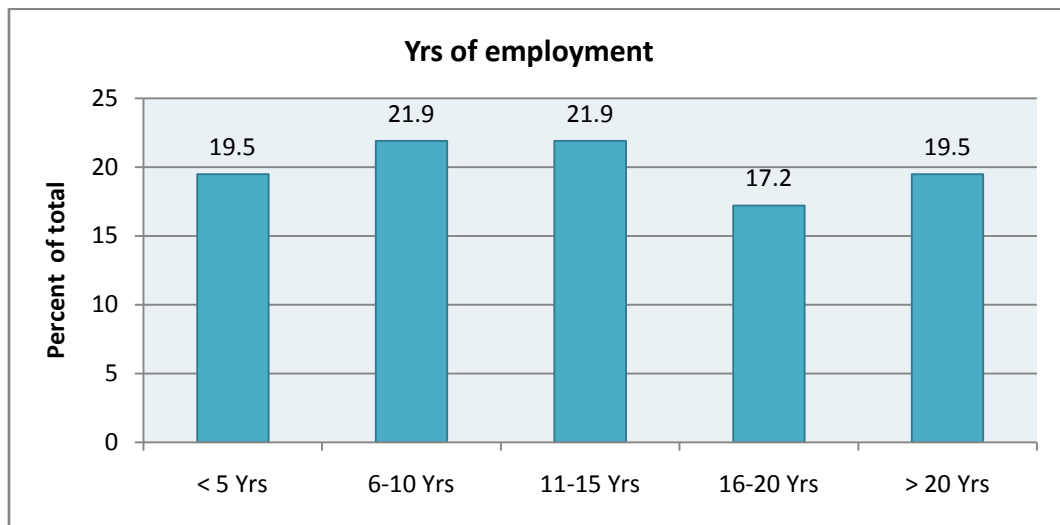


Figure 8.8 - Years of Service in the Firm

8.2.9 Total Work Experience

About 29% of the respondents (62 respondents) had more than 20 years of experience. This throws some light that the respondents were well experienced. Only 10% of the respondents (22 respondents) had less than 5 years of experience (Table 8.11 and Figure 8.9).

TABLE 8.11 - Total Work Experience

Tenure	Frequency	Percent
< 5 Yrs	22	10.2
6-10 Yrs	37	17.2
11-15 Yrs	48	22.3
16-20 Yrs	46	21.4
> 20 Yrs	62	28.8
Total	215	100

(Source: Primary data; SPSS Output)

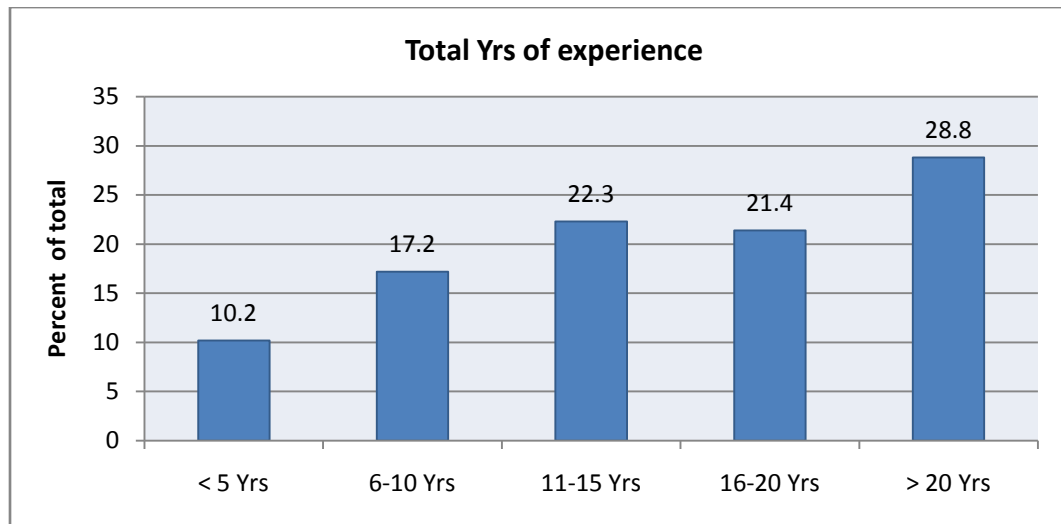


Figure 8.9 - Total Work Experience

8.2.10 Type Of Firm

Out of the 126 SME firms, the majority i.e.38% of the firms (48 firms) were Private Limited Companies, followed by Private Companies comprising of 21% of the firms (27 firms). Less than 2% of firms were Public Ltd. or Joint-stock companies (Refer Table 8.12, Figure 8.10).

TABLE 8.12 - Type of Firm

Type of Firm	Frequency	Percent
Proprietary	23	18.25
Partnership	24	19.04
Private	27	21.43
Joint-Stock Co	2	1.59
Pvt. Ltd.	48	38.09
Public Ltd.	2	1.59
Total	126	100

(Source: Primary data; SPSS Output)

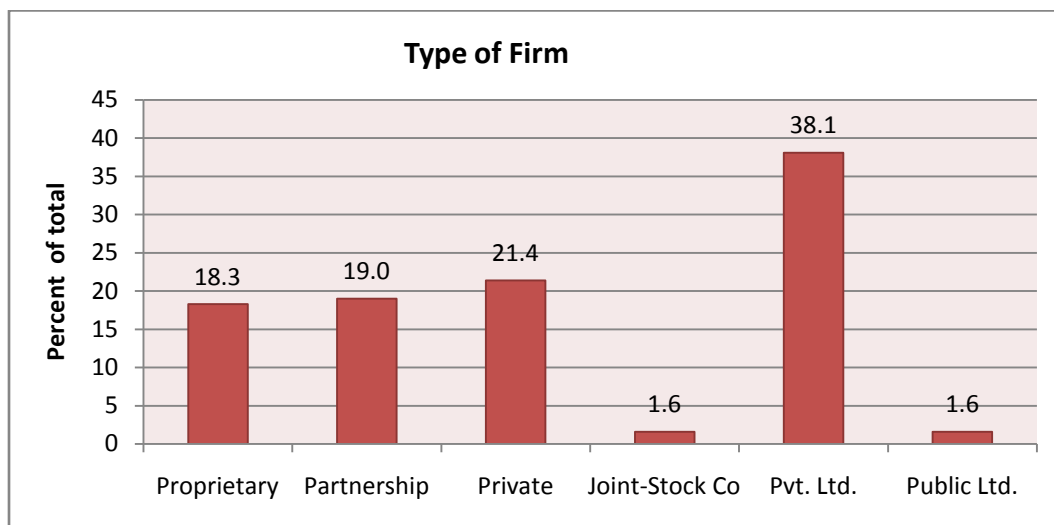


Figure 8.10 : Type of Firm

8.2.11 Age of the Firm

Out of the 126 SMEs, about 68% of the firms (86 firms) were more than 16 years old, while only about 3% firms (4 firms) were about 2 to 5 years old. This is a good sign which shows firm's sustainability over the years.

TABLE 8.13 - Age of the Firm

Age of the Firm	Frequency	Percent
2-5 Yrs	4	3.17
6-10 Yrs	15	11.9
11-15 Yrs	21	16.66
16-20 Yrs	34	26.98
> 20 YRS	52	41.26
Total	126	100

(Source: Primary data; SPSS Output)

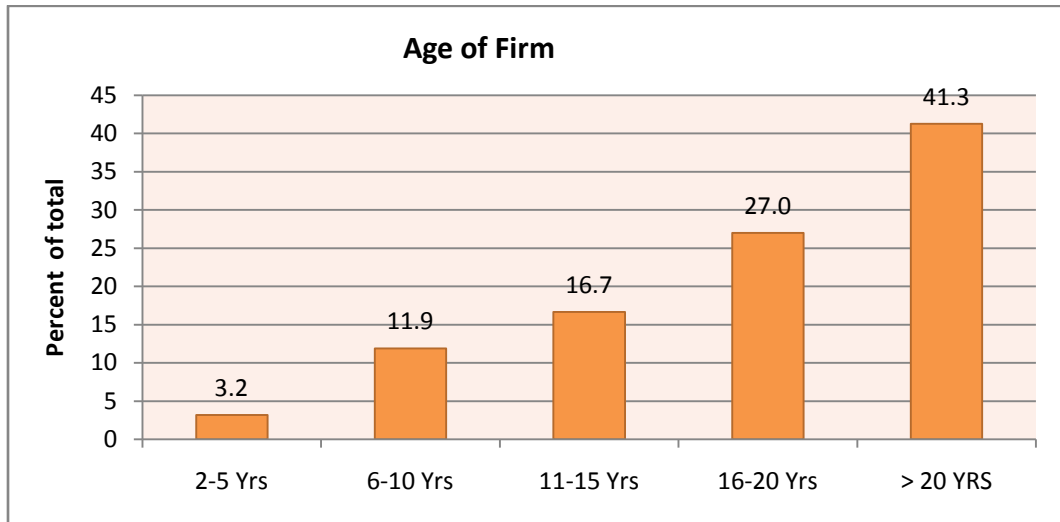


Figure 8.11: Age of the Firm

8.3.Descriptive Statistics- Frequency Distribution of HR Activities

8.3.1. Our Firm Has Some Written Documentation of HR Policies

Research shows that well-written business policies and procedures allow employees to clearly understand their roles and responsibilities within predefined limits, and removes ambiguity. It was found that 47% of the respondents agreed that their firm had no rules, regulations or HR policies in written form in the form of Employee Handbook, Rule-book or HR Manual, as shown in Table 8.14 and Figure 8.12.

TABLE 8.14: Written Documentation of HR Policies

Written documentation	Frequency	Percent
Emp Handbook	49	22.8
Rule Book	22	10.2
HR Manual	43	20
Nothing Like	101	47
Total	215	100

(Source: Primary data; SPSS Output)

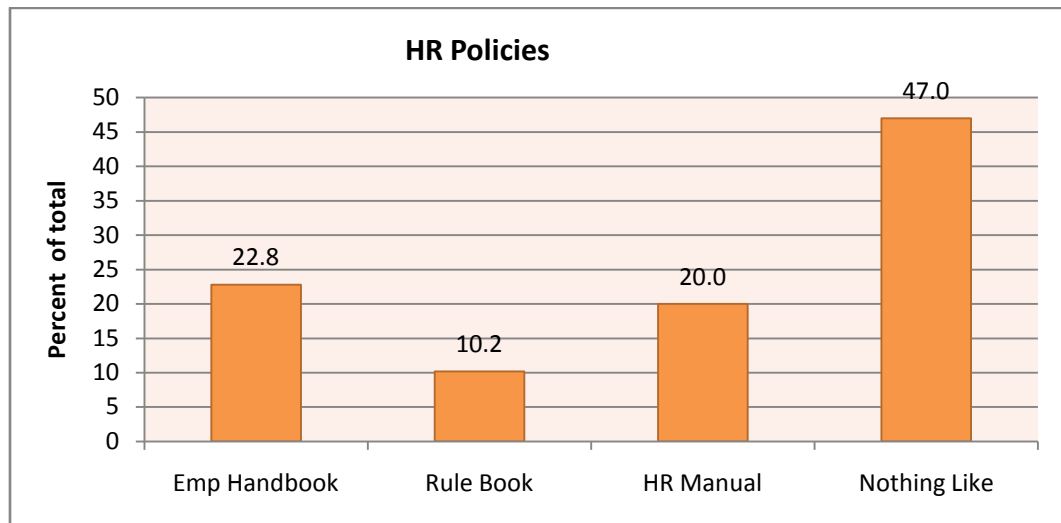


Figure 8.12: Written Documentation of HR Policies

8.3.2. The Person Who Handles HR Functions

It is also worth mentioning that about 49% of the respondents agreed that their firms had no internal HR expert designated to undertake the HR functions in the firm, but was mostly taken care of by the owner/ entrepreneur. The greener side is, that about 51% of the respondents said that their firms had a designated internal HR expert to take care of the HR related functions (Table 8.15 and Figure 8.13).

TABLE 8.15 - The Person handling HR Functions

	Frequency	Percent
No Internal HR expert	106	49.3
Presence of Internal HR expert	109	50.7
Total	215	100

(Source: Primary data; SPSS Output)

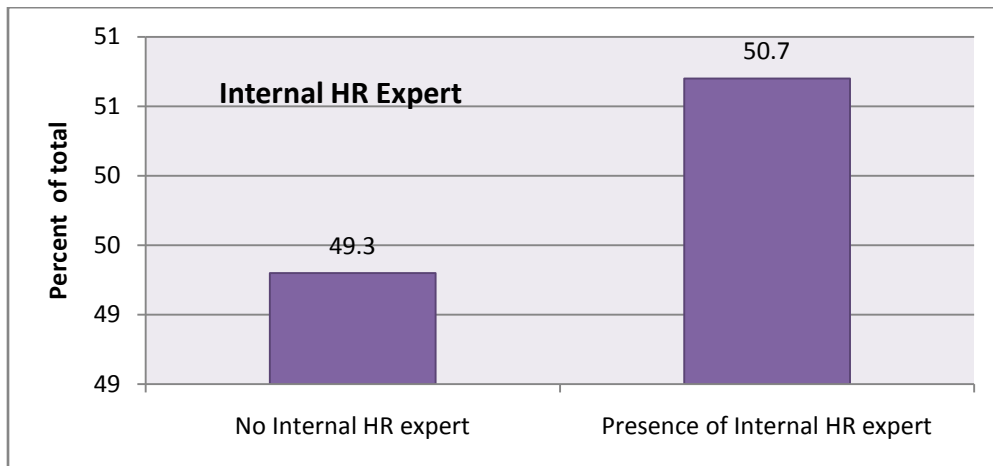


Figure 8.13- The Person handling HR Functions

8.3.3. Does Your Firm Take Guidance From HR Consultant?

It can be seen from Table 8.16 (Figure 8.14) that about 36% of the respondents do not take consultancy from an HR Consultant. The greener side is that about 64% of the respondents take guidance from HR Consultants. As could be seen from Table 8.15 that 49% of the firms had no internal HR expert designated to undertake the HR functions in the firm, so it could be deduced that taking consultancy services from an outside HR expert could help to improve the functioning of the HR practices.

TABLE 8.16 - Taking Guidance From HR Consultant

	Frequency	Percent
Does Not Take Consultancy	77	35.8
Takes Consultancy	138	64.2
Total	215	100

(Source: Primary data; SPSS Output)

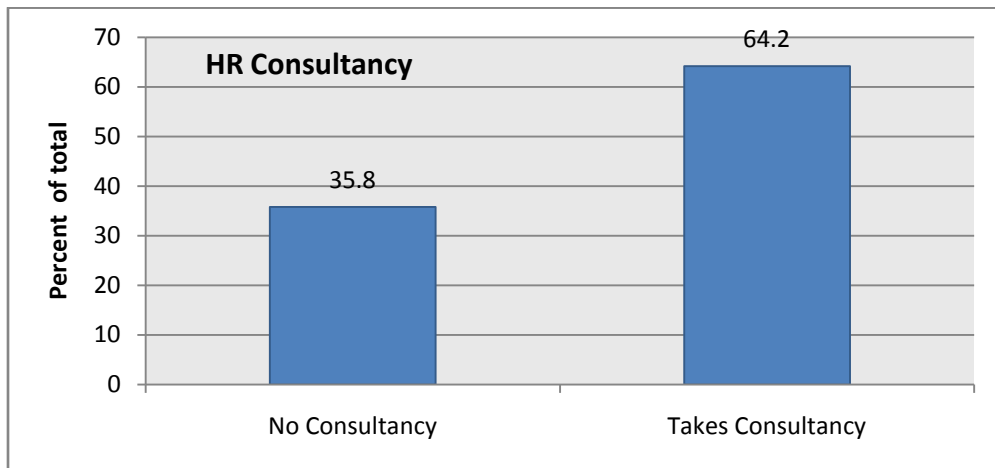


Figure 8.14 - Taking Guidance From HR Consultant

8.3.4. Does Your Firm Take Guidance From Financial Consultant?

It is a healthy gesture to see that about 95% of the respondents take consultancy from Financial Consultants, which accentuates the fact that experts from outside are consulted to enhance the functioning with respect to matters related to financial procedures (as compared to only 64% of respondents who consult an HR Consultant for advice related to HR functions). Refer Table 15 and Figure 15.

TABLE 8.17 -Taking Guidance from Financial Consultant

	Frequency	Percent
Does Not Take Consultancy	11	5.1
Takes Consultancy	204	94.9
Total	215	100

(Source: Primary data; SPSS Output)

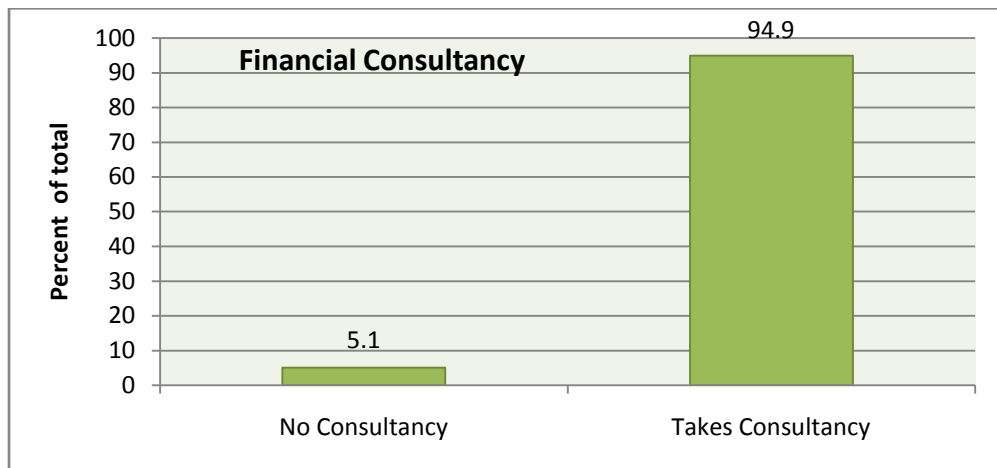


Figure 8.15 - Taking Guidance from Financial Consultant

8.3.5. How Often Does the Firm Consult an HR Consultant

It can be observed from Table 8.18 and Figure 8.16 that about 36% of the respondents never consult an HR Consultant. Further, about 25% of the respondents consult an HR Consultant only need-based, while 20% of the respondents consult an HR Consultant on a monthly basis.

TABLE 8.18: Frequency of Consulting an HR Consultant

How Frequently	Frequency	Percent
Monthly	43	20
Quarterly	17	7.9
Half-Yearly	8	3.7
Yearly	14	6.5
Once In 2 Yrs	3	1.4
Need-Based	53	24.7
Not At All	77	35.8
Total	215	100

(Source: Primary data; SPSS Output)

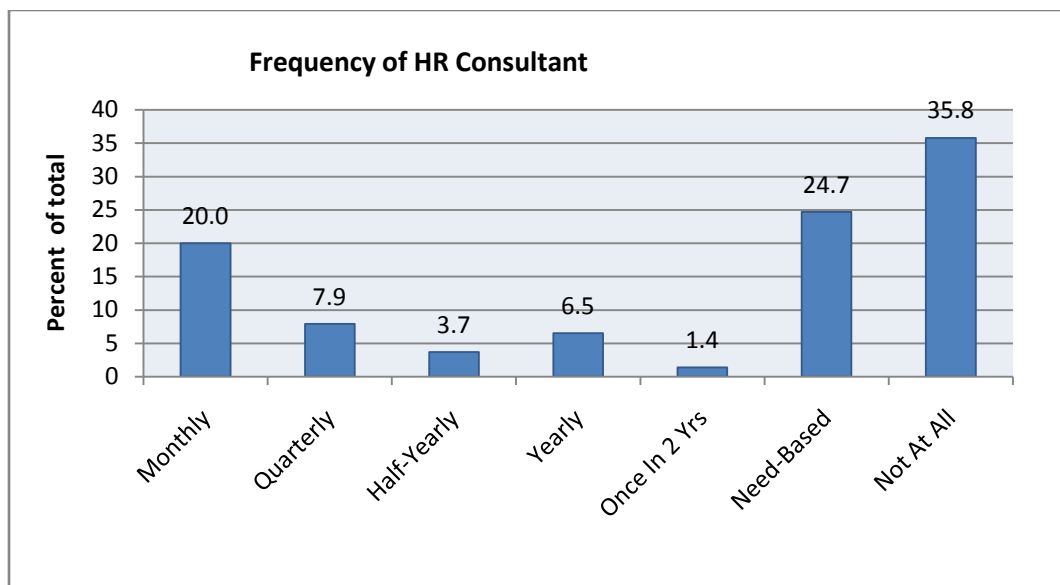


Figure 8.16: Frequency of Consulting an HR Consultant

8.3.6. How Often Does The Firm Consult A Financial Consultant

Table 8.19 (Figure 8.17) depicts that about 27% of the respondents consult a Financial Consultant on a quarterly basis whereas 18% of the respondents consult a Financial Consultant monthly. While only 6% of the respondents never consult a Financial Consultant (as compared to 36% who never consult an HR Consultant).

TABLE 8.19 - Frequency of Consulting a Financial Consultant

How Frequently	Frequency	Percent
Monthly	39	18.1
Quarterly	58	27
Half-Yearly	14	6.5
Yearly	31	14.4
Once In 2 Yrs	3	1.4
Need-Based	57	26.5
Not At All	13	6
Total	215	100

(Source: Primary data; SPSS Output)

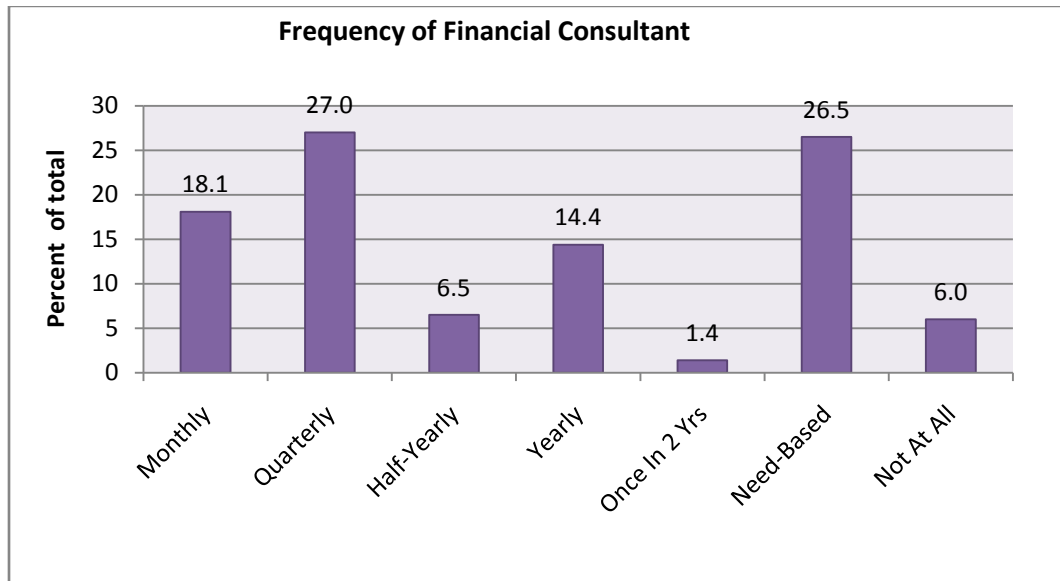


Figure 8.17 - Frequency of Consulting a Financial Consultant

8.3.7. Possessing a Quality or ISO Certification

It is noteworthy to see (refer Table 8.20 and Figure 8.18) that about 62% of the respondents have a Quality or ISO Certification in their firms. It can be thus deduced that SMEs are quite conscious about quality conformance, in order to be competitive. Further, the subsidies given by the government, surely has encouraged quality consciousness.

TABLE 8.20 - Possessing a Quality or ISO Certification

Possessing Quality Certification	Frequency	Percent
Yes	133	61.9
No	82	38.1
Total	215	100

(Source: Primary data; SPSS Output)

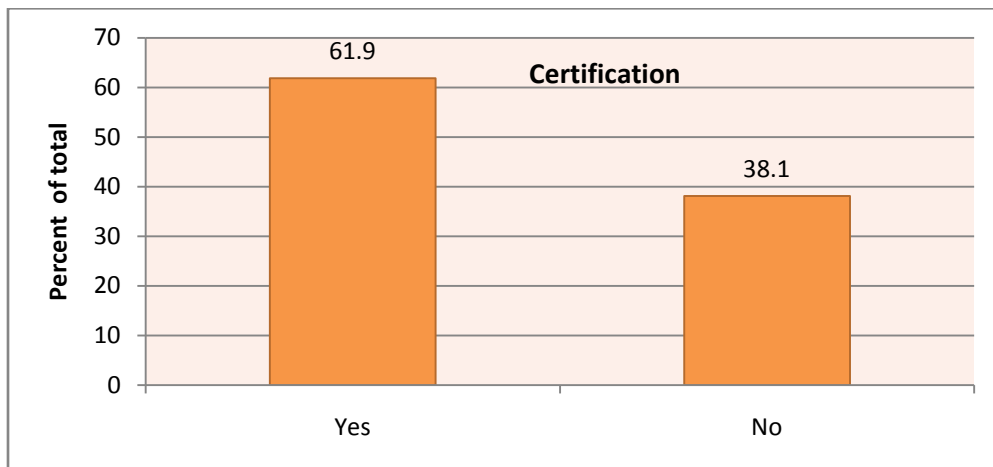


Figure 8.18 - Possessing a Quality or ISO Certification

8.3.8. Registration With Any Trade Union

It is very pleasing to see that 94% of the respondent firms are not associated with any Trade Union which shows sound Industrial Relations (IR) across the various industrial estates in the Vadodara district without any need of Trade Union intervention between employees and the management (Refer Table 8.21 and Figure 8.19).

TABLE 8.21 - Registration with Any Trade Union

Trade Union Registration	Frequency	Percent
Yes	13	6
No	202	94
Total	215	100

(Source: Primary data; SPSS Output)

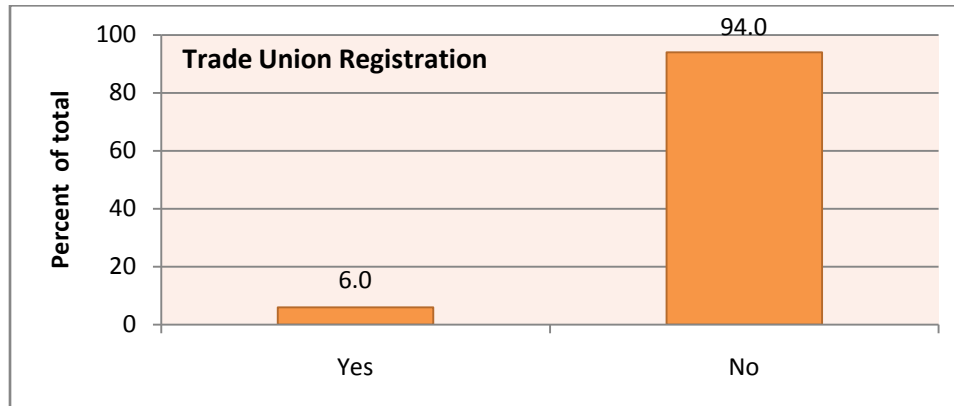


Figure 8.19 - Registration with Any Trade Union

8.3.9. Achievement of Expected Levels Of Growth

When asked whether the Managing Heads feel that they have achieved the expected levels of growth or not, it is noteworthy to see that about 54% of the respondents said 'No' as their answer (Refer Table 8.22 and Figure 8.20). This shows that the Managing Heads keep a high expectation of their levels of growth.

TABLE 8.22 - Achieved Expected Levels of Growth

Achieved Expected	Frequency	Percent
Yes	98	45.6
No	117	54.4
Total	215	100

(Source: Primary data; SPSS Output)

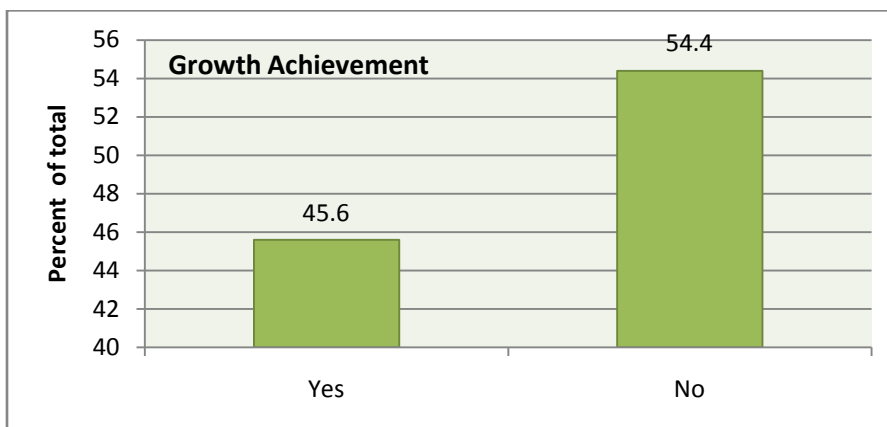


Figure 8.20 - Achieved Expected Levels of Growth

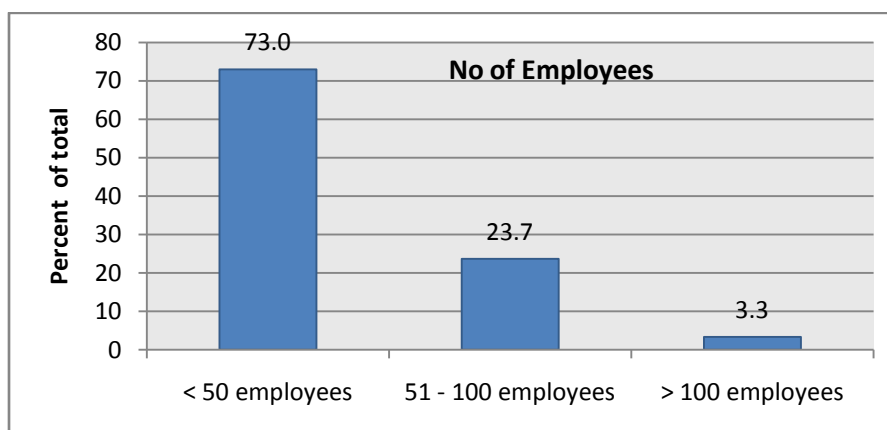
8.3.10. Number of Full Time Employees (Binned)

Table 8.23 and Figure 8.21 shows that 73% of the respondents (157 respondents) were from firms with less than 50 full-time employees, whereas about 24% of the respondents were from firms with 51 to 100 employees and only 3% with firms more than 100 employees. Thus, it can be concluded that majority of the firms have less than 50 full-time employees in their firms.

TABLE 8.23 - Number of Full Time Employees (Binned)

Number of full-time employees	Frequency	Percent
< 50 employees	157	73
51 - 100 employees	51	23.7
> 100 employees	7	3.3
Total	215	100

(Source: Primary data; SPSS Output)

**Figure 8.21 - Number of Full Time Employees (Binned)**

8.3.11. Number Of Part-Time Employees (Binned)

Table 8.24 and Figure 8.22 shows that 97% of the respondents were from firms with less than 10 part-time employees, whereas only about 3% of the respondents were from firms with more than 10 part-time employees. It can be thus, deduced that majority of the SME firms in Vadodra district do not have the practice of employing part-time employees.

TABLE 8.24 - Number of Part-Time Employees (Binned)

Number of full-time employees	Frequency	Percent
Less than 10 employees	209	97.2
More than 10 employees	6	2.8
Total	215	100

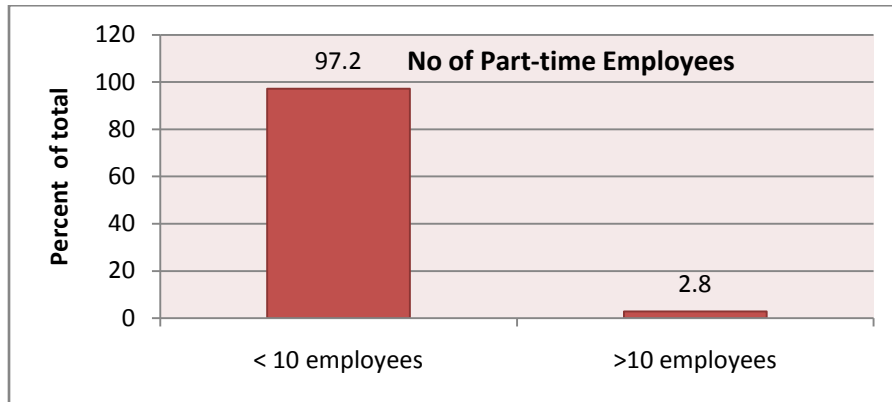


Figure 8.22 - Number of Part-Time Employees (Binned)

8.3.12. Number of Contractual Employees (Binned)

Table 8.25 (Figure 8.23) shows that about 94% of the respondents were from firms with less than 50 contractual employees, whereas only about 3% of the respondents were from firms with 51 to 94 contractual employees and another 3% of the respondents were from firms with more than 94 contractual employees.

TABLE 8.25 - Number of Contractual Employees (Binned)

Number of Contractual Employees	Frequency	Percent
< 50 employees	201	93.5
51 - 95 employees	7	3.3
> 95 employees	7	3.3
Total	215	100

(Source: Primary data; SPSS Output)



Figure 8.23 - Number of Contractual Employees (Binned)

8.3.13. Number of Women Employees (Binned)

It is surprising to see that that about 90% of the respondents were from firms with less than 10 women employees, whereas only about 10% of the respondents were from firms with more than 10 women employees. Thus it can be deduced that there is a lot of scope of improvement for bringing in gender diversity in SMEs by encouraging more women employees to join SMEs (Refer Table 8.26, Figure 8.24).

TABLE 8.26-Number of Women Employees (Binned)

Number of women employees	Frequency	Percent
Less than 10 women employees	194	90.2
More than 10 women employees	21	9.8
Total	215	100

(Source: Primary data; SPSS Output)

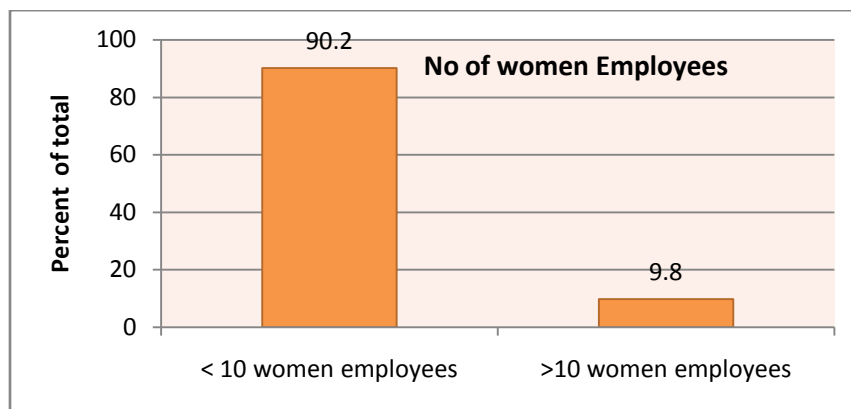


Figure 8.24-Number of Women Employees (Binned)

8.4.Descriptive Statistics of Scale Items

8.4.1. Cronbach's Reliability Test

Reliability is a measure of how a scale can be relied on to produce similar measurements every time we use the scale. Cronbach's Alpha was administered to test the reliability of the scale items. If the alpha value for the scale is 0.7 or more, it is usually considered a good scale. The Scale was found out to be reliable in the present study.

Cronbach's Alpha Reliability Test was administered for the below mentioned three constructs separately as well as taken together (consisting of 31 items) viz.

- HR Practices
- Employee Outcomes (as a 'Performance Dimension')
- Organizational Performance Outcomes (as a 'Performance Dimension')

TABLE 8.27 - Cronbach Alpha Values for Scale Items

Construct	No. of Items	Cronbach Alpha
HR Practices	14	.802
Employee Outcomes	9	.888
Organizational Performance Outcomes	8	.865
HR Practices & Performance Dimensions	31	.905

(Source: Primary data; SPSS Output)

Table 8.27 shows the Cronbach Alpha values for all the three constructs separately as well as the combined alpha values for all the 31 scale items of 'HR Practices' and 'Performance' dimension, which was found out to be 0.905, which is more than 0.7; hence the data is found to be reliable.

8.4.2. Mean & Standard Deviation (Of Scale Items)

Mean is the average of a group of numbers and is computed by summing all numbers and dividing by the number of numbers. The mean is affected by each and every value, and each data item influences the mean. It may also be a disadvantage sometime, because extremely large or small values can cause the mean to be pulled towards the extreme value. Whereas, Standard Deviation (σ) is a measure of variability. It is the square root of the variance. The mean and standard deviation are computed in Table 8.28 for the scale items of HR Practices, Employee Outcomes and Performance Outcomes. The mean of the items are arranged in ascending order.

TABLE 8.28 - Mean, Standard Deviation & Cronbach's Alpha (Mean arranged in ascending order)

Criteria	Mean	Std. Deviation	N	Cronbach (α)
HR Practices				
Good performers are given non-financial incentives	2.98	1.127	215	0.802
Employees are rotated from one job to another	3.4	0.916	215	
Organizes training and skill development programs	3.67	1.04	215	
Employees participate in the decision-making process	3.67	1.075	215	
Selection is on the basis of merit	3.92	0.75	215	
Good performers are given more authority and responsibility	3.93	0.87	215	
Employees receive feedback	3.94	0.656	215	
Good performers are given financial incentives	3.95	0.985	215	
Enough opportunity for career growth	3.98	0.837	215	
Employees are given opportunity to suggest improvement	4.02	0.7	215	
Our organization places the right person in the right job	4.05	0.628	215	
Appraises the performance of employees at regular intervals	4.1	0.64	215	
Compensation is decided on the basis of competence or ability	4.12	0.572	215	
Employees can openly communicate with the superiors	4.14	0.574	215	
Mean & σ of HR Practices	3.847	0.812		

Criteria	Mean	Std. Deviation	N	Cronbach (α)
Employee Outcomes				
Employees are punctual and report daily	3.55	0.873	215	0.888
Employees are regular	3.56	0.872	215	
Employees take up extra duties and responsibilities	3.71	0.87	215	
Competence of an Employee	3.75	0.705	215	
Employees are committed	3.8	0.866	215	
Employee's follow general code of conduct and rules	3.83	0.797	215	
Employee's general behavior is good	3.86	0.719	215	
Employee's co-operation with is satisfactory	3.91	0.74	215	
Employees co-operate among themselves	3.97	0.761	215	
Mean & σ of Employee Outcomes	3.771	0.8		
Organizational Outcomes				
Return on Investment (in %) has increased	3.68	0.887	215	0.865
There is an increase in the Net Profit Margin	3.69	0.853	215	
Average Number of defects of products / deficiencies in service shows a decrease	4.03	0.742	215	
The firm has displayed proper utilization of resources	4.12	0.749	215	
Our suppliers/ vendors are satisfied with us	4.14	0.683	215	
Customer satisfaction has increased	4.17	0.683	215	
Products/service Quality shows improvement	4.23	0.692	215	
Measures have been taken by the firm for product/ service development	4.24	0.688	215	
Mean & σ of Organizational Outcomes	4.037	0.747		

(Source: Compiled from SPSS Output)

Interpretation

After arranging the items in ascending order of the Means, it can be observed from Table 8.28 that the **lowest mean, which is 2.98**, is for the statement '**Good performers are given non-financial incentives**'. The **Standard Deviation for the same item is 1.127**. This shows that SME firms do not encourage Non-Financial incentives to a great extent. It can be also be deduced from Table 8.28 that employees are not much **rotated from one job to another (Mean= 3.40, Std. Dev= 0.916)**. Job-rotation can help the employees to get trained in new areas of work, which can help to enhance employee motivation. It

can also be observed that **Product Development has highest mean of 4.24 with standard deviation of 0.688**, which is a good sign and shows the fact that SMEs undergo a lot of product development, based on customer needs.

8.5.Descriptive Statistics for Multiple Response Questions

Respondents were asked to tick wherever applicable for the various responses related to various HR practices pertaining to their firms. Multiple responses were received pertaining to the following HR practices in SMEs:

- Sources of recruitment
- Methods of Selection
- Compensation Management
- Welfare measures offered (mandatory as well as non-mandatory)
- Performance Management
- Training and Development

The respondents were asked to tick one or more methods whichever prevailed in their firm. The methods were chosen based on the general available practices gathered from literature review as well as discussions with the owners/ Managing Heads during the pilot-study stage. The multiple responses helped to know the prevalence of various HR practices in the SME sector in Vadodara district.

8.5.1. Sources of Recruitment: Multiple Response Frequencies

The major sources of Recruitment were identified and respondents were asked to identify the sources of recruitment prevalent in their firms. Table 8.29 gives an idea about the major sources of recruitment in SMEs across the various estates. It was found that majority of the respondents (26%) marked '**Employee Referrals**' as the most important source of recruitment, followed by 'Walk-ins' with about 18%. It is also noteworthy to find that 'Newspaper advertisements' comprised of only about 16%.

TABLE 8.29 - Sources of Recruitment

Sources of Recruitment	N	Percent	% of cases
Government Exchange	40	7.00%	18.60%
Consultancy Firms	54	9.50%	25.10%
Walk Inns	101	17.80%	47.00%
From Company's Website	99	17.40%	46.00%
Newspaper Advertisement	93	16.30%	43.30%
Employee's Referral	147	25.80%	68.40%
Other's	35	6.20%	16.30%
Total	569	100.00%	264.70%

(Source: Primary data; SPSS Output)

8.5.2. Methods of Selection: Multiple Response Frequencies

The most common methods of Selection were identified as Application blank, written test, interviews and on-the-job testing, based on pilot-study. Respondents were asked to identify the prevalent selection methods incorporated in their firms. Table 8.30 gives an idea about the major selection methods in SMEs across the various estates. **'Interviews'** has been found to be the most important selection method, with about 41% respondents, followed by 'on-the-job-testing'. It is interesting to note that the word **'on-the-job testing'** was coined by the researcher as one of the prevalent methods of selection, in the various industrial estates in Vadodara district, during her pilot-study. In this method, especially for the selection of skilled, semi-skilled and unskilled workers, who are looking forward for employment are asked to work for about a week in the firm. Based on observation by the supervisor/ senior during the one week period, the candidate is either selected or not selected, based on his performance. **This adds a new selection method to the body of knowledge prevalent in the SMEs.**

TABLE 8.30 - Methods of Selection

Methods of Selection	N	Percent	% of cases
Application/Detailed CV	107	25.00%	50.20%
Written Test	38	8.90%	17.80%
Interview	174	40.70%	81.70%
On Job Testing	109	25.50%	51.20%
Total	428	100.00%	200.90%

8.5.3. Basis of Pay: Multiple Response Frequencies

It can be observed from Table 8.31 that majority of the firms have a **pay based on performance** of the employees (about 30% of the respondents), followed by pay based on skills (about 26% of the respondents). It can be deduced that good performance and skill-based competencies are appreciated in the SMEs as it is linked with pay and compensation.

TABLE 8.31 - Basis of Pay

Firm has a pay based on....	N	Percent	% of cases
Performance	153	29.50%	71.20%
Qualification	85	16.40%	39.50%
Negotiation	49	9.50%	22.80%
Skills	135	26.10%	62.80%
Experience	96	18.50%	44.70%
Total	518	100.00%	240.90%

(Source: Primary data)

8.5.4. Welfare Measures/ Social Security Measures: Multiple Response Frequencies

Research proves that welfare measures helps to enhance employee engagement and also enhances the feel-good factor of the employees (Gallup Study, 2016). Welfare measures/ Social security measures are divided into few mandatory measures like Employee State Insurance Corporation (ESIC), Employee's Provident Fund (EPF), Bonus etc, for firms with the prescribed minimum number of employees; as well as few non-mandatory measures like mediclaim etc. **ESIC** with about 28% scores the highest among the other welfare/ social security measures, followed by annual Bonus with about 26% of the respondents agreeing for it. However, ESIC being a mandatory social security measure, it is surprising to note that its adherence is far less than the minimal expected. (Refer Table 8.32)

TABLE 8.32- Welfare Measures/ Social Security Measures

Welfare Measures	N	Percent	% cases
Mediclaim	102	15.20%	48.10%
Insurance (ESIC etc)	184	27.50%	86.80%
Provident Fund	140	20.90%	66.00%
Bonus	177	26.40%	83.50%
Uniform	51	7.60%	24.10%
Canteen	9	1.30%	4.20%
Others	7	1.00%	3.30%
Total	670	100.00%	316.00%

(Source: Primary data)

8.5.5. Performance Assessment Method: Multiple Response Frequencies

Table 8.33 shows that about 30% of the respondents agree that their firm has a formal Performance Appraisal Format, which is a good sign in the context of SMEs, which are believed to be quite informal in nature. About 50% of the respondents agree that **performance is assessed in their firm by the HODs/ owners, based on past performance of employees, though there is no prescribed format** for the same. It is also to be also noted that about 10% of the respondents say that their firm does not have any system of performance assessment. It is also interesting to note that a negligible portion of about 4% of firms have some modern methods of Performance Assessment like Psychometric Tests, Assessment Centres, Management-by-Objectives, on-line continuous assessments as well as other well devised assessment tools designed by outside HR Consultants/ Consultancy firms. Thus, it can be ascertained that there is a scope of improvement to enhance the performance assessment system in majority SMEs.

TABLE 8.33- Performance Assessment Method

Performance Assessment Method	N	Percent	% of Cases
Performance Appraisal Format	82	29.80%	39.40%
Essay Method	19	6.90%	9.10%
Evaluate Past Performance (informally by HOD/ owner)	136	49.50%	65.40%
Others	12	4.40%	5.80%
Does Not Exist in Form	26	9.50%	12.50%
Total	275	100.00%	132.20%

8.5.6. Use of Performance Assessment: Multiple Response Frequencies

It is a good to see that performance assessment is used positively to develop employees, as about 27% of the respondents opine that their firm uses performance assessment for developing the employees. It is also good to note that performance assessment is not used in a negative way to remove employees at the workplace as only about 6% of the respondents agree to it (Refer Table 8.34).

TABLE 8.34-Use of Performance Assessment

Use of Performance Assessment	N	Percent	% of Cases
For Promotion of Employees	115	25.10%	56.40%
For Training Employees	81	17.60%	39.70%
For Disciplining Employees	74	16.10%	36.30%
For Developing Employees	123	26.80%	60.30%
For Removing Employees	28	6.10%	13.70%
Others	13	2.80%	6.40%
Does Not Exist in Form	25	5.40%	12.30%
Total	459	100.00%	225.00%

(Source: Primary data)

8.5.7. Training Method: Multiple Response Frequencies

As can be observed in Table 8.35, SMEs seems to rely more on On-the-Job Training (about 44%), followed by mentoring by seniors (31%). It also corroborates the fact that SMEs try to be more cost-effective in all their aspects, and On-the-Job training is surely more cost-effective than Off-the-Job Training (19%). Further, both On-the-Job Training and Mentoring are tailor-made training which best suits the environment and functioning of the organization. It is also on a positive note that only a negligible amount of about 2.5% of the firms has no training programs devised for employees in any form.

TABLE 8.35- Training Method

Training Method	N	Percent	% of Cases
On-the-job Training	189	43.50%	88.70%
Mentoring by Seniors	135	31.10%	63.40%
Workshop/ Seminar (Off-the-job)	83	19.10%	39.00%
Others	16	3.70%	7.50%
Does Not Exist in any Form	11	2.50%	5.20%
Total	434	100.00%	203.80%

8.6. Cross-Tabulation for Multiple Response Questions

A cross-tabulation can be done by combining any two of the questions and tabulating the data together. It basically describes two or more variables simultaneously. It must be noted here that the mere existence of a statistically significant association does not necessarily imply a cause-and-effect relationship between the (presumed) independent and the (presumed) dependent variable. Cross-tabulation was performed between few variables, whichever was thought to be important by the researcher to find an association, if any.

8.6.1. Cross-Tabulation: Sources of Recruitment and Selection Methods (Multiple Responses)

Cross-tabulation was done between ‘Sources of Recruitment’ and ‘Selection Methods’. ‘**Employee Referrals**’ was found out to be the most important ‘Source of Recruitment’ with the highest count, followed by ‘Walk-inns’ (Refer Table 8.36). Further, the ‘Selection Methods’ most common in the recruitment method of ‘Employee Referrals’ is found to be through ‘**Application Blank/ Detailed CV**’ and ‘**Interviews**’, followed by ‘On-the-Job Testing’.

TABLE 8.36- Cross-Tabulation: Sources of Recruitment and Selection Methods

Sources of Recruitment		Selection Methods				Total
		Application/Detailed CV	Written Test	Interview	On-the-Job Testing	
Government Exchange	Count	37	4	37	20	40
	% within \$Recruitment	92.50%	10.00%	92.50%	50.00%	
	% within \$Selection	21.30%	10.50%	21.30%	18.30%	
Consultancy Firms	Count	47	14	47	17	54
	% within \$Recruitment	87.00%	25.90%	87.00%	31.50%	
	% within \$Selection	27.00%	36.80%	27.00%	15.60%	
Walk Inns	Count	84	24	84	66	101
	% within \$Recruitment	83.20%	23.80%	83.20%	65.30%	
	% within \$Selection	48.30%	63.20%	48.30%	60.60%	
From Company's Website	Count	92	22	92	39	97
	% within \$Recruitment	94.80%	22.70%	94.80%	40.20%	
	% within \$Selection	52.90%	57.90%	52.90%	35.80%	
Newspaper Advertisement	Count	87	18	87	41	93
	% within \$Recruitment	93.50%	19.40%	93.50%	44.10%	
	% within \$Selection	50.00%	47.40%	50.00%	37.60%	
Employee's Referral	Count	127	24	127	76	147
	% within \$Recruitment	86.40%	16.30%	86.40%	51.70%	
	% within \$Selection	73.00%	63.20%	73.00%	69.70%	
Others	Count	21	7	21	25	35
	% within \$Recruitment	60.00%	20.00%	60.00%	71.40%	
	% within \$Selection	12.10%	18.40%	12.10%	22.90%	
Total	Count	107	174	174	109	215

⁵Percentages and totals are based on respondents; ⁶Dichotomy group tabulated at value 1 (Source: SPSS Output, Primary data)

8.6.2. Cross-Tabulation: Performance Assessment Method and Use of Performance Appraisal (Multiple Responses)

Cross-tabulation was done between ‘Performance Assessment Method’ and ‘Use of Performance Appraisal’. ‘Evaluating Past Performance’ by the HOD/ owner, though without a formal appraisal format, was found out to be the most important ‘Performance Assessment Method’ with the highest count (Refer Table 8.37). Further, the ‘Use of Performance Assessment’ most commonly found through evaluating past performance is for ‘Developing Employees’ followed by ‘For Promotion decisions’. It is a positive gesture to see that past performance evaluation is seldom done to remove employees.

TABLE 8.37 - Cross-Tabulation: Performance Assessment Method and Use of Performance Appraisal

Performance Assessment Method		Use of Performance Assessment						Total
		For Promotion	Training Employee	To Discipline	Develop Employees	Remove Employees	Others	
Performance Appraisal Format	Count	62	54	40	57	15	11	80
	% within \$Performance	77.5%	67.5%	50.0%	71.3%	18.8%	13.8%	
	% within \$Performance Use	53.9%	66.7%	54.1%	46.7%	53.6%	100.0%	
Essay Method	Count	12	14	10	14	7	0	19
	% within \$Performance	63.2%	73.7%	52.6%	73.7%	36.8%	0.0%	
	% within \$Performance Use	10.4%	17.3%	13.5%	11.5%	25.0%	0.0%	
Evaluate Past Performance	Count	76	53	58	94	24	7	132
	% within \$Performance	57.6%	40.2%	43.9%	71.2%	18.2%	5.3%	
	% within \$Performance Use	66.1%	65.4%	78.4%	77.0%	85.7%	63.6%	
Others	Count	12	10	8	8	2	0	12
	% within \$Performance	100.0%	83.3%	66.7%	66.7%	16.7%	0.0%	
	% within \$Performance Use	10.4%	12.3%	10.8%	6.6%	7.1%	0.0%	
Does Not Exist in Form	Count	5	2	1	4	0	0	22
	% within \$Performance	22.7%	9.1%	4.5%	18.2%	0.0%	0.0%	
	% within \$Performance Use	4.3%	2.5%	1.4%	3.3%	0.0%	0.0%	
Count		115	81	74	122	28	11	200

Percentages and totals are based on respondents; Dichotomy group tabulated at value 1.
(Source: SPSS Output, Primary data)

8.6.3. Cross-Tabulation: Age of the Firm and Documentation of HR Practice

Cross-tabulation was done between ‘Age of the firm’ and ‘Documentation of HR Practice’. It is to be noted here that the ‘Age of the firm’ was captured in five groups (2-5 years, 6-10 years, 11-15 years, 16-20 years and more than 21 years). This cross-tabulation was done to see if age of the firm has any linkage with the documentation of HR practices (See Table 8.38 and Figure 8.25).

TABLE 8.38 - Cross-Tabulation: Age of the Firm and Documentation of HR Practice

Documentation of HR Practice		Age of the Firm					Total
		2-5 Yrs	5-10 Yrs	11-15 Yrs	16-20 Yrs	> 21 Yrs	
EMP HANDBOOK	Count	2	6	13	10	18	49
	% within Our firm has	4.1%	12.2%	26.5%	20.4%	36.7%	100.0%
	% within Age of the Firm	25.0%	26.1%	35.1%	20.0%	18.6%	22.8%
RULE BOOK	Count	0	1	10	9	2	22
	% within Our firm has	0.0%	4.5%	45.5%	40.9%	9.1%	100.0%
	% within Age of the Firm	0.0%	4.3%	27.0%	18.0%	2.1%	10.2%
HR MANUAL	Count	2	2	0	13	26	43
	% within Our firm has	4.7%	4.7%	0.0%	30.2%	60.5%	100.0%
	% within Age of the Firm	25.0%	8.7%	0.0%	26.0%	26.8%	20.0%
NOTHING LIKE	Count	4	14	14	18	51	101
	% within Our firm has	4.0%	13.9%	13.9%	17.8%	50.5%	100.0%
	% within Age of the Firm	50.0%	60.9%	37.8%	36.0%	52.6%	47.0%
Total	Count	8	23	37	50	97	215
	% within Our firm has	3.7%	10.7%	17.2%	23.3%	45.1%	100.0%
	% within Age of the Firm	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(Source: SPSS Output, Primary data)

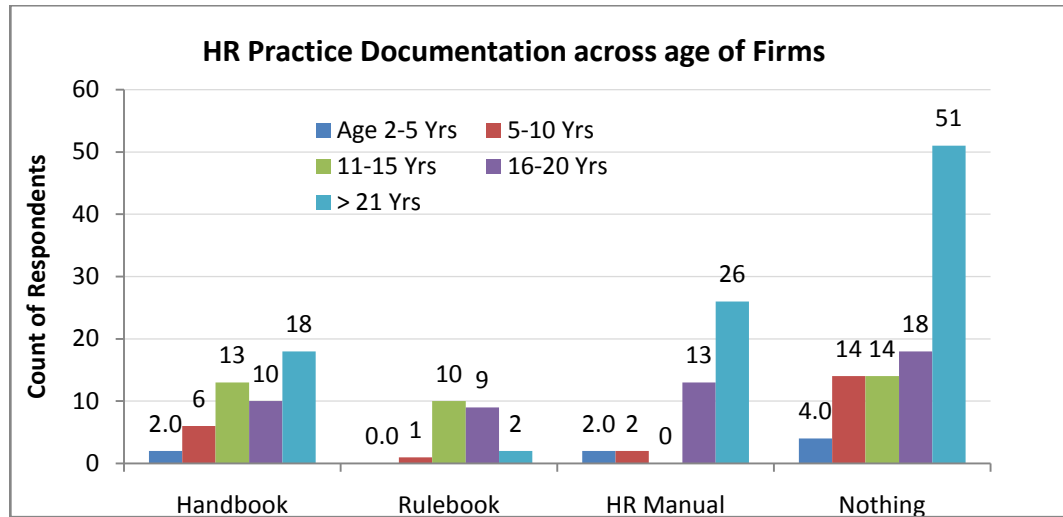


Figure 8.25 - Age of the Firm and Documentation of HR Practice

It can be seen from Table 8.38 and Figure 8.25 that of the 49 respondents who have confirmed that they have an Employee Handbook, about 37% (18 respondents) are from firms which are more than 21 years old. Further, of the 43 respondents who have confirmed that they have an HR Manual, about 61% (26 respondents) are from firms which are more than 21 years old.

8.7. Chi-Square Test on Cross-Tabulation

Chi-square test is considered when we are interested in finding the differences in frequency counts using nominal data. The chi-square statistic (χ^2) is used to test the statistical significance of the observed association in a cross-tabulation. To determine whether a systematic association exists, the probability of obtaining a value of chi-square as large or larger than the one calculated from the cross-tabulation is estimated. An important characteristic of the chi-square statistic is the number of degrees of freedom (df) associated with it. That is, $df = (r - 1) \times (c - 1)$. The null hypothesis (H_0) of no association between the two variables will be rejected only when the calculated value of the test statistic is greater than the critical value of the chi-square distribution with the appropriate degrees of freedom. Hypotheses testing was done to see if some significant

association existed or not between few HR practices/ activities and some firm specific context variables, in the present study.

8.7.1. Cross-Tabulation & Chi-square Test: Type of Firm and Documentation of HR Practice

Cross-tabulation was done between ‘Type of firm’ and ‘Documentation of HR Practice’. It is to be noted here that the ‘Types of firms’ were Proprietary, Partnerships, Private, Joint-stock company and Private Limited. It needs to be re-called here that written documentation of rules/ regulations helps in its adherence in a better manner than unwritten/ not documented ones. This cross-tabulation was done to see if there is any association between the firm type and the documentation of HR practices (Refer Table 8.39).

The null and alternate hypothesis is framed herewith as:

H₀₁: There is no significant association between Type of firm and Documentation of HR practice.

H_{a1}: There is significant association between Type of firm and Documentation of HR practice.

TABLE 8.39- Cross-Tabulation: Type of Firm and Documentation of HR Practice

Documentation of HR Practice (Our firm has...)		Firm Type						TOTAL
		PROPRIETORY	PARTNERSHIP	PRIVATE	JOINT STOCK	PRIVATE LTD.	PUBLIC LTD.	
EMP HAND- BOOK	Count	12	8	7	2	20	0	49
	% within Our firm has	24.5%	16.3%	14.3%	4.1%	40.8%	0.0%	100.0%
	% within Firm Type	33.3%	19.0%	14.9%	50.0%	24.4%	0.0%	22.8%
RULE BOOK	Count	4	5	5	0	8	0	22
	% within Our firm has	18.2%	22.7%	22.7%	0.0%	36.4%	0.0%	100.0%
	% within Firm Type	11.1%	11.9%	10.6%	0.0%	9.8%	0.0%	10.2%
HR MANU AL	Count	0	3	10	0	26	4	43
	% within Our firm has	0.0%	7.0%	23.3%	0.0%	60.5%	9.3%	100.0%
	% within Firm Type	0.0%	7.1%	21.3%	0.0%	31.7%	100.0%	20.0%

Documentation of HR Practice		Firm Type						TOTAL
(Our firm has...)		PROPRIETARY	PARTNERSHIP	PRIVATE	JOINT STOCK	PRIVATE LTD.	PUBLIC LTD.	
NOTHING LIKE	Count	20	26	25	2	28	0	101
	% within Our firm has	19.8%	25.7%	24.8%	2.0%	27.7%	0.0%	100.0%
	% within Firm Type	55.6%	61.9%	53.2%	50.0%	34.1%	0.0%	47.0%
Total	Count	36	42	47	4	82	4	215
	% within Our firm has	16.7%	19.5%	21.9%	1.9%	38.1%	1.9%	100.0%
	% within Firm Type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

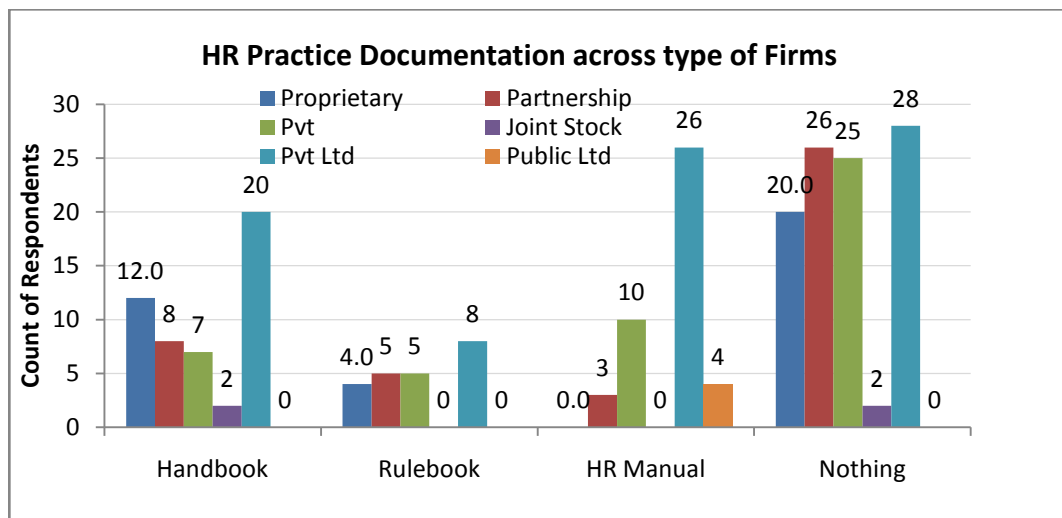


Figure 8.26 - Type of Firm and Documentation of HR Practice

TABLE 8.40 - Chi-Square Test (Cross-Tab: Type of Firm and Documentation of HR Practice)

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	44.222 ^a	15	.000
Likelihood Ratio	49.507	15	.000
Linear-by-Linear Association	.800	1	.371
N of Valid Cases	215		

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	44.222 ^a	15	.000
Likelihood Ratio	49.507	15	.000
Linear-by-Linear Association	.800	1	.371
N of Valid Cases	215		

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.37.

(Source: SPSS Output)

As the p-value is less than 0.05, so we reject null hypothesis and conclude that there is significant association between type of firm and documentation of HR practice.

From Table 8.39 and Figure 8.26 it can be seen that about 101 respondents (47% of respondents) have confirmed that their firm does not have anything in documentation related to HR policies/ Hand-books etc, of whom about 28% are from Private Limited companies. It is also worth mentioning that about 49 respondents (about 23% of respondents) have confirmed that their firm has an Employee Hand-book of whom 20 respondents (about 41% respondents) belong to Private Ltd. Companies. Further, it is also to be noted that 43 respondents (about 20% of respondents) have confirmed that their firm has an HR Manual of whom 26 respondents (about 60.5% of respondents) are from Private Limited companies. Further, as can be seen from Table 8.40 (chi-square test), that **the p-value is less than 0.05, so we reject null hypothesis and conclude that there is significant association between type of firm and documentation of HR practice.**

8.7.2. Cross-Tabulation & Chi-square Test: Size of Firm and Documentation of HR Practice

Cross-tabulation was done between 'Size of firm' and 'Documentation of HR Practice'. It is to recall here that the 'Size of firms' were Small or Medium Enterprises only. This cross-tabulation followed by chi-square test was done to see if size of firm has any association with the documentation of HR practices (Refer Table 8.41).

The null and alternate hypothesis is framed herewith as:

H₀: Size of firm has no significant association with Documentation of HR practice.

H_a: There is significant association between Size of firm and Documentation of HR practice.

TABLE 8.41: Cross-Tabulation- Size of Firm and Documentation of HR Practice

Documentation of HR Practice (Our firm has...)		Size of the Firm		Total
		SMALL	MEDIUM	
EMP HANDBOOK	Count	27	22	49
	Expected Count	32.6	16.4	49
	% within Our firm has	55.1%	44.9%	100.0%
	% within Size of the Firm	18.9%	30.6%	22.8%
RULE BOOK	Count	13	9	22
	Expected Count	14.6	7.4	22
	% within Our firm has	59.1%	40.9%	100.0%
	% within Size of the Firm	9.1%	12.5%	10.2%
HR MANUAL	Count	19	24	43
	Expected Count	28.6	14.4	43
	% within Our firm has	44.2%	55.8%	100.0%
	% within Size of the Firm	13.3%	33.3%	20.0%
NOTHING LIKE	Count	84	17	101
	Expected Count	67.2	33.8	101
	% within Our firm has	83.2%	16.8%	100.0%
	% within Size of the Firm	58.7%	23.6%	47.0%
Total	Count	143	72	215
	Expected Count	143	72	215
	% within Our firm has	66.5%	33.5%	100.0%
	% within Size of the Firm	100.0%	100.0%	100.0%

(Source: SPSS Output, Primary data)

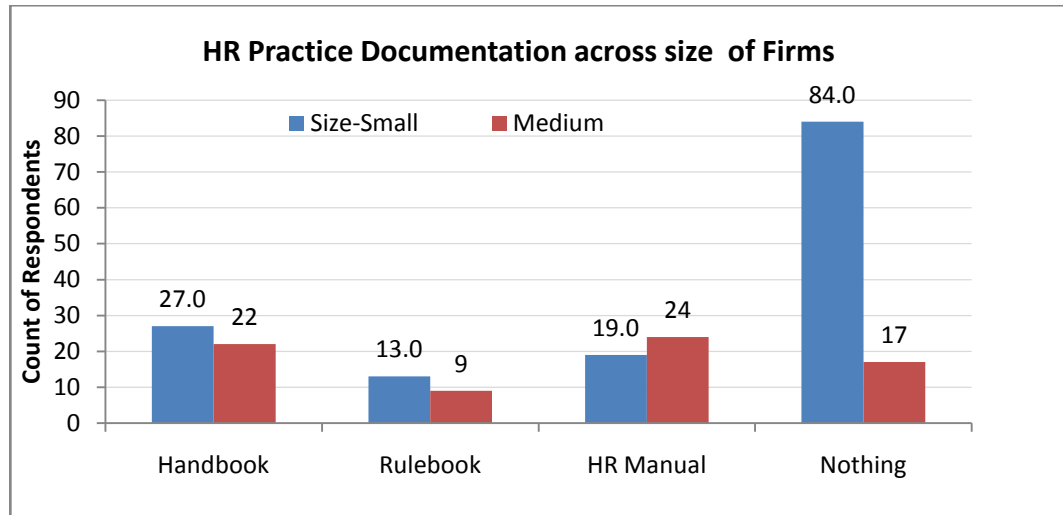


Figure 8.27 - Cross-Tab: Size of Firm and Documentation of HR Practice

TABLE 8.42- Chi-Square Test (Cross-Tab: Size Of Firm And Documentation Of HR Practice)

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.611 ^a	3	0
Likelihood Ratio	26.401	3	0
Linear-by-Linear Association	12.37	1	0
N of Valid Cases	215		

0 cells (.0%) have expected count less than 5. The minimum expected count is 7.37.

(Source: SPSS Output)

As the p-value is less than 0.05, so we reject null hypothesis and conclude that there is significant association between Size of firm and Documentation of HR practice. It can be seen from Table 8.41 and Figure 8.27 that about 101 respondents have confirmed that they have no documentation of HR Practice of which 84 respondents (about 83% respondents) belong to Small firms. It has also to be noted that 49 of the respondents' firms have an Employee Handbook of which 27 respondents (55%) are from Small Enterprises. Further, 43 of the respondents have confirmed that their firm has an HR Manual of whom 24 respondents (56%) are from Medium Enterprises.

8.7.3. Cross-Tabulation and Chi-Square: Quality/ ISO Certification and Documentation of HR Practice

Cross-tabulation was done between firms bearing Quality or ISO Certification and 'Documentation of HR Practice'. This cross-tabulation was done to see if an accredited SME firm bearing any Quality/ ISO Certification has an association with the documentation of HR practices (See Table 8.43 and Figure 8.28).

The null and alternate hypothesis is framed herewith as:

H₀₃: Documentation of HR practice is not associated with the SME firm bearing a Quality/ ISO Certification.

H_{a3}: Documentation of HR practice is associated with the SME firm bearing a Quality/ ISO Certification.

TABLE 8.43- Cross-Tabulation: Quality/ ISO Certification and Documentation of HR Practice

Documentation of HR Practice (Our firm has....)		Quality or ISO Certification		Total
		YES	NO	
EMP HANDBOOK	Count	26	23	49
	% within Our firm has	53.1%	46.9%	100.0%
	% within Quality or ISO Certification	19.5%	28.0%	22.8%
RULE BOOK	Count	8	14	22
	% within Our firm has	36.4%	63.6%	100.0%
	% within Quality or ISO Certification	6.0%	17.1%	10.2%
HR MANUAL	Count	41	2	43
	% within Our firm has	95.3%	4.7%	100.0%
	% within Quality or ISO Certification	30.8%	2.4%	20.0%
NOTHING LIKE	Count	58	43	101
	% within Our firm has	57.4%	42.6%	100.0%
	% within Quality or ISO Certification	43.6%	52.4%	47.0%
Total	Count	133	82	215
	% within Our firm has	61.9%	38.1%	100.0%
	% within Quality or ISO Certification	100.0%	100.0%	100.0%

(Source: SPSS Output, Primary data)

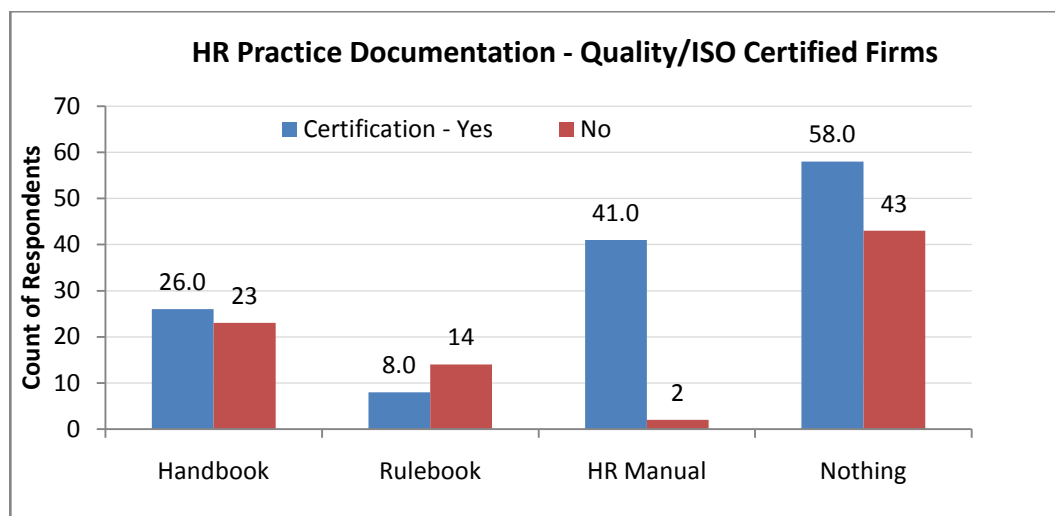


Figure 8.28 - Cross-Tabulation: Quality/ ISO Certification and Documentation of HR Practice

TABLE 8.44 - Chi-Square Test: Quality/ ISO Certification and Documentation of HR Practice

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.951 ^a	3	0
Likelihood Ratio	35.296	3	0
Linear-by-Linear Association	1.265	1	0.261
N of Valid Cases	215		

0 cells (.0%) have expected count less than 5. The minimum expected count is 8.39
(Source: SPSS Output, Primary data)

As the p-value is less than 0.05, so we reject null hypothesis and conclude that **Documentation of HR practice is associated with the SME firm bearing a Quality/ ISO Certification** (Refer Table 8.44). It can be seen from Table 8.43 and Figure 8.28 that of the 49 Managing Heads who have confirmed that they have an Employee Handbook, 53% (26 respondents) have a Quality/ ISO Certification. Further, of the 43 respondents who have said that their firm possesses an HR Manual, about 95% (41 respondents) have a Quality/ ISO Certification in their firm.

8.7.4. Cross-Tabulation & Chi-Square: Person who Handles HR Functions and Documentation of HR Practice

Cross-tabulation was done between ‘person who handles HR functions’ and ‘Documentation of HR Practice’. This cross-tabulation was done to see if the presence of an internal HR expert in an SME firm has an association with the documentation of HR practices (See Table 8.45 and Figure 8.29).

The null and alternate hypothesis is framed herewith as:

H₀₄: Documentation of HR practice is not associated with the presence of an internal HR Expert.

H_{a4}: Documentation of HR practice is associated with the presence of an internal HR Expert.

TABLE 8.45: Cross-Tabulation - Person who Handles HR Functions and Documentation of HR Practice

Person who handles HR Functions		Documentation of HR Practice				
		EMP HANDBOOK	RULE BOOK	HR MANUAL	NOTHING LIKE	TOTAL
No Internal HR expert	Count	21	11	11	63	106
	Expected Count	24.2	10.8	21.2	49.8	106
	% within person who handles HR functions	19.8%	10.4%	10.4%	59.4%	100.0%
	% within Our firm has	42.9%	50.0%	25.6%	62.4%	49.3%
Presence of Internal HR expert	Count	28	11	32	38	109
	Expected Count	24.8	11.2	21.8	51.2	109
	% within person who handles HR functions	25.7%	10.1%	29.4%	34.9%	100.0%
	% within Our firm has	57.1%	50.0%	74.4%	37.6%	50.7%
Total	Count	49	22	43	101	215
	Expected Count	49	22	43	101	215
	% within person who handles HR functions	22.8%	10.2%	20.0%	47.0%	100.0%
	% within Our firm has	100.0%	100.0%	100.0%	100.0%	100.0%

(Source: SPSS Output, Primary data)

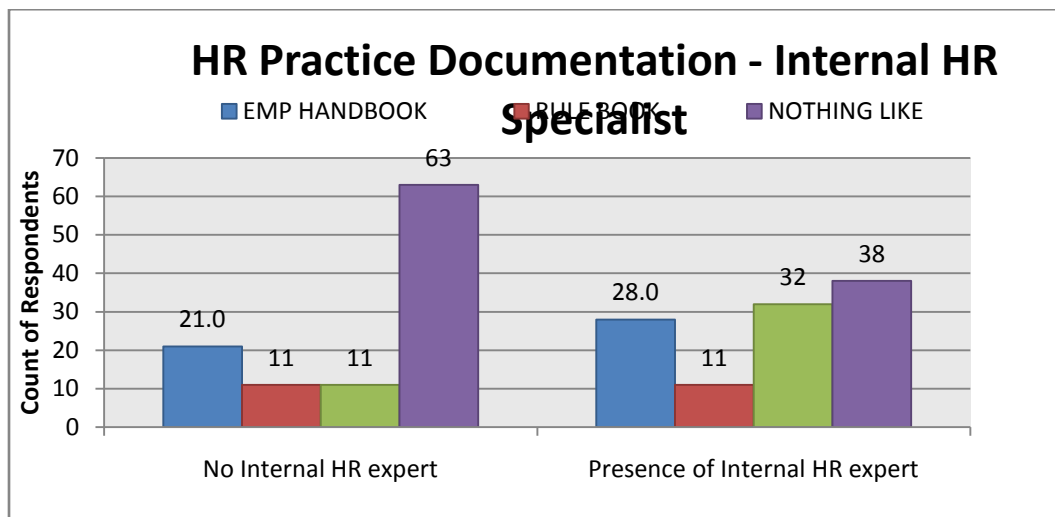


Figure 8.29 - Cross-Tabulation: Person who Handles HR Functions and Documentation of HR Practice

TABLE 8.46 - Chi-Square: Person who Handles HR Functions and Documentation of HR Practice

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.405 ^a	3	0.001
Likelihood Ratio	17.923	3	0
Linear-by-Linear Association	4.707	1	0.03
N of Valid Cases	215		

0 cells (.0%) have expected count less than 5. The minimum expected count is 10.85
(Source: SPSS Output, Primary data)

As the p-value is less than 0.05, so we reject null hypothesis and conclude that Documentation of HR practice is associated with the presence of an internal HR Expert. It can be seen from Table 8.45 and Figure 8.29 that of the 109 respondents who have an internal HR person in their firm, 71 respondents (65%) have HR Policies in their firm in the form of Employee Handbook, Rule-book or HR Manual. However, it is also to be noted that about 35% firms do not have any kind of documented HR related policies or rules, even with the presence of an internal HR expert in the firm. This calls in for the

scope of improvement to enhance the documentation of HR policies, rules and regulations in written form.

8.7.5. Cross-Tabulation: Person Who Handles HR Functions and Size of Firm

Cross-tabulation was done between ‘Person who handles HR functions’ and ‘Size of firm’. This cross-tabulation was done to see if the presence of an internal HR expert in an SME firm has an association with the Size of firm viz. Small and Medium (See Table 8.47 and Figure 8.30).

The null and alternate hypothesis is framed herewith as:

H₀₅: Presence of an internal HR Expert is not associated with the size of firm.

H_{a5}: Presence of an internal HR Expert is associated with the size of firm.

TABLE 8.47 - Cross-Tabulation: Person Who Handles HR Functions and Size of Firm

Person who handles HR Functions		Size of the Firm		
		SMALL	MEDIUM	TOTAL
No Internal HR expert	Count	84	22	106
	Expected Count	70.5	35.5	106
	% within person who handles HR functions	79.2%	20.8%	100.0%
	% within Size of the Firm	58.7%	30.6%	49.3%
Presence of Internal HR expert	Count	59	50	109
	Expected Count	72.5	36.5	109
	% within person who handles HR functions	54.1%	45.9%	100.0%
	% within Size of the Firm	41.3%	69.4%	50.7%
Total	Count	143	72	215
	Expected Count	143	72	215
	% within person who handles HR functions	66.5%	33.5%	100.0%
	% within Size of the Firm	100.0%	100.0%	100.0%

(Source: SPSS Output, Primary data)

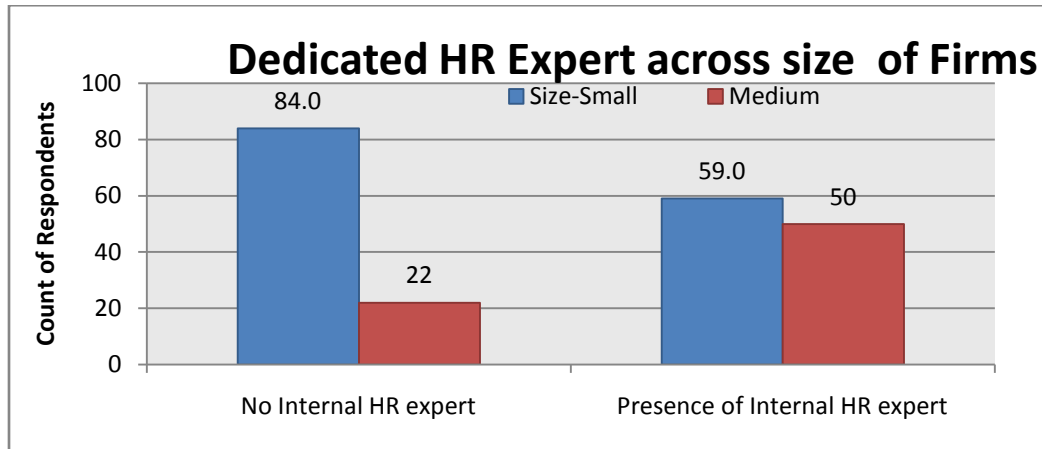


Figure 8.30 - Person Who Handles HR Functions and Size of Firm

It can be seen from Table 8.47 and Figure 8.30 that of the 109 respondents who have confirmed about the presence of an Internal HR person in their firm, who have an internal HR expert, about 59 respondents (54%) are from Small Enterprises and rest 46% are from Medium Enterprises.

TABLE 8.48-Chi-Square Test: Person Who Handles HR Functions and Size of Firm

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15.221 ^a	1	.000		
Continuity Correction ^b	14.114	1	.000		
Likelihood Ratio	15.533	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	15.150	1	.000		
N of Valid Cases	215				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 35.50.

b. Computed only for a 2x2 table

As the p-value is less than 0.05 (See Table 8.48), so we reject null hypothesis and conclude that presence of an internal HR Expert is associated with the size of firm.

Section II: Inferential Statistics – Non Parametric Tests

8.8. Mann-Whitney Test

The Mann-Whitney U Test is used for two samples when data is not normally distributed. It is used for ordinal scores. It is an alternative to the independent t-test which is used when the data is ordinal and non-parametric. It is appropriate for analyzing the data from an independent measures design with two conditions. This test works on ranking the data rather than testing the actual scores (values), and scoring each rank subsequently, ranking '1' with the lowest score.

The logic behind the Mann-Whitney test is to rank the data for each condition, and then see how different the two rank totals are. If there is a systematic difference between the two conditions, then most of the high ranks will belong to one condition and most of the low ranks will belong to the other one. As a result, the rank totals will be quite different (Graham Hole Research skills; <https://statistics.laerd.com/spss-tutorials/mann-whitney-u-test-using-spss-statistics.php>).

8.8.1. Mann-Whitney Test for Gender of Respondent and HR Practices

Mann-Whitney Test was done to see if there is any effect of gender of respondents on the HR Practices practiced in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₆: There is no significant influence of Gender on HR Practices.

H_{a6}: There is significant influence of Gender on HR Practices.

TABLE 8.49 - Ranks- Mann-Whitney Test for Gender of Respondent and HR Practices

HR Practices	Gender of the Respondent	N	Mean Rank	Sum of Ranks
Our organization places the right person in the right job	MALE	196	107.34	21038.5
	FEMALE	19	114.82	2181.5
	Total	215		
Selection is on the basis of merit	MALE	196	108.39	21244
	FEMALE	19	104	1976
	Total	215		
Organizes training and skill development programs	MALE	196	107.59	21088.5
	FEMALE	19	112.18	2131.5
	Total	215		
Employees are rotated from one job to another	MALE	196	107.83	21135.5
	FEMALE	19	109.71	2084.5
	Total	215		
Appraises the performance of employees at regular intervals.	MALE	196	107.32	21035.5
	FEMALE	19	114.97	2184.5
	Total	215		
Employees receive feedback	MALE	196	106.42	20857.5
	FEMALE	19	124.34	2362.5
	Total	215		
Enough opportunity for career growth	MALE	196	104.61	20504.5
	FEMALE	19	142.92	2715.5
	Total	215		
Compensation is decided on the basis of competence or ability	MALE	196	105.84	20744.5
	FEMALE	19	130.29	2475.5
	Total	215		
Good performers are given financial incentives	MALE	196	106.08	20791.5
	FEMALE	19	127.82	2428.5
	Total	215		
Good performers are given non-financial incentives.	MALE	196	108.71	21307.5
	FEMALE	19	100.66	1912.5
	Total	215		
Good performers are given more authority and responsibility.	MALE	196	107.87	21142.5
	FEMALE	19	109.34	2077.5
	Total	215		
Employees participate in the decision-making process.	MALE	196	106.71	20915.5
	FEMALE	19	121.29	2304.5
	Total	215		
Employees are given opportunity to suggest improvement	MALE	196	106.85	20942
	FEMALE	19	119.89	2278
	Total	215		
Employees can openly communicate with the superiors	MALE	196	108.59	21283.5
	FEMALE	19	101.92	1936.5
	Total	215		

(S((Source: SPSS output; Primary data)

TABLE 8.50 (a, b, c & d) - Test Statistics a: Mann-Whitney Test for Gender of Respondent and HR Practices

	Our organization places the right person in the right job	Selection is on the basis of merit	Organizes training and skill development programs	Employees are rotated from one job to another
Mann-Whitney U	1732.5	1786	1782.5	1829.5
Wilcoxon W	21038.5	1976	21088.5	21135.5
Z	-0.622	-0.359	-0.33	-0.136
Asymp. Sig. (2-tailed)	0.534	0.72	0.742	0.892

Test Statistics^b

	Appraises the performance of employees at regular intervals.	Employees receive feedback	Enough opportunity for career growth	Compensation is decided on the basis of competence or ability
Mann-Whitney U	1729.5	1551.5	1198.5	1438.5
Wilcoxon W	21035.5	20857.5	20504.5	20744.5
Z	-0.623	-1.474	-2.764	-2.039
Asymp. Sig. (2-tailed)	0.533	0.141	0.006	0.041

	Good performers are given financial incentives	Good performers are given non-financial incentives.	Good performers are given more authority and responsibility.	Employees participate in the decision-making process.
Mann-Whitney U	1485.5	1722.5	1836.5	1609.5
Wilcoxon W	20791.5	1912.5	21142.5	20915.5
Z	-1.545	-0.557	-0.111	-1.037
Asymp. Sig. (2-tailed)	0.122	0.577	0.911	0.3

Test Statistics^c

	Employees are given opportunity to suggest improvement	Employees can openly communicate with the superiors
Mann-Whitney U	1636	1746.5
Wilcoxon W	20942	1936.5
Z	-1.065	-0.549

Test Statistics^c

	Employees are given opportunity to suggest improvement	Employees can openly communicate with the superiors
Mann-Whitney U	1636	1746.5
Wilcoxon W	20942	1936.5
Z	-1.065	-0.549
Asymp. Sig. (2-tailed)	0.287	0.583
a. Grouping Variable: Gender of the Respondent (Source: SPSS Output, Primary data)		

Interpretation

From Table 8.50 (b), it can be seen that the p-value of **‘Enough opportunity for career growth’** and **‘Compensation is given on the basis of competence and ability’** is less than **0.05**, so we reject the null hypothesis.

Further, the mean-rank of **‘females’** is 142.92, while that of **‘males’** is 104.61 for the statement **‘Enough opportunity for career growth’**. The mean rank of **‘females’** is 130.29 while that of **‘males’** is 105.84 for the statement **‘Compensation is given on the basis of competence and ability’** (Refer Table 8.49). Thus, females consider that there is **‘Enough opportunity for career growth’** as well as that **‘Compensation is given on the basis of competence and ability’** in SME firms.

We thus **conclude** that there is a **significant influence of ‘gender’** on **‘Enough opportunity for career growth’** and **‘Compensation is given on the basis of competence and ability’**.

8.8.2. Mann-Whitney Test for Quality/ ISO Certification and HR Practices

Mann-Whitney Test was done to see if there is any influence of Quality/ ISO Certification on the HR Practices practiced in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₇: There is no significant influence of Quality/ ISO Certification on HR Practices.

H_{a7}: There is significant influence of Quality/ ISO Certification on HR Practices.

TABLE 8.51 - Mean-Ranks: Mann-Whitney Test for Quality/ ISO Certification and HR Practices

HR Practices	Quality or ISO Certification	N	Mean Rank	Sum of Ranks
Our organization places the right person in the right job	YES	133	117	15560.5
	NO	82	93.41	7659.5
	Total	215		
Selection is on the basis of merit	YES	133	113.66	15117
	NO	82	98.82	8103
	Total	215		
Organizes training and skill development programs	YES	133	118.82	15802.5
	NO	82	90.46	7417.5
	Total	215		
Employees are rotated from one job to another	YES	133	112.35	14942
	NO	82	100.95	8278
	Total	215		
Appraises the performance of employees at regular intervals.	YES	133	115.96	15423
	NO	82	95.09	7797
	Total	215		
Employees receive feedback	YES	133	111.99	14895
	NO	82	101.52	8325
	Total	215		
Enough opportunity for career growth	YES	133	110.33	14673.5
	NO	82	104.23	8546.5
	Total	215		
Compensation is decided on the	YES	133	109.35	14544

HR Practices	Quality or ISO Certification	N	Mean Rank	Sum of Ranks
basis of competence or ability	NO	82	105.8	8676
Good performers are given financial incentives	YES	133	113.1	15042
	NO	82	99.73	8178
	Total	215		
Good performers are given non-financial incentives.	YES	133	107.1	14244
	NO	82	109.46	8976
	Total	215		
Good performers are given more authority and responsibility.	YES	133	115.5	15361
	NO	82	95.84	7859
	Total	215		
Employees participate in the decision-making process.	YES	133	107.92	14354
	NO	82	108.12	8866
	Total	215		
Employees are given opportunity to suggest improvement	YES	133	115.2	15322
	NO	82	96.32	7898
	Total	215		
Employees can openly communicate with the superiors	YES	133	115.05	15301
	NO	82	96.57	7919
	Total	215		

(Source: SPSS Output, Primary data)

TABLE 8.52 - Test Statistics^a for Quality/ ISO Certification and HR Practices

HR Practice	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Our organization places the right person in the right job	4256.5	7659.5	-3.359	0.001
Selection is on the basis of merit	4700	8103	-2.077	0.038
Organizes training and skill development programs	4014.5	7417.5	-3.486	0
Employees are rotated from one job to another	4875	8278	-1.412	0.158
Appraises the performance of employees at regular intervals.	4394	7797	-2.91	0.004
Employees receive feedback	4922	8325	-1.473	0.141
Enough opportunity for career growth	5143.5	8546.5	-0.754	0.451
Compensation is decided on the basis of competence or ability	5273	8676	-0.506	0.613
Good performers are given financial incentives	4775	8178	-1.626	0.104
Good performers are given non-financial incentives.	5333	14244	-0.28	0.779
Good performers are given more authority and responsibility.	4456	7859	-2.545	0.011
Employees participate in the decision-making process.	5443	14354	-0.024	0.981
Employees are given opportunity to suggest improvement	4495	7898	-2.637	0.008
Employees can openly communicate with the superiors	4516	7919	-2.602	0.009

Source: Grouping Variable: Quality or ISO Certification; SPSS Output; Primary data

Interpretation

From Table 8.52, it can be seen that the p-value of the following **HR Practices** is **less than 0.05**:

- Our organization places the right person in the right job
- Selection is on the basis of merit

- Organizes training and skill development programs
- Appraises the performance of employees at regular intervals
- Good performers are given more authority and responsibility
- Employees are given opportunity to suggest improvement
- Employees can openly communicate with the superiors

Further, from Table 8.51 it can be seen that the mean-rank of firms with Quality / ISO Certification is high and is 117, 113.66, 118.82, 115.96, 115.5, 115.2 and 115.05 respectively, for the above statements; while that of firms without the Certification is 93.41, 98.82, 90.46, 95.09, 95.84, 96.32 and 96.57 respectively. So the firms possessing a Quality/ ISO Certification have an influence especially for the HR practices mentioned above.

As the **p-value** of the above statements on HR Practices is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Quality/ ISO Certification on the following HR Practices: Recruitment, Selection, Training & Skill Development, Performance Appraisal, Employee Involvement and Open-Communication.**

8.8.3. Mann-Whitney Test for Quality/ ISO Certification and Organizational Outcomes

Mann-Whitney Test was done to see if there is any influence of Quality/ ISO Certification on the Organizational Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀: There is no significant influence of Quality/ ISO Certification on Organizational Outcomes.

H_a: There is significant influence of Quality/ ISO Certification on Organizational Outcomes.

TABLE 8.53 - Mean-Ranks: Mann-Whitney Test for Quality/ ISO Certification and Organizational Outcomes

Organizational Outcomes	Quality or ISO Certification	N	Mean Rank	Sum of Ranks
Customer satisfaction has increased	YES	133	118.26	15728
	NO	82	91.37	7492
	Total	215		
Our suppliers/ vendors are satisfied with us.	YES	133	117.06	15569
	NO	82	93.3	7651
	Total	215		
Measures have been taken by the firm for product/ service development	YES	133	117.59	15640
	NO	82	92.44	7580
	Total	215		
Products/service Quality shows improvement	YES	133	118.42	15749.5
	NO	82	91.1	7470.5
	Total	215		
The firm has displayed proper utilization of resources.	YES	133	115.61	15375.5
	NO	82	95.66	7844.5
	Total	215		
Average Number of defects of products / deficiencies in service shows a decrease	YES	133	119.07	15836
	NO	82	90.05	7384
	Total	215		
There is an increase in the Net Profit Margin.	YES	133	121.61	16173.5
	NO	82	85.93	7046.5
	Total	215		
Return on Investment (in %) has increased	YES	133	116.76	15528.5
	NO	82	93.8	7691.5
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.54 - Test Statistics^a: Mann-Whitney Test for Quality/ ISO Certification and Organizational Outcomes

Organizational Outcomes	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Customer satisfaction has increased	4089	7492	-3.439	0.001
Our suppliers/ vendors are satisfied with us.	4248	7651	-3.007	0.003
Measures have been taken by the firm for product/ service development	4177	7580	-3.163	0.002
Products/service Quality shows improvement	4067.5	7470.5	-3.463	0.001
The firm has displayed proper utilization of resources.	4441.5	7844.5	-2.518	0.012
Average Number of defects of products / deficiencies in service shows a decrease	3981	7384	-3.64	0
There is an increase in the Net Profit Margin.	3643.5	7046.5	-4.418	0
Return on Investment (in %) has increased	4288.5	7691.5	-2.836	0.005

(Source: SPSS Output, Primary data)

Interpretation

From Table 8.54, it can be seen that the p-value of the following statements on Organizational Outcomes is **less than 0.05**:

- Customer satisfaction has increased
- Our suppliers/ vendors are satisfied with us
- Measures have been taken by the firm for product/ service development
- Products/service Quality shows improvement
- The firm has displayed proper utilization of resources.
- Average Number of defects of products / deficiencies in service shows a decrease
- There is an increase in the Net Profit Margin
- Return on Investment (in %) has increased over the last two years

Table 8.53 shows that the mean-rank of firms with Quality / ISO Certification is high and is 118.26, 117.06, 117.59, 118.42, 115.61, 119.07, 121.61 and 116.76 respectively; while that of firms without the Certification is 91.37, 93.3, 92.44, 91.1, 95.66, 90.05, 85.93 and 93.80 respectively, for the statements on 'Organizational outcomes'. So the firms possessing a Quality/ ISO Certification have an influence on all the above mentioned statements of Organizational outcomes (Refer Table 8.53).

As the **p-value** of the above statements on Organizational Outcomes is **less than 0.05**, so **we reject the null hypothesis and conclude that there is a significant influence of Quality/ ISO Certification on the following Organizational Outcomes: Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Quality, Optimum utilization of resources, Defects or deficiencies in Product or Service, Net Profit Margin, Return on Investment.**

8.8.4. Mann-Whitney Test for Presence of an Internal HR Person on HR Practices

Mann-Whitney Test was done to see if there is any influence of presence of an internal HR person on the HR Practices in the SME firms.

The null and alternate hypothesis is framed as under:

H0: There is no significant influence of Presence of an Internal HR Person on HR Practices.

H9: There is significant influence of Presence of an Internal HR Person on HR Practices.

TABLE 8.55 -Mean-Ranks: Mann-Whitney Test for Presence of an Internal HR Person on HR Practices

HR Practices	The person who handles HR functions	N	Mean Rank	Sum of Ranks
Our organization places the right person in the right job	No Internal HR expert	106	102.71	10887
	Presence of Internal HR expert	109	113.15	12333
	Total	215		
Selection is on the basis of merit	No Internal HR expert	106	96.9	10271.5
	Presence of Internal HR expert	109	118.79	12948.5
	Total	215		
Organizes training and skill development programs	No Internal HR expert	106	92.37	9791
	Presence of Internal HR expert	109	123.2	13429
	Total	215		
Employees are rotated from one job to another	No Internal HR expert	106	101.24	10731.5
	Presence of Internal HR expert	109	114.57	12488.5
	Total	215		
Appraises the performance of employees at regular intervals.	No Internal HR expert	106	101.33	10741.5
	Presence of Internal HR expert	109	114.48	12478.5
	Total	215		
Employees receive feedback	No Internal HR expert	106	98.02	10390
	Presence of Internal HR expert	109	117.71	12830
	Total	215		
Enough opportunity for career growth	No Internal HR expert	106	93.43	9903.5
	Presence of Internal HR expert	109	122.17	13316.5
	Total	215		
Compensation is decided on the basis of competence or ability	No Internal HR expert	106	96.43	10221.5
	Presence of Internal HR expert	109	119.25	12998.5
	Total	215		
Good performers are given financial incentives	No Internal HR expert	106	98.64	10456
	Presence of Internal HR expert	109	117.1	12764
	Total	215		
Good performers are given non-financial incentives.	No Internal HR expert	106	118.05	12513.5
	Presence of Internal HR expert	109	98.22	10706.5
	Total	215		
Good performers are given more authority and responsibility.	No Internal HR expert	106	100.07	10607
	Presence of Internal HR expert	109	115.72	12613
	Total	215		

HR Practices	The person who handles HR functions	N	Mean Rank	Sum of Ranks
Employees participate in the decision-making process.	No Internal HR expert	106	103.87	11010.5
	Presence of Internal HR expert	109	112.01	12209.5
Employees are given opportunity to suggest improvement	No Internal HR expert	106	102.87	10904.5
	Presence of Internal HR expert	109	112.99	12315.5
Employees can openly communicate with the superiors	No Internal HR expert	106	102.52	10867.5
	Presence of Internal HR expert	109	113.33	12352.5
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.56 - Test Statistics^a : Mann-Whitney Test for Presence of an Internal HR Person on HR Practices

HR Practices	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Our organization places the right person in the right job	5216	10887	-1.53	0.126
Selection is on the basis of merit	4600.5	10271.5	-3.153	0.002
Organizes training and skill development programs	4120	9791	-3.901	0
Employees are rotated from one job to another	5060.5	10731.5	-1.7	0.089
Appraises the performance of employees at regular intervals.	5070.5	10741.5	-1.886	0.059
Employees receive feedback	4719	10390	-2.851	0.004
Enough opportunity for career growth	4232.5	9903.5	-3.653	0
Compensation is decided on the basis of competence or ability	4550.5	10221.5	-3.353	0.001
Good performers are given financial incentives	4785	10456	-2.311	0.021
Good performers are given non-financial incentives.	4711.5	10706.5	-2.416	0.016
Good performers are given more authority and responsibility.	4936	10607	-2.086	0.037
Employees participate in the decision-making process.	5339.5	11010.5	-1.02	0.308
Employees are given opportunity to suggest improvement	5233.5	10904.5	-1.453	0.146
Employees can openly communicate with the superiors	5196.5	10867.5	-1.566	0.117

Interpretation

Table 8.56 shows that the p-value of the following statements on HR Practices is **less than 0.05**:

- Selection is on the basis of merit
- Organizes training and skill development programs
- Employees receive feedback
- Enough opportunity for career growth
- Compensation is decided on the basis of competence or ability
- Good performers are given financial incentives
- Good performers are given non-financial incentives
- Good performers are given more authority and responsibility

Further, Table 8.55 shows that the mean-rank of firms with Presence of an Internal HR person is 118.79, 123.20, 114.57, 122.17, 119.25, 117.1, 98.22 and 115.72 respectively, for the above statements, while that of firms without the presence of an internal HR person is 96.9, 92.37, 101.24, 93.43, 96.43, 98.64, 118.05 and 100.07, respectively. So the firms having an internal HR person have an influence especially for the HR Practices mentioned above, **except** for the statement 'Good performers are given financial incentives'.

As the **p-value** of the above statements on HR Practices is **less than 0.05**, so we **reject the null hypothesis and conclude that there is a significant influence of presence of an internal HR person on the following HR Practices: Selection, Training & Skill Development, Feedback mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility (Delegation of power).**

8.8.5. Mann-Whitney Test for Presence of an Internal HR Person and Employee Outcomes

Mann-Whitney Test was done to see if there is any influence of presence of an internal HR person and Employee Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₀: There is no significant influence of Presence of an Internal HR Person and Employee Outcomes.

H_{a10}: There is significant influence of Presence of an Internal HR Person and Employee Outcomes.

TABLE 8.57 -Mean-Ranks: Mann-Whitney Test for Presence of an Internal HR Person and Employee Outcomes

Employee Outcomes	The person who handles HR functions	N	Mean Rank	Sum of Ranks
Competence of an Employee	No Internal HR expert	106	106.12	11249
	Presence of Internal HR expert	109	109.83	11971
	Total	215		
Employee's co-operation with is satisfactory.	No Internal HR expert	106	101.54	10763.5
	Presence of Internal HR expert	109	114.28	12456.5
	Total	215		
Employees co-operate among themselves	No Internal HR expert	106	105.97	11232.5
	Presence of Internal HR expert	109	109.98	11987.5
	Total	215		
Employee's general behavior is good	No Internal HR expert	106	106.93	11334.5
	Presence of Internal HR expert	109	109.04	11885.5
	Total	215		
Employees are committed	No Internal HR expert	106	103.21	10940
	Presence of Internal HR expert	109	112.66	12280
	Total	215		
Employees are punctual and report daily	No Internal HR expert	106	111.49	11817.5
	Presence of Internal HR expert	109	104.61	11402.5
	Total	215		
Employees are regular	No Internal HR expert	106	107.72	11418
	Presence of Internal HR expert	109	108.28	11802

Employee Outcomes	The person who handles HR functions	N	Mean Rank	Sum of Ranks
	Total	215		
Employees take up extra duties and responsibilities	No Internal HR expert	106	99	10494.5
	Presence of Internal HR expert	109	116.75	12725.5
	Total	215		
Employee's follow general code of conduct and rules	No Internal HR expert	106	100.2	10621.5
	Presence of Internal HR expert	109	115.58	12598.5
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.58 - Test Statistics^a: Mann-Whitney Test for Presence of an Internal HR Person and Employee Outcomes

Employee Outcomes	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Competence of an Employee	5578	11249	-0.55	0.582
Employee's co-operation with is satisfactory.	5092.5	10763.5	-1.809	0.07
Employees co-operate among themselves	5561.5	11232.5	-0.527	0.599
Employee's general behavior is good	5663.5	11334.5	-0.282	0.778
Employees are committed	5269	10940	-1.206	0.228
Employees are punctual and report daily	5407.5	11402.5	-0.865	0.387
Employees are regular	5747	11418	-0.072	0.943
Employees take up extra duties and responsibilities	4823.5	10494.5	-2.276	0.023
Employee's follow general code of conduct and rules	4950.5	10621.5	-2.015	0.044

Grouping Variable: The person who handles HR functions

(Source: SPSS Output; Primary data)

Interpretation

It can be deduced from Table 8.58, that the p-value of the following statements on HR Practices is **less than 0.05**:

- Employees take up extra duties and responsibilities when need arises (sense of involvement).
- Employee's follow general code of conduct and rules.

Table 8.57 shows that the mean-rank of firms with Presence of an Internal HR person is 116.75 and 115.58 respectively, for the above two statements; while that of firms without the presence of an internal HR person is 99 and 100.20 respectively. So the firms having an internal HR person have an influence especially for the above two Employee Outcomes.

As the p-value of the above statements on Employee Outcomes is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of presence of an internal HR person on the Employee Outcomes related to taking extra duties and responsibilities (employee involvement) and adherence to code of conduct and rules.**

8.8.6. Mann-Whitney Test for Presence of an Internal HR Person and Organizational Outcomes

Mann-Whitney Test was done to see if there is any influence of presence of an internal HR person and Employee Outcomes in the SME firms (Table: 8.59) .

The null and alternate hypothesis is framed as under:

H₀₁₁: There is no significant influence of Presence of an Internal HR Person and Organizational Outcomes.

H_{a11}: There is significant influence of Presence of an Internal HR Person and Organizational Outcomes.

TABLE 8.59 - Mean-Ranks: Mann-Whitney Test for Presence of an Internal HR Person and Organizational Outcomes

Organizational Outcomes	The person who handles HR functions	N	Mean Rank	Sum of Ranks
Customer satisfaction has increased	No Internal HR expert	106	100.63	10666.5
	Presence of Internal HR expert	109	115.17	12553.5
	Total	215		
Our suppliers/ vendors are satisfied with us.	No Internal HR expert	106	102	10811.5
	Presence of Internal HR expert	109	113.84	12408.5
	Total	215		
Measures have been taken by the firm for product/ service development	No Internal HR expert	106	94.86	10055.5
	Presence of Internal HR expert	109	120.78	13164.5
	Total	215		
Products/service Quality shows improvement	No Internal HR expert	106	96.08	10184.5
	Presence of Internal HR expert	109	119.59	13035.5
	Total	215		
The firm has displayed proper utilization of resources.	No Internal HR expert	106	95.89	10164
	Presence of Internal HR expert	109	119.78	13056
	Total	215		
Average Number of defects of products / deficiencies in service shows a decrease	No Internal HR expert	106	99.68	10566.5
	Presence of Internal HR expert	109	116.09	12653.5
	Total	215		
There is an increase in the Net Profit Margin.	No Internal HR expert	106	97.28	10312
	Presence of Internal HR expert	109	118.42	12908
	Total	215		
Return on Investment (in %) has increased	No Internal HR expert	106	93.46	9907
	Presence of Internal HR expert	109	122.14	13313
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.60 - Test Statistics^a: Mann-Whitney Test for Presence of an Internal HR Person and Organizational Outcomes

Organizational Outcomes	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Customer satisfaction has increased	4995.5	10666.5	-1.914	0.056
Our suppliers/ vendors are satisfied with us.	5140.5	10811.5	-1.543	0.123
Measures have been taken by the firm for product/ service development	4384.5	10055.5	-3.353	0.001
Products/service Quality shows improvement	4513.5	10184.5	-3.068	0.002
The firm has displayed proper utilization of resources.	4493	10164	-3.105	0.002
Average Number of defects of products / deficiencies in service shows a decrease	4895.5	10566.5	-2.118	0.034
There is an increase in the Net Profit Margin.	4641	10312	-2.695	0.007
Return on Investment (in %) has increased	4236	9907	-3.646	0

Grouping Variable: The person who handles HR functions
(Source: SPSS Output; Primary data)

Interpretation

It can be deduced from Table 8.60, that the p-value of the following statements on **Organizational Outcomes** is less than **0.05**:

- Measures have been taken by the firm for product/ service development
- Products/service Quality shows improvement
- The firm has displayed proper utilization of resources.
- Average Number of defects of products / deficiencies in service shows a decrease.
- There is an increase in the Net Profit Margin.
- Return on Investment (in %) has increased over the last two years.

Table 8.59 shows that the mean-rank of firms with Presence of an Internal HR person is 120.78, 119.59, 119.78, 116.09, 118.42 and 122.14 respectively, for the above statements; while that of firms without the presence of an internal HR person is 94.86, 96.08, 95.89, 99.68, 97.28 and 93.46 respectively. So the firms having an internal HR

person have an influence especially for the above statements on Organizational Outcomes.

As the **p-value** of the above statements on Organizational Outcome is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of presence of an internal HR person on the Organizational Outcomes related to Product/ service development, quality of product/ service, utilization of resources, reduction in average Number of defects of products / deficiencies in service, increase in the Net Profit Margin and Return on Investment (in %).**

8.8.7. Mann-Whitney Test for Size of Firm and HR Practices

Mann-Whitney Test was done to see if there is any influence of size of firm (small or medium) and HR Practices in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₂: There is no significant effect of Size of Firm on HR Practices.

H_{a12}: There is significant effect of Size of Firm on HR Practices.

TABLE 8.61-Mean- Ranks: Mann-Whitney Test for Size of Firm and HR Practices

HR Practices	Size of the Firm	N	Mean Rank	Sum of Ranks
Our organization places the right person in the right job	SMALL	143	108.14	15464
	MEDIUM	72	107.72	7756
	Total	215		
Selection is on the basis of merit	SMALL	143	103.55	14807.5
	MEDIUM	72	116.84	8412.5
	Total	215		
Organizes training and skill development programs	SMALL	143	99.33	14204.5
	MEDIUM	72	125.22	9015.5
	Total	215		

HR Practices	Size of the Firm	N	Mean Rank	Sum of Ranks
Employees are rotated from one job to another	SMALL	143	101.66	14537
	MEDIUM	72	120.6	8683
Appraises the performance of employees at regular intervals.	SMALL	143	106.62	15246
	MEDIUM	72	110.75	7974
	Total	215		
Employees receive feedback	SMALL	143	103.22	14760
	MEDIUM	72	117.5	8460
	Total	215		
Enough opportunity for career growth	SMALL	143	107.34	15349.5
	MEDIUM	72	109.31	7870.5
	Total	215		
Compensation is decided on the basis of competence or ability	SMALL	143	109.9	15716
	MEDIUM	72	104.22	7504
	Total	215		
Good performers are given financial incentives	SMALL	143	107.25	15337
	MEDIUM	72	109.49	7883
	Total	215		
Good performers are given non-financial incentives.	SMALL	143	113.47	16226
	MEDIUM	72	97.14	6994
	Total	215		
Good performers are given more authority and responsibility.	SMALL	143	106.92	15290
	MEDIUM	72	110.14	7930
	Total	215		
Employees participate in the decision-making process.	SMALL	143	106.97	15296.5
	MEDIUM	72	110.05	7923.5
	Total	215		
Employees are given opportunity to suggest improvement	SMALL	143	106.44	15220.5
	MEDIUM	72	111.1	7999.5
	Total	215		
Employees can openly communicate with the superiors	SMALL	143	111.66	15967
	MEDIUM	72	100.74	7253
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.62 -Test Statistics^a: Mann-Whitney Test for Size of Firm and HR Practices

HR Practices	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Our organization places the right person in the right job	5128	7756	-0.058	0.954
Selection is on the basis of merit	4511.5	14807.5	-1.807	0.071
Organizes training and skill development programs	3908.5	14204.5	-3.091	0.002
Employees are rotated from one job to another	4241	14537	-2.28	0.023
Appraises the performance of employees at regular intervals.	4950	15246	-0.56	0.576
Employees receive feedback	4464	14760	-1.952	0.051
Enough opportunity for career growth	5053.5	15349.5	-0.237	0.813
Compensation is decided on the basis of competence or ability	4876	7504	-0.788	0.431
Good performers are given financial incentives	5041	15337	-0.264	0.792
Good performers are given non-financial incentives.	4366	6994	-1.879	0.06
Good performers are given more authority and responsibility.	4994	15290	-0.405	0.686
Employees participate in the decision-making process.	5000.5	15296.5	-0.364	0.716
Employees are given opportunity to suggest improvement	4924.5	15220.5	-0.633	0.527
Employees can openly communicate with the superiors	4625	7253	-1.494	0.135

Grouping Variable: Size of the Firm
(Source: SPSS Output; Primary data)

Interpretation

It can be deduced from Table 8.62, that the p-value of the following statements on **HR Practices** is **less than 0.05**:

- Organizes training and skill development programs
- Employees are rotated from one job to another

Table 8.61 shows that the mean-rank of Medium-sized firms is 125.22 and 120.60 respectively, for the above statements; while that of small-sized firms is 99.33 and 101.66

respectively. So the size of the firm does have an effect on the HR practice of T&D and job-rotation.

As the **p-value** of the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that size of firm has a significant effect on the HR practices related to Training & Skill-development as well as job-rotation. In the present survey, medium sized firms have shown to have a significant effect on the HR practices related to T&D and job-rotation.**

8.8.8. Mann-Whitney Test for Size of Firm and Employee Outcomes

Mann-Whitney Test was done to see if there is any influence of size of firm (small or medium) on Employee Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₃: The size of the firm does not significantly influence the Employee Outcomes.

H_{a13}: The size of the firm significantly influences the Employee Outcomes.

TABLE 8.63 - Mean-Ranks: Mann-Whitney Test for Size of Firm on Employee Outcomes

Employee Outcomes	Size of the Firm	N	Mean Rank	Sum of Ranks
Competence of an Employee	SMALL	143	102.69	14684
	MEDIUM	72	118.56	8536
	Total	215		
Employee's co-operation with Mgt. is satisfactory.	SMALL	143	100.55	14378.5
	MEDIUM	72	122.8	8841.5
	Total	215		
Employees co-operate among themselves	SMALL	143	107.63	15391
	MEDIUM	72	108.74	7829
	Total	215		
Employee's general behavior is good	SMALL	143	108.19	15470.5
	MEDIUM	72	107.63	7749.5

Employee Outcomes	Size of the Firm	N	Mean Rank	Sum of Ranks
Employees are committed	SMALL	143	101.06	14452
	MEDIUM	72	121.78	8768
	Total	215		
Employees are punctual and report daily	SMALL	143	100.68	14397.5
	MEDIUM	72	122.53	8822.5
	Total	215		
Employees are regular	SMALL	143	103.1	14743
	MEDIUM	72	117.74	8477
	Total	215		
Employees take up extra duties and responsibilities	SMALL	143	97.64	13962.5
	MEDIUM	72	128.58	9257.5
	Total	215		
Employee's follow general code of conduct and rules	SMALL	143	101.32	14489
	MEDIUM	72	121.26	8731
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.64 - Test Statistics^a: Mann-Whitney Test for Size of Firm on Employee Outcomes

Employee Outcomes	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Competence of an Employee	4388	14684	-2.226	0.026
Employee's co-operation with Mgt.is satisfactory.	4082.5	14378.5	-2.984	0.003
Employees co-operate among themselves	5095	15391	-0.137	0.891
Employee's general behavior is good	5121.5	7749.5	-0.07	0.944
Employees are committed	4156	14452	-2.495	0.013
Employees are punctual and report daily	4101.5	14397.5	-2.597	0.009
Employees are regular	4447	14743	-1.78	0.075
Employees take up extra duties and responsibilities	3666.5	13962.5	-3.746	0
Employee's follow general code of conduct and rules	4193	14489	-2.466	0.014

a. Grouping Variable: Size of the Firm (Source: SPSS Output; Primary data)

Interpretation

It can be deduced from Table 8.64 that the p-value of the following statements on **Employee Outcomes** is **less than 0.05**:

- Competence of the employees to do their assigned work is satisfactory.
- Employee's co-operation with Management/ Head is satisfactory.
- Employees are committed to complete their assigned task.
- Employees are punctual and report daily for work on time.
- Employees take up extra duties and responsibilities when need arises (sense of involvement).
- Employee's follow general code of conduct and rules.

Table 8.63 shows that the mean-rank of Medium-sized firms is high and is 118.56, 122.80, 121.78, 122.53, 128.58 and 121.26 respectively, for the above statements; while that of small-sized firms is 102.69, 100.55, 101.06, 100.68, 97.64 and 101.32 respectively. So the size of the firm does have an effect on the Employee Outcomes mentioned above.

As the **p-value** of the above statements on **Employee Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that size of firm has a significant influence on the Employee Outcomes related to Employee Competence, Employee's co-operation with Management, Employee's commitment to complete assigned tasks, Punctuality, Sense of involvement as well as adherence to general code of conduct. In the present survey, medium sized firms have shown to have a significant effect on the mentioned Employee Outcomes.**

8.8.9. Mann-Whitney Test for Size of Firm and Organizational Outcomes

Mann-Whitney Test was done to see if there is any influence of size of firm (small or medium) on Organizational Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₄: Size of firm does not significantly influence Organizational Outcomes.

H_{a14}: Size of firm has a significant influence on Organizational Outcomes.

TABLE 8.65 - Mean-Ranks: Mann-Whitney Test for Size of Firm and Organizational Outcomes

Organizational Outcomes	Size of the Firm	N	Mean Rank	Sum of Ranks
Customer satisfaction has increased	SMALL	143	101.62	14532
	MEDIUM	72	120.67	8688
	Total	215		
Our suppliers/ vendors are satisfied with us.	SMALL	143	105.36	15066
	MEDIUM	72	113.25	8154
	Total	215		
Measures have been taken by the firm for product/ service development	SMALL	143	104.22	14904
	MEDIUM	72	115.5	8316
	Total	215		
Products/service Quality shows improvement	SMALL	143	104.69	14970
	MEDIUM	72	114.58	8250
	Total	215		
The firm has displayed proper utilization of resources.	SMALL	143	104.49	14941.5
	MEDIUM	72	114.98	8278.5
	Total	215		
Average Number of defects of products / deficiencies in service shows a decrease	SMALL	143	112.34	16064
	MEDIUM	72	99.39	7156
	Total	215		
There is an increase in the Net Profit Margin.	SMALL	143	107.42	15361
	MEDIUM	72	109.15	7859
	Total	215		
Return on Investment (in %) has increased	SMALL	143	104.47	14939.5
	MEDIUM	72	115.01	8280.5
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.66 -Test Statistics^a: Mann-Whitney Test for Size of Firm and Organizational Outcomes

Organizational Outcomes	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Customer satisfaction has increased	4236	14532	-2.367	0.018
Our suppliers/ vendors are satisfied with us.	4770	15066	-0.971	0.332
Measures have been taken by the firm for product/ service development	4608	14904	-1.378	0.168
Products/service Quality shows improvement	4674	14970	-1.219	0.223
The firm has displayed proper utilization of resources.	4645.5	14941.5	-1.287	0.198
Average Number of defects of products / deficiencies in service shows a decrease	4528	7156	-1.578	0.115
There is an increase in the Net Profit Margin.	5065	15361	-0.209	0.835
Return on Investment (in %) has increased	4643.5	14939.5	-1.265	0.206

Grouping Variable: Size of the Firm
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 2 that the p-value of the following statement on **Organizational Outcome** is less than 0.05: **‘Customer satisfaction has increased over the last two years’**

Table 1 further shows that the mean-rank of Medium-sized firms is high and is 120.67 for the above statement; while that of small-sized firms is 101.62. So the size of the firm does have an effect on the Organizational Outcome related to ‘Customer Satisfaction’.

As the **p-value** of the above statement on **Organizational Outcomes** is less than 0.05, so we reject the null hypothesis and conclude that size of firm has a significant effect on the **Organizational Outcome related to Customer Satisfaction. In the present survey, medium sized firms have shown to have a significant effect on the Customer Satisfaction.**

8.8.10. Mann-Whitney Test for Number of Women Employees and HR Practices in the SMEs

Mann-Whitney Test was done to see if there is any influence of number of women employees in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₅: There is no significant effect of Number of Women Employees on HR Practices in the SMEs.

H_{a15}: There is a significant effect of Number of Women Employees on HR Practices in the SMEs

TABLE 8.67 - Mean-Ranks: Mann-Whitney Test for Number of Women Employees and HR Practices in the SMEs

HR Practices	No. of women	N	Mean Rank	Sum of Ranks
Our organization places the right person in the right job	< 10 women employees	194	105.51	20469
	> 10 women employees	21	131	2751
	Total	215		
Selection is on the basis of merit	< 10 women employees	194	103.37	20054.5
	> 10 women employees	21	150.74	3165.5
	Total	215		
Organizes training and skill development programs	< 10 women employees	194	106.36	20633.5
	> 10 women employees	21	123.17	2586.5
	Total	215		
Employees are rotated from one job to another	< 10 women employees	194	108.54	21056
	> 10 women employees	21	103.05	2164
	Total	215		
Appraises the performance of employees at regular intervals.	< 10 women employees	194	105.55	20476.5
	> 10 women employees	21	130.64	2743.5
	Total	215		
Employees receive feedback	< 10 women employees	194	107.73	20900
	> 10 women employees	21	110.48	2320
	Total	215		
Enough opportunity for career growth	< 10 women employees	194	102.99	19980.5
	> 10 women employees	21	154.26	3239.5
	Total	215		

HR Practices	No. of women	N	Mean Rank	Sum of Ranks
Compensation is decided on the basis of competence or ability	< 10 women employees	194	105.45	20458
	> 10 women employees	21	131.52	2762
	Total	215		
Good performers are given financial incentives	< 10 women employees	194	104.2	20215
	> 10 women employees	21	143.1	3005
	Total	215		
Good performers are given non-financial incentives.	< 10 women employees	194	105.58	20482
	> 10 women employees	21	130.38	2738
	Total	215		
Good performers are given more authority and responsibility.	< 10 women employees	194	105.98	20561
	> 10 women employees	21	126.62	2659
	Total	215		
Employees participate in the decision-making process.	< 10 women employees	194	107.52	20859.5
	> 10 women employees	21	112.4	2360.5
	Total	215		
Employees are given opportunity to suggest improvement	< 10 women employees	194	105.94	20552
	> 10 women employees	21	127.05	2668
	Total	215		
Employees can openly communicate with the superiors	< 10 women employees	194	103.66	20110.5
	> 10 women employees	21	148.07	3109.5
	Total	215		

(Source: SPSS Output; Primary data)

TABLE 8.68 - Test Statistics^a : Mann-Whitney Test for Number of Women Employees and HR Practices in the SMEs

HR Practices	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Our organization places the right person in the right job	1554	20469	-2.219	0.027
Selection is on the basis of merit	1139.5	20054.5	-4.051	0
Organizes training and skill development programs	1718.5	20633.5	-1.263	0.207
Employees are rotated from one job to another	1933	2164	-0.416	0.678
Appraises the performance of employees at regular intervals.	1561.5	20476.5	-2.138	0.033

HR Practices	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Employees receive feedback	1985	20900	-0.236	0.813
Enough opportunity for career growth	1065.5	19980.5	-3.87	0
Compensation is decided on the basis of competence or ability	1543	20458	-2.274	0.023
Good performers are given financial incentives	1300	20215	-2.892	0.004
Good performers are given non-financial incentives.	1567	20482	-1.795	0.073
Good performers are given more authority and responsibility.	1646	20561	-1.633	0.102
Employees participate in the decision-making process.	1944.5	20859.5	-0.363	0.716
Employees are given opportunity to suggest improvement	1637	20552	-1.801	0.072
Employees can openly communicate with the superiors	1195.5	20110.5	-3.823	0

Grouping Variable: b. No. of women employees
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.68 that the p-value of the following statements on **HR Practices** is less than **0.05**:

- Our organization places the right person in the right job
- Selection is on the basis of merit
- Appraises the performance of employees at regular intervals.
- Enough opportunity for career growth
- Compensation is decided on the basis of competence or ability
- Good performers are given financial incentives
- Employees can openly communicate with the superiors

Table 8.67 further shows that the mean-rank of firms with more than 10 women employees is high and is 131, 150.74, 130.64, 154.26, 131.52, 143.10 and 148.07

respectively, for the above statements. **So the number of women employees in the SME firms does have an effect on the HR Practices related to placing the right person in the right job; merit-based selection methods; regular performance appraisal system; opportunities for career growth; competency-based Compensation Management System; Reward Management with respect to giving financial incentives; Open communication.**

As the **p-value** of the above statements on **HR Practices** is less than **0.05**, so we reject the null hypothesis and conclude that number of women employees has a significant effect on the HR Practices related to Recruitment & Selection, regular implementation of Performance Appraisal System, Career growth & Management, competency-based Compensation Management System, Reward Management with respect to giving financial incentives and Open communication. In the present survey, the firms with more than 10 women employees have shown to have a significant effect on the specific mentioned HR Practices.

8.9. Kruskal-Wallis Test

Kruskal-Wallis Test in very simple terms can be said to be the non-parametric equivalent for the parametric test ANOVA. It is similar to the Mann-Whitney test, except that it enables to compare three or more groups, rather than just two, as in Mann-Whitney. Different objects/ subjects are used for each group.

This test is appropriate for use under the following circumstances:

- there are three or more conditions that we want to compare;
- each condition is performed by a different group of participants; i.e. there is an independent-measure design with three or more conditions.
- the data do not meet the requirements for a parametric test. (i.e. use it if the data are not normally distributed; if the variances for the different conditions are markedly different; or if the data are measurements on an ordinal scale).

8.9.1. Kruskal-Wallis Test for Age of the Respondents and HR Practices

Kruskal-Wallis Test was done to see if there is any influence of age of the respondents on HR practices in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₆: There is no significant influence of age of the respondents on HR Practices.

H_{a16}: There is significant influence of age of the respondents on HR Practices.

TABLE 8.69 Mean-Ranks: Kruskal-Wallis Test for Age of the respondents and HR Practices

HR Practices	Age of the Respondent	N	Mean Rank
Our organization places the right person in the right job	18-25 YRS	6	117.08
	26-35 YRS	59	111.06
	36-45 YRS	66	101.24
	46-55 YRS	57	112.96
	ABOVE 55 YRS	27	105.33
	Total	215	

HR Practices	Age of the Respondent	N	Mean Rank
Selection is on the basis of merit	18-25 YRS	6	79.17
	26-35 YRS	59	109.89
	36-45 YRS	66	107.11
	46-55 YRS	57	109.54
	ABOVE 55 YRS	27	109.2
	Total	215	
Organizes training and skill development programs	18-25 YRS	6	105.83
	26-35 YRS	59	112.49
	36-45 YRS	66	103.11
	46-55 YRS	57	110.65
	ABOVE 55 YRS	27	105.04
	Total	215	
Employees are rotated from one job to another	18-25 YRS	6	111.75
	26-35 YRS	59	107.54
	36-45 YRS	66	101.21
	46-55 YRS	57	118.7
	ABOVE 55 YRS	27	102.17
	Total	215	
Appraises the performance of employees at regular intervals.	18-25 YRS	6	129
	26-35 YRS	59	124.13
	36-45 YRS	66	95.11
	46-55 YRS	57	101.71
	ABOVE 55 YRS	27	112.89
	Total	215	
Employees receive feedback	18-25 YRS	6	107.5
	26-35 YRS	59	114.66
	36-45 YRS	66	101.74
	46-55 YRS	57	104.17
	ABOVE 55 YRS	27	116.94
	Total	215	
Enough opportunity for career growth	18-25 YRS	6	65.58
	26-35 YRS	59	125.85
	36-45 YRS	66	102.52
	46-55 YRS	57	103.19
	ABOVE 55 YRS	27	101.96
	Total	215	
Compensation is decided on the basis of competence or ability	18-25 YRS	6	99.17
	26-35 YRS	59	127.03

HR Practices	Age of the Respondent	N	Mean Rank
	36-45 YRS	66	98.02
	46-55 YRS	57	101.68
	ABOVE 55 YRS	27	106.09
	Total	215	
Good performers are given financial incentives	18-25 YRS	6	116.67
	26-35 YRS	59	128.16
	36-45 YRS	66	103.82
	46-55 YRS	57	91.94
	ABOVE 55 YRS	27	106.15
	Total	215	
Good performers are given non-financial incentives.	18-25 YRS	6	112.08
	26-35 YRS	59	98.33
	36-45 YRS	66	119.02
	46-55 YRS	57	99.46
	ABOVE 55 YRS	27	119.31
	Total	215	
Good performers are given more authority and responsibility.	18-25 YRS	6	90.25
	26-35 YRS	59	106.17
	36-45 YRS	66	116.23
	46-55 YRS	57	100.39
	ABOVE 55 YRS	27	111.87
	Total	215	
Employees participate in the decision-making process.	18-25 YRS	6	83
	26-35 YRS	59	113.38
	36-45 YRS	66	115.35
	46-55 YRS	57	103.88
	ABOVE 55 YRS	27	92.54
	Total	215	
Employees are given opportunity to suggest improvement	18-25 YRS	6	90.5
	26-35 YRS	59	112.45
	36-45 YRS	66	107.86
	46-55 YRS	57	105.64
	ABOVE 55 YRS	27	107.48
	Total	215	
Employees can openly communicate with the superiors	18-25 YRS	6	127.33
	26-35 YRS	59	115.86
	36-45 YRS	66	106.29
	46-55 YRS	57	105

HR Practices	Age of the Respondent	N	Mean Rank
	ABOVE 55 YRS	27	97.06
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.70 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the respondents and HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	2.263	4	0.688
Selection is on the basis of merit	2.094	4	0.718
Organizes training and skill development programs	1.024	4	0.906
Employees are rotated from one job to another	3.204	4	0.524
Appraises the performance of employees at regular intervals.	12.202	4	0.016
Employees receive feedback	3.2	4	0.525
Enough opportunity for career growth	10.184	4	0.037
Compensation is decided on the basis of competence or ability	12.363	4	0.015
Good performers are given financial incentives	11.779	4	0.019
Good performers are given non-financial incentives.	5.869	4	0.209
Good performers are given more authority and responsibility.	3.394	4	0.494
Employees participate in the decision-making process.	4.806	4	0.308
Employees are given opportunity to suggest improvement	1.28	4	0.865
Employees can openly communicate with the superiors	3.842	4	0.428

a. Kruskal Wallis Test b. Grouping Variable: Age of the Respondent
(Source: SPSS Output; Primary Data)

Interpretation

It can be seen from Table 8.70 that the p-value of the following statements on **HR Practices** is **less than 0.05**:

- Our firm Appraises the performance of employees at regular intervals
- There is enough opportunity for career growth for good performers
- Compensation is decided on the basis of competence or ability

- Good performers are given financial incentives

Table 8.69 further shows that the mean-rank of the respondents for the statement ‘Our firm appraises the performance of employees at regular intervals’ in the age-group of 18-25 years is 129 which is higher than the other age-groups. **Thus, the owners/Managing heads in the age-group 18-25 years believes that the SME firms appraises the performance of employees at regular intervals.**

The mean-rank of the respondents in the middle age-group 26-35 years is 125.85, 127.03 and 128.16 respectively, which is higher than the other age-groups for the statements ‘There is enough opportunity for career growth for good performers’, ‘Compensation is decided on the basis of competence or ability’ and ‘Good performers are given financial incentives’. **Thus, the owners/Managing heads in the middle age-group 26-35 years believes that there is enough opportunity for career growth for good performers in the SMEs, as well as that compensation is decided on the basis of competence or ability. They also believe that good performers are rewarded well by giving financial incentives in SME firms.**

Thus, as the **p-value** of the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that age of the respondents have a significant influence on the HR Practices related to Performance Management and Opportunities for career growth, Compensation and Reward Management with respect to giving financial incentives.**

All those statements whose p-value is more than 0.05, the age of the respondents does not influence the HR practices in the SMEs in Vadodara district.

8.9.2. Kruskal-Wallis Test for Age of the Respondents and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any influence of age of the respondents on Employee Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₇: There is no significant influence of age of the respondents on Employee Outcomes.

H_{a17}: There is significant influence of age of the respondents on Employee Outcomes.

TABLE 8.71 - Mean-Ranks: Kruskal-Wallis Test for Age of the Respondents and Employee Outcomes

Employee Outcomes	Age of the Respondent	N	Mean Rank
Competence of an Employee	18-25 YRS	6	110.17
	26-35 YRS	59	109.69
	36-45 YRS	66	119.58
	46-55 YRS	57	105.12
	ABOVE 55 YRS	27	81.59
	Total	215	
Employee's co-operation with is satisfactory.	18-25 YRS	6	125.58
	26-35 YRS	59	104.91
	36-45 YRS	66	115.02
	46-55 YRS	57	109.94
	ABOVE 55 YRS	27	89.61
	Total	215	
Employees co-operate among themselves	18-25 YRS	6	108.33
	26-35 YRS	59	104.78
	36-45 YRS	66	116.79
	46-55 YRS	57	107.29
	ABOVE 55 YRS	27	94.98
	Total	215	
Employee's general behavior is good	18-25 YRS	6	104.58
	26-35 YRS	59	105.14
	36-45 YRS	66	114.27
	46-55 YRS	57	112.67
	ABOVE 55 YRS	27	89.83
	Total	215	
Employees are committed	18-25 YRS	6	113.5
	26-35 YRS	59	107.93
	36-45 YRS	66	107.25

Employee Outcomes	Age of the Respondent	N	Mean Rank
	46-55 YRS	57	113.22
	ABOVE 55 YRS	27	97.74
	Total	215	
Employees are punctual and report daily	18-25 YRS	6	93.83
	26-35 YRS	59	103.84
	36-45 YRS	66	118.21
	46-55 YRS	57	108.87
	ABOVE 55 YRS	27	93.44
	Total	215	
Employees are regular	18-25 YRS	6	139
	26-35 YRS	59	116.85
	36-45 YRS	66	112.81
	46-55 YRS	57	100.52
	ABOVE 55 YRS	27	85.81
	Total	215	
Employees take up extra duties and responsibilities	18-25 YRS	6	126.5
	26-35 YRS	59	121.77
	36-45 YRS	66	110.17
	46-55 YRS	57	97.75
	ABOVE 55 YRS	27	90.13
	Total	215	
Employee's follow general code of conduct and rules	18-25 YRS	6	86.25
	26-35 YRS	59	119.34
	36-45 YRS	66	111.36
	46-55 YRS	57	103.82
	ABOVE 55 YRS	27	88.67
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.72 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the Respondents and Employee Outcomes

Employee Outcomes	Chi-Square	Df	Asymp. Sig.
Competence of an Employee	11.641	4	0.02
Employee's co-operation with is satisfactory.	5.637	4	0.228
Employees co-operate among themselves	3.309	4	0.508
Employee's general behavior is good	4.402	4	0.354
Employees are committed	1.397	4	0.845

Employee Outcomes	Chi-Square	Df	Asymp. Sig.
Employees are punctual and report daily	4.385	4	0.356
Employees are regular	8.762	4	0.067
Employees take up extra duties and responsibilities	8.621	4	0.071
Employee's follow general code of conduct and rules	7.107	4	0.13

a. Kruskal Wallis Test b. Grouping Variable: Age of the Respondent
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.72 that the p-value of the statement 'The competence of the employees to do their assigned work is satisfactory' is **less than 0.05**.

Table 8.71 further shows that the mean-rank of the respondents for the above statement in the age-group of 36-45 years is 119.58 which is higher than the other age-groups. **Thus, the owners/Managing heads in the age-group 36-45 years believes that the competence of the employees to do their assigned work is satisfactory in the SME firms.**

Thus, as the **p-value** of the above statements on **Employee Outcome** is **less than 0.05**, so **we reject the null hypothesis** and **conclude that age of the respondents has a significant influence on the Employee Outcome related to competence of the employees to do their assigned work in the SME firms.**

All the other statements related to Employee Outcomes, whose p-value is more than 0.05, the age of the respondents does not influence the Employee Outcomes in the SMEs in Vadodara district.

8.9.3. Kruskal-Wallis Test for Age of the Respondents and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any influence of age of the respondents on Organizational Outcomes in the SME firms.

The null and alternate hypothesis is framed as under:

H₀₁₈: There is no significant influence of age of the respondents on Organizational Outcomes.

H_{a18}: There is significant influence of age of the respondents on Organizational Outcomes.

TABLE 8.73 -Mean-Ranks: Kruskal-Wallis Test for Age of the Respondents and Organizational Outcomes

Organizational Outcomes	Age of the Respondent	N	Mean Rank
Customer satisfaction has increased	18-25 YRS	6	150.5
	26-35 YRS	59	121.81
	36-45 YRS	66	111.23
	46-55 YRS	57	93.15
	ABOVE 55 YRS	27	91.85
	Total	215	
Our suppliers/ vendors are satisfied with us.	18-25 YRS	6	137.5
	26-35 YRS	59	112.97
	36-45 YRS	66	112.41
	46-55 YRS	57	100.61
	ABOVE 55 YRS	27	95.41
	Total	215	
Measures have been taken by the firm for product/ service development	18-25 YRS	6	101.5
	26-35 YRS	59	119.84
	36-45 YRS	66	103.91
	46-55 YRS	57	106.5
	ABOVE 55 YRS	27	96.74
	Total	215	
Products/service Quality shows improvement	18-25 YRS	6	128.75
	26-35 YRS	59	111.61

Organizational Outcomes	Age of the Respondent	N	Mean Rank
	36-45 YRS	66	112.1
	46-55 YRS	57	107.66
	ABOVE 55 YRS	27	86.2
	Total	215	
The firm has displayed proper utilization of resources.	18-25 YRS	6	107
	26-35 YRS	59	105.15
	36-45 YRS	66	110.52
	46-55 YRS	57	112.73
	ABOVE 55 YRS	27	98.3
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	18-25 YRS	6	64.25
	26-35 YRS	59	111.29
	36-45 YRS	66	113.5
	46-55 YRS	57	109.31
	ABOVE 55 YRS	27	94.33
	Total	215	
There is an increase in the Net Profit Margin.	18-25 YRS	6	126.17
	26-35 YRS	59	124.03
	36-45 YRS	66	94.31
	46-55 YRS	57	98.97
	ABOVE 55 YRS	27	121.44
	Total	215	
Return on Investment (in %) has increased	18-25 YRS	6	150.83
	26-35 YRS	59	121.25
	36-45 YRS	66	93.14
	46-55 YRS	57	103
	ABOVE 55 YRS	27	116.41
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.74 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the Respondents and Organizational Outcomes

Organizational Outcomes	Chi-Square	df	Asymp. Sig.
Customer satisfaction has increased	13.667	4	0.008
Our suppliers/ vendors are satisfied with us.	4.853	4	0.303
Measures have been taken by the firm for product/ service development	4.107	4	0.392
Products/service Quality shows improvement	5.482	4	0.241
The firm has displayed proper utilization of resources.	1.483	4	0.83
Average Number of defects of products / deficiencies in service shows a decrease	5.974	4	0.201
There is an increase in the Net Profit Margin.	11.805	4	0.019
Return on Investment (in %) has increased	11.814	4	0.019

a. Kruskal Wallis Testb. Grouping Variable: Age of the Respondent
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.74 that the p-value of the following statements on **Organizational Outcomes** is less than **0.05**:

- Customer satisfaction has increased
- There is an increase in the Net Profit Margin.
- Return on Investment (in %) has increased

Table 8.73 further shows that the mean-rank of the respondents for the above three statements in the age-group of **18-25 years** is high and is 150.50, 126.17 and 150.83 respectively, which is higher than the other age-groups. **Thus, the owners/Managing heads in the age-group 18-25 years believes that the customer satisfaction has increased as well as the Net Profit Margin and Return on Investment (ROI) in the last two years has increased in the SMEs.**

Thus, as the **p-value** of the above statements on **Organizational Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that age of the respondents has a significant influence on the Organizational Outcomes related to Customer satisfaction, Net Profit Margin and Return on Investment.**

All those statements whose p-value is more than 0.05, the age of the respondents does not influence the Organizational Outcomes in the SMEs in Vadodara district.

8.9.4. Kruskal-Wallis Test for Number of Years of Service in the Firm and HR Practices

Kruskal-Wallis Test was done to see if there is any influence of number of years of service in the firm on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₁₉: There is no significant influence of number of years of service in the firm on HR Practices.

H_{a19}: There is significant influence of number of years of service in the firm on HR Practices.

TABLE 8.75 - Mean-Ranks: Kruskal-Wallis Test for Number of Years of Service in the Firm on HR Practices

HR Practices	I am in this firm since	N	Mean Rank
Our organization places the right person in the right job	LESS THAN 5YRS	42	105.08
	6-10 YRS	47	107.74
	11-15 YRS	47	108.26
	16-20 YRS	37	89.72
	MORE THAN 20 YRS	42	127.02
	Selection is on the basis of merit	LESS THAN 5YRS	42
6-10 YRS		47	104.47
11-15 YRS		47	105.9
16-20 YRS		37	93.42
MORE THAN 20 YRS		42	128.01
Total		215	

HR Practices	I am in this firm since	N	Mean Rank
Organizes training and skill development programs	LESS THAN 5YRS	42	113.87
	6-10 YRS	47	101.62
	11-15 YRS	47	111.93
	16-20 YRS	37	91.45
	MORE THAN 20 YRS	42	119.46
	Total	215	
Employees are rotated from one job to another	LESS THAN 5YRS	42	106.21
	6-10 YRS	47	103.63
	11-15 YRS	47	114.19
	16-20 YRS	37	109.77
	MORE THAN 20 YRS	42	106.19
	Total	215	
Appraises the performance of employees at regular intervals.	LESS THAN 5YRS	42	123.07
	6-10 YRS	47	98.93
	11-15 YRS	47	105.19
	16-20 YRS	37	87.7
	MORE THAN 20 YRS	42	124.11
	Total	215	
Employees receive feedback	LESS THAN 5YRS	42	105.77
	6-10 YRS	47	106.28
	11-15 YRS	47	109.57
	16-20 YRS	37	101.76
	MORE THAN 20 YRS	42	115.89
	Total	215	
Enough opportunity for career growth	LESS THAN 5YRS	42	112.02
	6-10 YRS	47	106.47
	11-15 YRS	47	114.83
	16-20 YRS	37	90.62
	MORE THAN 20 YRS	42	113.36
	Total	215	
Compensation is decided on the basis of competence or ability	LESS THAN 5YRS	42	118.56
	6-10 YRS	47	109.66
	11-15 YRS	47	101.94
	16-20 YRS	37	85.14
	MORE THAN 20 YRS	42	122.51
	Total	215	
Good performers are given financial incentives	LESS THAN 5YRS	42	114.93
	6-10 YRS	47	107.12
	11-15 YRS	47	109.17
	16-20 YRS	37	96.62

HR Practices	I am in this firm since	N	Mean Rank
	MORE THAN 20 YRS	42	110.77
	Total	215	
Good performers are given non-financial incentives.	LESS THAN 5YRS	42	98.94
	6-10 YRS	47	119.37
	11-15 YRS	47	100.07
	16-20 YRS	37	105.93
	MORE THAN 20 YRS	42	115.02
	Total	215	
Good performers are given more authority and responsibility.	LESS THAN 5YRS	42	101.3
	6-10 YRS	47	89.79
	11-15 YRS	47	123.81
	16-20 YRS	37	103.89
	MORE THAN 20 YRS	42	121.01
	Total	215	
Employees participate in the decision-making process.	LESS THAN 5YRS	42	95.08
	6-10 YRS	47	107.47
	11-15 YRS	47	120.71
	16-20 YRS	37	118.88
	MORE THAN 20 YRS	42	97.7
	Total	215	
Employees are given opportunity to suggest improvement	LESS THAN 5YRS	42	104.25
	6-10 YRS	47	103.3
	11-15 YRS	47	114.34
	16-20 YRS	37	98.47
	MORE THAN 20 YRS	42	118.31
	Total	215	
Employees can openly communicate with the superiors	LESS THAN 5YRS	42	105.31
	6-10 YRS	47	115.39
	11-15 YRS	47	101.73
	16-20 YRS	37	108.47
	MORE THAN 20 YRS	42	109.01
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.76 - - Test Statistics^{ab}: Kruskal-Wallis Test for Number of Years of Service in the Firm on HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	11.169	4	0.025
Selection is on the basis of merit	9.849	4	0.043
Organizes training and skill development programs	5.881	4	0.208
Employees are rotated from one job to another	0.935	4	0.92
Appraises the performance of employees at regular intervals.	15.287	4	0.004
Employees receive feedback	1.765	4	0.779
Enough opportunity for career growth	4.619	4	0.329
Compensation is decided on the basis of competence or ability	13.947	4	0.007
Good performers are given financial incentives	2.109	4	0.716
Good performers are given non-financial incentives.	4.065	4	0.397
Good performers are given more authority and responsibility.	12.22	4	0.016
Employees participate in the decision-making process.	6.852	4	0.144
Employees are given opportunity to suggest improvement	4.358	4	0.36
Employees can openly communicate with the superiors	1.865	4	0.761

a. Kruskal Wallis Test b. Grouping Variable: I am in this firm since
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.76 that the p-value of the following statements on **HR Practices** is less than **0.05**:

- Our organization places the right person in the right job
- Selection is on the basis of merit
- Appraises the performance of employees at regular intervals
- Compensation is decided on the basis of competence or ability

- Good performers are given more authority and responsibility.

Table 8.75 further shows that the mean-rank of the respondents for the first four statements for the respondents who had been working in the same organization for more than 20 years is high and is 127.02, 128.01, 124.11 and 122.51 respectively, which is higher than the others. **Thus, the owners/Managing heads who had been working in the organization for more than 20 years in the same firms believes that the SMEs places the right person in the right job; Selection is on the basis of merit; their firms appraises the performance of employees at regular intervals and that compensation is decided on the basis of competence or ability in their firms.**

Thus, as the **p-value** of the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of number of years of service in the firm on HR Practices related to Recruitment & Selection, implementation of regular Performance Appraisal System and a fair Compensation Management System in the SMEs.**

All those statements whose p-value is more than 0.05, the number of years of service in the SME firms does not influence the HR practices.

8.9.5. Kruskal-Wallis Test for Total Years of Work-Experience of Respondents and HR Practices

Kruskal-Wallis Test was done to see if there is any influence of total years of work-experience on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₂₀: There is no significant influence of total years of work-experience of respondents on HR Practices.

H_{a20}: There is significant influence of total years of work-experience of respondents on HR Practices.

TABLE 8.77 - Mean-Ranks: Kruskal-Wallis Test for Total Years of Work-Experience and HR Practices

HR Practices	Work Experience	N	Mean Rank
Our organization places the right person in the right job	Less than 5 years	22	105.11
	6 - 10 years	37	104.55
	11 - 15 years	48	109.8
	16 - 20 years	46	85.84
	More than 20 years	62	126.13
	Total	215	
Selection is on the basis of merit	Less than 5 years	22	97.02
	6 - 10 years	37	105.26
	11 - 15 years	48	108.33
	16 - 20 years	46	92.23
	More than 20 years	62	124.98
	Total	215	
Organizes training and skill development programs	Less than 5 years	22	104.07
	6 - 10 years	37	101.12
	11 - 15 years	48	113.34
	16 - 20 years	46	90.53
	More than 20 years	62	122.32
Employees are rotated from one job to another	Less than 5 years	22	109.91
	6 - 10 years	37	95.19
	11 - 15 years	48	110.38
	16 - 20 years	46	109.2
	More than 20 years	62	112.24
	Total	215	
Appraises the performance of employees at regular intervals.	Less than 5 years	22	118.11
	6 - 10 years	37	104.74
	11 - 15 years	48	110.83
	16 - 20 years	46	89.79
	More than 20 years	62	117.67
	Total	215	
Employees receive feedback	Less than 5 years	22	89.55
	6 - 10 years	37	112.23
	11 - 15 years	48	108.18
	16 - 20 years	46	101.25
	More than 20 years	62	116.9
Enough opportunity for career growth	Less than 5 years	22	95.41
	6 - 10 years	37	123.61

HR Practices	Work Experience	N	Mean Rank
	11 - 15 years	48	115.05
	16 - 20 years	46	91.84
	More than 20 years	62	109.69
	Total	215	
Compensation is decided on the basis of competence or ability	Less than 5 years	22	109.55
	6 - 10 years	37	118.8
	11 - 15 years	48	113.44
	16 - 20 years	46	87.54
	More than 20 years	62	111.98
	Total	215	
Good performers are given financial incentives	Less than 5 years	22	110.32
	6 - 10 years	37	119.72
	11 - 15 years	48	111.4
	16 - 20 years	46	93.17
	More than 20 years	62	108.56
	Total	215	
Good performers are given non-financial incentives.	Less than 5 years	22	110.66
	6 - 10 years	37	105.55
	11 - 15 years	48	106.32
	16 - 20 years	46	108.64
	More than 20 years	62	109.34
	Total	215	
Good performers are given more authority and responsibility.	Less than 5 years	22	77.68
	6 - 10 years	37	100.73
	11 - 15 years	48	109.59
	16 - 20 years	46	106.33
	More than 20 years	62	123.1
	Total	215	
Employees participate in the decision-making process.	Less than 5 years	22	81.64
	6 - 10 years	37	102.05
	11 - 15 years	48	123.63
	16 - 20 years	46	126.32
	More than 20 years	62	95.22
	Total	215	
Employees are given opportunity to suggest improvement	Less than 5 years	22	98.39
	6 - 10 years	37	96.62
	11 - 15 years	48	115.94
	16 - 20 years	46	110.55

HR Practices	Work Experience	N	Mean Rank
	More than 20 years	62	110.16
	Total	215	
Employees can openly communicate with the superiors	Less than 5 years	22	94.59
	6 - 10 years	37	108.01
	11 - 15 years	48	113.19
	16 - 20 years	46	110.2
	More than 20 years	62	107.1
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.78 - Test Statistics^{ab}: Kruskal-Wallis Test for Total Years of Work-Experience and HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	17.495	4	0.002
Selection is on the basis of merit	12.449	4	0.014
Organizes training and skill development programs	9	4	0.061
Employees are rotated from one job to another	2.302	4	0.68
Appraises the performance of employees at regular intervals.	9.218	4	0.056
Employees receive feedback	5.914	4	0.206
Enough opportunity for career growth	8.143	4	0.086
Compensation is decided on the basis of competence or ability	10.447	4	0.034
Good performers are given financial incentives	4.632	4	0.327
Good performers are given non-financial incentives.	0.177	4	0.996
Good performers are given more authority and responsibility.	12.093	4	0.017
Employees participate in the decision-making process.	15.745	4	0.003
Employees are given opportunity to suggest improvement	4.011	4	0.405
Employees can openly communicate with the superiors	2.158	4	0.707

a. Kruskal Wallis Test b. Grouping Variable: Work Exp.(Source: SPSS output; Primary data)

Interpretation

It can be seen from Table 8.78 that the p-value of the following statements on **HR Practices** is **less than 0.05**:

- Our organization places the right person in the right job
- Selection is on the basis of merit
- Compensation is decided on the basis of competence or ability
- Good performers are given more authority and responsibility.
- Employees participate in the decision-making process.

Table 8.77 further shows that the mean-rank of the respondents for the first four statements for the respondents whose total work experience was more than 20 years is high and is 126.13, 124.98, 111.98 and 123.10 respectively, which is higher than the others. **Thus, the owners/Managing heads whose total work experience was more than 20 years believes that the SMEs places the right person in the right job; Selection is on the basis of merit; compensation is decided on the basis of competence or ability and that good performers are given more authority and responsibility in their SME firm. The owner/ Managers whose work experience was 16-20 years believed that employees participated in the decision-making process.**

Thus, as the **p-value** of the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of total years of work experience on HR Practices related to Recruitment & Selection, fair Compensation Management System and Employee Participation in the SMEs.**

All those statements whose p-value is more than 0.05, the total work experience of respondents in the SME firms does not influence the HR practices.

8.9.6. Kruskal-Wallis Test for Educational Background of Respondents and HR Practices

Kruskal-Wallis Test was done to see if there is any influence of educational background of the respondents on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₂₁: There is no significant influence of Educational Background of respondents on HR Practices.

H_{a21}: There is a significant influence of Educational Background of respondents on HR Practices.

TABLE 8.79 - Mean-Ranks: Kruskal-Wallis Test for Educational Background of Respondents and HR Practices

HR Practices	Educational Background	N	Mean Rank
Our organization places the right person in the right job	BELOW STD.XII	17	94.26
	DIPLOMA	17	85.06
	GRADUATE	119	111.14
	MASTERS	61	112.24
	OTHERS	1	99
	Total	215	
Selection is on the basis of merit	BELOW STD.XII	17	81.09
	DIPLOMA	17	93.65
	GRADUATE	119	109.12
	MASTERS	61	117.3
	OTHERS	1	108.5
	Total	215	
Organizes training and skill development programs	BELOW STD.XII	17	69
	DIPLOMA	17	89.65
	GRADUATE	119	110.39
	MASTERS	61	119.11
	OTHERS	1	118.5
	Total	215	
Employees are rotated from one job to another	BELOW STD.XII	17	77.18
	DIPLOMA	17	99.06

HR Practices	Educational Background	N	Mean Rank
	GRADUATE	119	115.91
	MASTERS	61	102.99
	OTHERS	1	148.5
	Total	215	
Appraises the performance of employees at regular intervals.	BELOW STD.XII	17	90.24
	DIPLOMA	17	90.35
	GRADUATE	119	108.62
	MASTERS	61	116.89
	OTHERS	1	93.5
	Total	215	
Employees receive feedback	BELOW STD.XII	17	96.91
	DIPLOMA	17	93.82
	GRADUATE	119	108.26
	MASTERS	61	114.51
	OTHERS	1	110
	Total	215	
Enough opportunity for career growth	BELOW STD.XII	17	98.91
	DIPLOMA	17	77.38
	GRADUATE	119	110.31
	MASTERS	61	114.63
	OTHERS	1	103.5
	Total	215	
Compensation is decided on the basis of competence or ability	BELOW STD.XII	17	95.68
	DIPLOMA	17	91.32
	GRADUATE	119	108.42
	MASTERS	61	115.5
	OTHERS	1	94
	Total	215	
Good performers are given financial incentives	BELOW STD.XII	17	96.62
	DIPLOMA	17	106.32
	GRADUATE	119	105.45
	MASTERS	61	116.74
	OTHERS	1	100
	Total	215	
Good performers are given non-financial incentives.	BELOW STD.XII	17	128.5
	DIPLOMA	17	121.68
	GRADUATE	119	106.96
	MASTERS	61	99.53

HR Practices	Educational Background	N	Mean Rank
	OTHERS	1	167
	Total	215	
Good performers are given more authority and responsibility.	BELOW STD.XII	17	93.74
	DIPLOMA	17	110.53
	GRADUATE	119	111.14
	MASTERS	61	105.21
	OTHERS	1	104
	Total	215	
Employees participate in the decision-making process.	BELOW STD.XII	17	86.53
	DIPLOMA	17	117.71
	GRADUATE	119	114.85
	MASTERS	61	97.71
	OTHERS	1	120.5
	Total	215	
Employees are given opportunity to suggest improvement	BELOW STD.XII	17	85.59
	DIPLOMA	17	117.41
	GRADUATE	119	109.68
	MASTERS	61	108.47
	OTHERS	1	100
	Total	215	
Employees can openly communicate with the superiors	BELOW STD.XII	17	120.62
	DIPLOMA	17	110.97
	GRADUATE	119	107.76
	MASTERS	61	104.39
	OTHERS	1	91.5
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.80 - Test Statistics^{ab}: Kruskal-Wallis Test for Educational Background of Respondents and HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	5.801	4	0.215
Selection is on the basis of merit	8.202	4	0.084
Organizes training and skill development programs	11.905	4	0.018
Employees are rotated from one job to another	8.511	4	0.075
Appraises the performance of employees at regular intervals.	6.027	4	0.197
Employees receive feedback	3.161	4	0.531
Enough opportunity for career growth	6.218	4	0.183
Compensation is decided on the basis of competence or ability	4.4	4	0.355
Good performers are given financial incentives	2.259	4	0.688
Good performers are given non-financial incentives.	5.06	4	0.281
Good performers are given more authority and responsibility.	1.729	4	0.785
Employees participate in the decision-making process.	6.321	4	0.176
Employees are given opportunity to suggest improvement	4.02	4	0.403
Employees can openly communicate with the superiors	1.536	4	0.82

a. Kruskal Wallis Test b. Grouping Variable: Educational Background
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.80 that the p-value of the statement '**Organizes training and skill development programs**' is less than **0.05**:

Table 8.79 further shows that the **mean-rank of the respondents possessing Masters degree is high for the statement 'Organizes training and skill development programs'** and is 119.11, which is higher than the others. **Thus, the owners/Managing heads who possess a Masters degree as their educational qualification believe that**

the SMEs Organizes training and skill development programs for employees (need-based).

Thus, as the **p-value** of the above statement on **HR Practice** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of educational qualification on HR Practice related to organizing Training and Skill development programs in the SMEs.**

For all the other statements whose p-value is more than 0.05, the educational background of the respondents does not influence the HR practices in the SME firms.

8.9.7. Kruskal-Wallis Test for Educational Background of Respondents and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any influence of educational background of the respondents on Organizational Outcomes.

The null and alternate hypothesis is framed as under:

H₀₂₂: There is no significant influence of Educational Background of respondents on Organizational Outcomes.

H_{a22}: There is a significant influence of Educational Background of respondents on Organizational Outcomes.

TABLE 8.81 - Mean-Ranks: Kruskal-Wallis Test for Educational Background of Respondents and Organizational Outcomes

Organizational Outcomes	Educational Background	N	Mean Rank
Customer satisfaction has increased	BELOW STD.XII	17	87.5
	DIPLOMA	17	97.68
	GRADUATE	119	109.18
	MASTERS	61	114.61
	OTHERS	1	88.5
	Total	215	

Organizational Outcomes	Educational Background	N	Mean Rank
Our suppliers/ vendors are satisfied with us.	BELOW STD.XII	17	91.91
	DIPLOMA	17	104.97
	GRADUATE	119	110.03
	MASTERS	61	109.61
	OTHERS	1	92.5
	Total	215	
Measures have been taken by the firm for product/ service development	BELOW STD.XII	17	76.21
	DIPLOMA	17	87.85
	GRADUATE	119	112.24
	MASTERS	61	114.65
	OTHERS	1	81.5
	Total	215	
Products/service Quality shows improvement	BELOW STD.XII	17	84.18
	DIPLOMA	17	101.47
	GRADUATE	119	112.24
	MASTERS	61	108.61
	OTHERS	1	81.5
	Total	215	
The firm has displayed proper utilization of resources.	BELOW STD.XII	17	85.09
	DIPLOMA	17	91.29
	GRADUATE	119	112.02
	MASTERS	61	111.46
	OTHERS	1	92
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	BELOW STD.XII	17	94.91
	DIPLOMA	17	108.88
	GRADUATE	119	109.61
	MASTERS	61	108.36
	OTHERS	1	102.5
	Total	215	
There is an increase in the Net Profit Margin.	BELOW STD.XII	17	93.76
	DIPLOMA	17	107.88
	GRADUATE	119	109.69
	MASTERS	61	110.28
	OTHERS	1	12
	Total	215	
Return on Investment (in %) has increased	BELOW STD.XII	17	86.47
	DIPLOMA	17	98.09

Organizational Outcomes	Educational Background	N	Mean Rank
	GRADUATE	119	108.03
	MASTERS	61	118.26
	OTHERS	1	13.5
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.82 - Test Statistics^{ab}: Kruskal-Wallis Test for Educational Background of Respondents and Organizational Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	3.925	4	0.416
Our suppliers/ vendors are satisfied with us.	1.721	4	0.787
Measures have been taken by the firm for product/ service development	9.23	4	0.056
Products/service Quality shows improvement	4.197	4	0.38
The firm has displayed proper utilization of resources.	5.209	4	0.266
Average Number of defects of products / deficiencies in service shows a decrease	1.014	4	0.908
There is an increase in the Net Profit Margin.	4.027	4	0.402
Return on Investment (in %) has increased	7.494	4	0.112

a. Kruskal Wallis Test b. Grouping Variable: Educational Background
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.82 that the p-value of none of the statements is **less than 0.05**. Thus, as the **p-value** of none of the statements on **Organizational Outcomes** is **less than 0.05**, so we fail to reject the null hypothesis and conclude that there no significant influence of educational qualification on Organizational Outcomes in the SMEs.

8.9.8. Kruskal-Wallis Test for Specialization in Education of Respondents and HR Practices

Kruskal-Wallis Test was done to see if there is any influence of Specialization in educational background of the respondents on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₂₃: There is no significant influence of Specialization in education of respondents on HR Practices.

H_{a23}: There is a significant influence of Specialization in education of respondents on HR Practices.

TABLE 8.83 - Mean-Ranks: Kruskal-Wallis Test for Specialization in Education of Respondents and HR Practices

HR Practices	Specialization	N	Mean Rank
Our organization places the right person in the right job	HR	47	116.03
	MARKETING	38	113.16
	FINANCE	47	105.87
	OPERATIONS	18	110.28
	ENGINEERING	40	111.24
	OTHERS	25	76.71
	Total	215	
Selection is on the basis of merit	HR	47	124.03
	MARKETING	38	95.22
	FINANCE	47	108.59
	OPERATIONS	18	109.22
	ENGINEERING	40	113.49
	OTHERS	25	81.17
Organizes training and skill development programs	HR	47	125.98
	MARKETING	38	110.21
	FINANCE	47	107.52
	OPERATIONS	18	117
	ENGINEERING	40	105.4
	OTHERS	25	63.35
Employees are rotated from one job to another	HR	47	117.99
	MARKETING	38	117.3

HR Practices	Specialization	N	Mean Rank
	FINANCE	47	109.81
	OPERATIONS	18	135.25
	ENGINEERING	40	92.49
	OTHERS	25	71.13
	Total	215	
Appraises the performance of employees at regular intervals.	HR	47	127.05
	MARKETING	38	117.13
	FINANCE	47	101.34
	OPERATIONS	18	111.61
	ENGINEERING	40	99.23
	OTHERS	25	76.73
	Total	215	
Employees receive feedback	HR	47	121.6
	MARKETING	38	114.05
	FINANCE	47	106.57
	OPERATIONS	18	105.47
	ENGINEERING	40	100.04
	OTHERS	25	85.29
Enough opportunity for career growth	HR	47	129.67
	MARKETING	38	112.3
	FINANCE	47	100.77
	OPERATIONS	18	122.19
	ENGINEERING	40	92.1
	OTHERS	25	84.31
Compensation is decided on the basis of competence or ability	HR	47	123.83
	MARKETING	38	123.55
	FINANCE	47	103.3
	OPERATIONS	18	111.17
	ENGINEERING	40	92.68
	OTHERS	25	80.29
	Total	215	
Good performers are given financial incentives	HR	47	123.89
	MARKETING	38	123.97
	FINANCE	47	111.41
	OPERATIONS	18	109.72
	ENGINEERING	40	78.81
	OTHERS	25	87.79
Good performers are given non-financial incentives.	HR	47	98.93
	MARKETING	38	123.13

HR Practices	Specialization	N	Mean Rank
	FINANCE	47	112.72
	OPERATIONS	18	96.17
	ENGINEERING	40	96.4
	OTHERS	25	116.31
	Total	215	
Good performers are given more authority and responsibility.	HR	47	121.31
	MARKETING	38	126.95
	FINANCE	47	89.43
	OPERATIONS	18	114.14
	ENGINEERING	40	103.39
	OTHERS	25	86.94
	Total	215	
Employees participate in the decision-making process.	HR	47	110.95
	MARKETING	38	133.16
	FINANCE	47	101.24
	OPERATIONS	18	108.36
	ENGINEERING	40	91.9
	OTHERS	25	97.73
	Total	215	
Employees are given opportunity to suggest improvement	HR	47	122.16
	MARKETING	38	108.37
	FINANCE	47	105.18
	OPERATIONS	18	107.22
	ENGINEERING	40	105.3
	OTHERS	25	85.83
	Total	215	
Employees can openly communicate with the superiors	HR	47	113.16
	MARKETING	38	111.38
	FINANCE	47	113.68
	OPERATIONS	18	99.72
	ENGINEERING	40	97.25
	OTHERS	25	101.08
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.84 - Test Statistics^{ab}: Kruskal-Wallis Test for Specialization in Education of Respondents and HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	11.467	5	0.043
Selection is on the basis of merit	14.417	5	0.013
Organizes training and skill development programs	19.543	5	0.002
Employees are rotated from one job to another	19.492	5	0.002
Appraises the performance of employees at regular intervals.	19.066	5	0.002
Employees receive feedback	9.97	5	0.076
Enough opportunity for career growth	15.916	5	0.007
Compensation is decided on the basis of competence or ability	20.388	5	0.001
Good performers are given financial incentives	19.432	5	0.002
Good performers are given non-financial incentives.	6.458	5	0.264
Good performers are given more authority and responsibility.	16.84	5	0.005
Employees participate in the decision-making process.	11.654	5	0.04
Employees are given opportunity to suggest improvement	8.524	5	0.13
Employees can openly communicate with the superiors	4.032	5	0.545

a. Kruskal Wallis Test b. Grouping Variable: Specialization
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.84 that the p-value of the following statements of HR Practices are **less than 0.05**:

- Our organization places the right person in the right job.
- Selection is on the basis of merit.
- Organizes training and skill development programs.
- Employees are rotated from one job to another.

- Appraises the performance of employees at regular intervals.
- Enough opportunity for career growth.
- Compensation is decided on the basis of competence or ability.
- Good performers are given financial incentives.
- Good performers are given more authority and responsibility.
- Employees participate in the decision-making process.

Table 8.83 further shows that the mean-ranks of the respondents possessing **HR Specialization is high and is 116.03, 124.03, 125.98, 127.05, 129.67 and 123.83 respectively for the statements:**

- Our organization places the right person in the right job.
- Selection is on the basis of merit.
- Organizes training and skill development programs.
- Appraises the performance of employees at regular intervals.
- Enough opportunity for career growth.
- Compensation is decided on the basis of competence or ability.

Whereas, the mean-ranks of the respondents possessing **Marketing Specialization is high and is 123.97, 126.95 and 133.16 respectively for the statements:**

- Good performers are given financial incentives.
- Good performers are given more authority and responsibility.
- Employees participate in the decision-making process.

The mean-ranks of the respondents possessing **Operations Specialization is high and is 135.25 for the statement ‘Employees are rotated from one job to another’.**

Thus, the owners/Managing heads who possess HR Specialization as their educational background believes that the SMEs have sound Recruitment & Selection methods, Organizes training and skill development programs for employees (need-based), performance appraisal is done at regular intervals, there is enough opportunity for career growth in SMEs as well as that compensation is decided on the basis of competence/ ability.

The owners/Managing heads who possess Marketing Specialization as their educational background believes that the SMEs have sound Motivational systems related to giving financial incentives as well as authority and responsibility as well as Employee Participation in the decision-making process.

The owners/Managing heads who possess Operations Specialization as their educational background believes that the SMEs practice job-rotation of the employees.

Thus, as the p-value of the above statements on HR Practice is less than 0.05, so we reject the null hypothesis and conclude that there is a significant influence of Specialization of educational qualification on HR Practice related to Recruitment & Selection, Training & Skill development, Performance Appraisal, Career growth, Compensation Management, job-rotation, Employee participation as well as motivational aspects related to financial incentives and authority & responsibility.

For all the other statements whose p-value is more than 0.05, the specialization in educational background of the respondents does not influence the HR practices in the SME firms.

8.9.9. Kruskal-Wallis Test for Specialization in Education of Respondents and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any influence of Specialization in educational background of the respondents on Employee Outcomes.

The null and alternate hypothesis is framed as under:

H₀₂₄: There is no significant influence of Specialization in education of respondents on Employee Outcomes.

H_{a24}: There is a significant influence of Specialization in education of respondents on Employee Outcomes.

TABLE 8.85 - Mean-Ranks: Kruskal-Wallis Test for Specialization in Education of Respondents and Employee Outcomes

Employee Outcomes	Specialization	N	Mean Rank
Competence of an Employee	HR	47	110.28
	MARKETING	38	116.93
	FINANCE	47	113.26
	OPERATIONS	18	88.94
	ENGINEERING	40	100.09
	OTHERS	25	102.13
	Total	215	
Employee's co-operation with is satisfactory.	HR	47	109.61
	MARKETING	38	113.83
	FINANCE	47	112.54
	OPERATIONS	18	110
	ENGINEERING	40	103
	OTHERS	25	89.1
Employees co-operate among themselves	HR	47	112.36
	MARKETING	38	129.26
	FINANCE	47	98.69
	OPERATIONS	18	96.28
	ENGINEERING	40	105.85
	OTHERS	25	91.94
Employee's general behavior is good	HR	47	113.43
	MARKETING	38	124.09

Employee Outcomes	Specialization	N	Mean Rank
	FINANCE	47	100.03
	OPERATIONS	18	101.56
	ENGINEERING	40	102.4
	OTHERS	25	97.21
	Total	215	
Employees are committed	HR	47	116.57
	MARKETING	38	114.21
	FINANCE	47	104.51
	OPERATIONS	18	116.94
	ENGINEERING	40	100.5
	OTHERS	25	89.54
Employees are punctual and report daily	HR	47	104.59
	MARKETING	38	109.76
	FINANCE	47	99.01
	OPERATIONS	18	121.08
	ENGINEERING	40	113.11
	OTHERS	25	106.71
Employees are regular	HR	47	114.07
	MARKETING	38	107.36
	FINANCE	47	107.63
	OPERATIONS	18	118.53
	ENGINEERING	40	93.94
	OTHERS	25	108.94
Employees take up extra duties and responsibilities	HR	47	114.65
	MARKETING	38	111
	FINANCE	47	107.12
	OPERATIONS	18	114.25
	ENGINEERING	40	100.01
	OTHERS	25	96.13
Employee's follow general code of conduct and rules	HR	47	108.01
	MARKETING	38	113.72
	FINANCE	47	113.27
	OPERATIONS	18	130.67
	ENGINEERING	40	91.79
	OTHERS	25	94.17
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.86- Test Statistics^{ab}: Kruskal-Wallis Test for Specialization in Education of Respondents and Employee Outcomes

Employee Outcomes	Chi-Square	df	Asymp. Sig.
Competence of an Employee	5.947	5	0.311
Employee's co-operation with is satisfactory.	4.524	5	0.477
Employees co-operate among themselves	10.044	5	0.074
Employee's general behavior is good	6.319	5	0.276
Employees are committed	5.299	5	0.38
Employees are punctual and report daily	2.55	5	0.769
Employees are regular	3.616	5	0.606
Employees take up extra duties and responsibilities	2.8	5	0.731
Employee's follow general code of conduct and rules	8.677	5	0.123

a. Kruskal Wallis Test b. Grouping Variable: Specialization
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.86 that the p-value of none of the statements is **less than 0.05**. Thus, as the **p-value** of none of the statements on **Employee Outcomes** is **less than 0.05**, so we **fail to reject the null hypothesis** and **conclude that there no significant influence of Specialization in education of respondents on Employee Outcomes in the SMEs.**

8.9.10. Kruskal-Wallis Test for Specialization in Education of Respondents and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any influence of Specialization in educational background of the respondents on Organizational Outcomes.

The null and alternate hypothesis is framed as under:

H₀₂₅: There is no significant influence of Specialization in education of respondents on Organizational Outcomes.

H_{a25}: There is a significant influence of Specialization in education of respondents on Organizational Outcomes.

TABLE 8.87 - Mean-Ranks: Kruskal-Wallis Test for Specialization in Education of Respondents and Organizational Outcomes

Organizational Outcomes	Specialization	N	Mean Rank
Customer satisfaction has increased	HR	47	113.43
	MARKETING	39	108.78
	FINANCE	47	116.27
	OPERATIONS	18	126.75
	ENGINEERING	40	97.64
	OTHERS	24	78.71
Our suppliers/ vendors are satisfied with us.	HR	47	106.56
	MARKETING	39	119.63
	FINANCE	47	110.7
	OPERATIONS	18	125.78
	ENGINEERING	40	96.24
	OTHERS	24	88.92
Measures have been taken by the firm for product/ service development	HR	47	118.62
	MARKETING	39	127.41
	FINANCE	47	106.26
	OPERATIONS	18	129.22
	ENGINEERING	40	92.38
	OTHERS	24	65.56
Products/service Quality shows improvement	HR	47	116.39
	MARKETING	39	114.8

Organizational Outcomes	Specialization	N	Mean Rank
	FINANCE	47	112.73
	OPERATIONS	18	131.56
	ENGINEERING	40	94.3
	OTHERS	24	72.23
	Total	215	
The firm has displayed proper utilization of resources.	HR	47	120.31
	MARKETING	39	107.71
	FINANCE	47	110.5
	OPERATIONS	18	142.78
	ENGINEERING	40	92.18
	OTHERS	24	75.29
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	HR	47	117.27
	MARKETING	39	100.45
	FINANCE	47	98.06
	OPERATIONS	18	136.42
	ENGINEERING	40	112.8
	OTHERS	24	87.5
	Total	215	
There is an increase in the Net Profit Margin.	HR	47	120.67
	MARKETING	39	118.43
	FINANCE	47	99.55
	OPERATIONS	18	130.14
	ENGINEERING	40	90.54
	OTHERS	24	91.25
	Total	215	
Return on Investment (in %) has increased	HR	47	118.83
	MARKETING	39	109.43
	FINANCE	47	102.9
	OPERATIONS	18	135.92
	ENGINEERING	40	95.55
	OTHERS	24	89.85
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.88 - Test Statistics^{ab}: Kruskal-Wallis Test for Specialization in Education of Respondents and Organizational Outcomes

Organizational Outcomes	Chi-Square	df	Asymp. Sig.
Customer satisfaction has increased	11.666	5	0.04
Our suppliers/ vendors are satisfied with us.	8.139	5	0.149
Measures have been taken by the firm for product/ service development	25.426	5	0
Products/service Quality shows improvement	17.378	5	0.004
The firm has displayed proper utilization of resources.	20.59	5	0.001
Average Number of defects of products / deficiencies in service shows a decrease	11.393	5	0.044
There is an increase in the Net Profit Margin.	13.069	5	0.023
Return on Investment (in %) has increased	10.617	5	0.06

a. Kruskal Wallis Test b. Grouping Variable: Specialization
(Source: SPSS Output; Primary data)

Interpretation

It can be seen from Table 8.88 that the p-value of the following statements on Organizational Outcomes are **less than 0.05**:

- Customer satisfaction has increased.
- Measures have been taken by the firm for product/ service development
- Products/service Quality shows improvement
- The firm has displayed proper utilization of resources.
- Average Number of defects of products / deficiencies in service shows a decrease
- There is an increase in the Net Profit Margin.

Table 8.87 further shows that the mean-ranks of the respondents possessing **Operations** as their **Specialization area is high and is 126.75, 129.22, 131.56, 142.78, 136.42 and 130.14** respectively for all the above statements.

Thus, the owners/Managing heads who possess Operations Specialization as their educational background believes that the SMEs Customer satisfaction has increased; Measures have been taken by the firm for product/ service development;

Products/service Quality shows improvement; the SMEs have displayed proper utilization of resources; the average Number of defects of products / deficiencies in services have decreased and that there is an increase in the Net Profit Margin, over the last two years.

Thus, as the **p-value** of the above statements on **Organizational Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Specialization of educational qualification on Organizational Outcomes related to Customer satisfaction, Product/ service development, Products/service Quality improvement; proper utilization of resources; reduction in the average Number of defects of products / deficiencies in services and Net Profit Margin, over the last two years.**

For all the other statements whose p-value is more than 0.05, the specialization in educational background of the respondents does not influence the Organizational Outcomes in the SME firms.

8.9.11. Kruskal-Wallis Test for Type of Firm and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of Type of Firm (i.e Proprietary, Partnership firm, Private, Joint Stock Company, Private Ltd. or Public Ltd.) on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₂₆: There is no significant effect of Type of Firm on HR Practices.

H_{a26}: There is a significant effect of Type of Firm on HR Practices.

TABLE 8.89 - Mean-Ranks: Kruskal-Wallis Test for Type of Firm and HR Practices

HR Practices	Firm Type	N	Mean Rank
Our organization places the right person in the right job	PROPRIETORY	36	91.75
	PARTNERSHIP	42	101.93
	PRIVATE	47	106.74
	JOINT-STOCK CO	4	99.5
	PVT. LTD.	82	117.48
	PUBLIC LTD.	4	147
	Total	215	
Selection is on the basis of merit	PROPRIETORY	36	90.07
	PARTNERSHIP	42	108.9
	PRIVATE	47	102.74
	JOINT-STOCK CO	4	25
	PVT. LTD.	82	120.24
	PUBLIC LTD.	4	153.75
	Total	215	
Organizes training and skill development programs	PROPRIETORY	36	86.99
	PARTNERSHIP	42	115.75
	PRIVATE	47	83.85
	JOINT-STOCK CO	4	121.5
	PVT. LTD.	82	123.99
	PUBLIC LTD.	4	158.25
	Total	215	
Employees are rotated from one job to another	PROPRIETORY	36	107.24
	PARTNERSHIP	42	103.76
	PRIVATE	47	105.02
	JOINT-STOCK CO	4	47.25
	PVT. LTD.	82	115.12
	PUBLIC LTD.	4	109.25
	Total	215	
Appraises the performance of employees at regular intervals.	PROPRIETORY	36	96.65
	PARTNERSHIP	42	98.73
	PRIVATE	47	102.19
	JOINT-STOCK CO	4	191
	PVT. LTD.	82	115.34
		4	142.25
	PUBLIC LTD.		

HR Practices	Firm Type	N	Mean Rank
Employees receive feedback	PROPRIETARY	36	93.96
	PARTNERSHIP	42	106.85
	PRIVATE	47	96.81
	JOINT-STOCK CO	4	66.25
	PVT. LTD.	82	120.91
	PUBLIC LTD.	4	155
	Total	215	
Enough opportunity for career growth	PROPRIETARY	36	82.36
	PARTNERSHIP	42	110.76
	PRIVATE	47	105.88
	JOINT-STOCK CO	4	19.75
	PVT. LTD.	82	121.58
	PUBLIC LTD.	4	144.5
	Total	215	
Compensation is decided on the basis of competence or ability	PROPRIETARY	36	94.86
	PARTNERSHIP	42	87.14
	PRIVATE	47	105.94
	JOINT-STOCK CO	4	143.25
	PVT. LTD.	82	122.2
	PUBLIC LTD.	4	143.25
	Total	215	
Good performers are given financial incentives	PROPRIETARY	36	85.57
	PARTNERSHIP	42	105.17
	PRIVATE	47	103.35
	JOINT-STOCK CO	4	100
	PVT. LTD.	82	120.78
	PUBLIC LTD.	4	140.25
	Total	215	
Good performers are given non-financial incentives.	PROPRIETARY	36	116.61
	PARTNERSHIP	42	101.5
	PRIVATE	47	105.98
	JOINT-STOCK CO	4	109
	PVT. LTD.	82	107.65
	PUBLIC LTD.	4	128.75
	Total	215	
Good performers are given more authority and responsibility.	PROPRIETARY	36	88.69
	PARTNERSHIP	42	116.43
	PRIVATE	47	87.17

HR Practices	Firm Type	N	Mean Rank
	JOINT-STOCK CO	4	58
	PVT. LTD.	82	124.6
	PUBLIC LTD.	4	147.75
	Total	215	
Employees participate in the decision-making process.	PROPRIETARY	36	95.64
	PARTNERSHIP	42	124.67
	PRIVATE	47	109.38
	JOINT-STOCK CO	4	5.5
	PVT. LTD.	82	110.13
	PUBLIC LTD.	4	86.75
Total	215		
Employees are given opportunity to suggest improvement	PROPRIETARY	36	87.94
	PARTNERSHIP	42	136.89
	PRIVATE	47	97.33
	JOINT-STOCK CO	4	9.75
	PVT. LTD.	82	111
	PUBLIC LTD.	4	147.25
Total	215		
Employees can openly communicate with the superiors	PROPRIETARY	36	85.61
	PARTNERSHIP	42	127.87
	PRIVATE	47	95.41
	JOINT-STOCK CO	4	141
	PVT. LTD.	82	111.65
	PUBLIC LTD.	4	141
Total	215		

(Source: SPSS output; Primary data)

TABLE 8.90 - Test Statistics^{ab}: Kruskal-Wallis Test for Type of Firm and HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	9.942	5	0.077
Selection is on the basis of merit	23.595	5	0
Organizes training and skill development programs	23.12	5	0
Employees are rotated from one job to another	6.087	5	0.298

HR Practices	Chi-Square	df	Asymp. Sig.
Appraises the performance of employees at regular intervals.	17.807	5	0.003
Employees receive feedback	16.591	5	0.005
Enough opportunity for career growth	22.791	5	0
Compensation is decided on the basis of competence or ability	20.541	5	0.001
Good performers are given financial incentives	10.873	5	0.054
Good performers are given non-financial incentives.	1.761	5	0.881
Good performers are given more authority and responsibility.	25.031	5	0
Employees participate in the decision-making process.	17.961	5	0.003
Employees are given opportunity to suggest improvement	38.584	5	0
Employees can openly communicate with the superiors	20.283	5	0.001

a. Kruskal Wallis Test b. Grouping Variable: Firm Type

Interpretation

It can be seen from Table 8.90 that the p-value of the following statements on HR Practices are **less than 0.05**: ‘Selection is on the basis of merit’, ‘Organizes training and skill development programs’, ‘Appraises the performance of employees at regular intervals’, ‘Employees receive feedback’, ‘There is enough opportunity for career growth’, ‘Compensation is decided on the basis of competence or ability’, ‘Good performers are given more authority and responsibility’, ‘Employees participate in the decision-making process’, ‘Employees are given opportunity to suggest improvement’ and ‘Employees can openly communicate with the superiors’.

Table 8.89 shows that the **mean-ranks of Public Ltd. Companies is high and is 153.75, 158.25, 155, 144.5, 147.75 and 147.25** respectively for the HR Practices related to **Selection Method, Training & Skill development Program, Feedback mechanism, Opportunities for career growth, Delegation of power as well as opportunities for giving suggestions for improvement.**

Table 8.89 further shows that the **mean-ranks of Joint-stock Companies is high and is 191 and 144.5 respectively for the HR Practices related to Performance Appraisal and Compensation decision based on competence and ability; whereas the mean-rank is high and is 124.67 for the Partnership firms for the HR practice related to employee participation in the decision-making process. The mean-rank is high and is 141 for the HR practice related to open-communication with superiors for the Public Ltd. Companies as well as the joint-stock companies.**

Thus, as the **p-value** of all the above statements on **HR Practices is less than 0.05, so we reject the null hypothesis and conclude that there is a significant influence of type of firm on HR Practices.**

For all the other statements whose p-value is more than 0.05, the type of firm does not influence the HR Practices in the SME firms.

8.9.12. Kruskal-Wallis Test for Type of Firm and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Type of Firm (i.e Proprietary, Partnership firm, Private, Joint Stock Company, Private Ltd. or Public Ltd.) on Employee Outcomes.

The null and alternate hypothesis is framed as under:

H₀₂₇: There is no significant effect of Type of Firm on Employee Outcomes.

H_{a27}: There is a significant effect of Type of Firm on Employee Outcomes.

TABLE 8.91 - Mean-Ranks: Kruskal-Wallis Test for Type of Firm and Employee Outcomes

Employee Outcomes	Firm Type	N	Mean Rank
Competence of an Employee	PROPRIETARY	36	103.75
	PARTNERSHIP	42	105.64
	PRIVATE	47	102.41
	JOINT-STOCK CO	4	79.5

Employee Outcomes	Firm Type	N	Mean Rank
	PVT. LTD.	82	112.77
	PUBLIC LTD.	4	167.25
	Total	215	
Employee's co-operation with is satisfactory.	PROPRIETORY	36	92.9
	PARTNERSHIP	42	99.63
	PRIVATE	47	113.62
	JOINT-STOCK CO	4	154.5
	PVT. LTD.	82	111.16
	PUBLIC LTD.	4	154.5
	Total	215	
Employees co-operate among themselves	PROPRIETORY	36	97.25
	PARTNERSHIP	42	114.76
	PRIVATE	47	102.8
	JOINT-STOCK CO	4	109.5
	PVT. LTD.	82	108.12
	PUBLIC LTD.	4	191
	Total	215	
Employee's general behavior is good	PROPRIETORY	36	93.42
	PARTNERSHIP	42	115.36
	PRIVATE	47	101.74
	JOINT-STOCK CO	4	119
	PVT. LTD.	82	111.2
	PUBLIC LTD.	4	159
	Total	215	
Employees are committed	PROPRIETORY	36	86.19
	PARTNERSHIP	42	109.68
	PRIVATE	47	102.06
	JOINT-STOCK CO	4	194.5
	PVT. LTD.	82	111.68
	PUBLIC LTD.	4	194.5
	Total	215	
Employees are punctual and report daily	PROPRIETORY	36	84.17
	PARTNERSHIP	42	109.77
	PRIVATE	47	112.69
	JOINT-STOCK CO	4	101.5
	PVT. LTD.	82	112.02
	PUBLIC LTD.	4	172.75
	Total	215	

Employee Outcomes	Firm Type	N	Mean Rank
Employees are regular	PROPRIETARY	36	79.9
	PARTNERSHIP	42	121.27
	PRIVATE	47	97.63
	JOINT-STOCK CO	4	139
	PVT. LTD.	82	114.84
	PUBLIC LTD.	4	172.25
	Total	215	
Employees take up extra duties and responsibilities	PROPRIETARY	36	78.97
	PARTNERSHIP	42	103.15
	PRIVATE	47	104.7
	JOINT-STOCK CO	4	126.5
	PVT. LTD.	82	119.77
	PUBLIC LTD.	4	199
	Total	215	
Employee's follow general code of conduct and rules	PROPRIETARY	36	71.17
	PARTNERSHIP	42	102.65
	PRIVATE	47	109.04
	JOINT-STOCK CO	4	118
	PVT. LTD.	82	121.48
	PUBLIC LTD.	4	197
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.92 - Test Statistics^{ab}: Kruskal-Wallis Test for Type of Firm and Employee Outcomes

Employee Outcomes	Chi-Square	Df	Asymp. Sig.
Competence of an Employee	8.835	5	0.116
Employee's co-operation with Mgt. is satisfactory.	11.546	5	0.042
Employees co-operate among themselves	11.201	5	0.048
Employee's general behavior is good	7.779	5	0.169
Employees are committed	24.182	5	0
Employees are punctual and report daily	11.759	5	0.038
Employees are regular	20.08	5	0.001
Employees take up extra duties and responsibilities	23.786	5	0
Employee's follow general code of conduct and rules	30.996	5	0

a. Kruskal Wallis Testb. Grouping Variable: Firm Type; (Source: SPSS output; Primary data)

Interpretation

It can be seen from Table 8.92 that the p-value of the following statements on Employee Outcomes are **less than 0.05**: ‘Employee’s co-operation with Management/Head is satisfactory’, ‘Employees co-operate among themselves’, ‘Employees are committed’, ‘Employees are punctual and report daily for work on time’, ‘Employees are regular’, ‘Employees take up extra duties and responsibilities when need arises’ and ‘Employee’s follow general code of conduct and rules’.

Table 8.91 shows that the **mean-ranks of Public Ltd. Companies is high and is 191, 194.5, 172.25, 199 and 197 respectively, for the Employee Outcomes related to Employee’s co-operation among themselves, Employee Commitment, Regularity of employees, Employee involvement as well as Conformance to rules and regulations.**

Table 1 further shows that the **mean-ranks of both, Public Ltd. as well as Joint-stock Companies is high and is 154.5 and 172.75 respectively, for the Employee Outcomes related to Employee’s co-operation with Management/Head as well as Punctuality of employees.**

Thus, as the **p-value** of all the above statements on **Employee Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of type of firm on Employee Outcomes.**

For all the other statements whose p-value is more than 0.05, the type of firm does not influence the Employee Outcomes in the SME firms.

8.9.13. Kruskal-Wallis Test for Type of Firm and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Type of Firm (i.e Proprietary, Partnership firm, Private, Joint Stock Company, Private Ltd. or Public Ltd.) on Organizational Outcomes.

The null and alternate hypothesis is framed as under:

H₀₂₈: There is no significant effect of Type of Firm on Organizational Outcomes.

H_{a28}: There is a significant effect of Type of Firm on Organizational Outcomes.

TABLE 8.93 - Mean-Ranks: Kruskal-Wallis Test for Type of Firm and Organizational Outcomes

Organizational Outcomes	Firm Type	N	Mean Rank
Customer satisfaction has increased	PROPRIETORY	36	80.83
	PARTNERSHIP	42	101.88
	PRIVATE	47	118.88
	JOINT-STOCK CO	4	181.5
	PVT. LTD.	82	109.65
	PUBLIC LTD.	4	181.5
	Total	215	
Our suppliers/ vendors are satisfied with us.	PROPRIETORY	36	91.06
	PARTNERSHIP	42	98.45
	PRIVATE	47	111.22
	JOINT-STOCK CO	4	137.5
	PVT. LTD.	82	113.41
	PUBLIC LTD.	4	182.5
	Total	215	
Measures have been taken by the firm for product/ service development	PROPRIETORY	36	68
	PARTNERSHIP	42	85.07
	PRIVATE	47	110.67
	JOINT-STOCK CO	4	128
	PVT. LTD.	82	131.55
	PUBLIC LTD.	4	174.5
	Total	215	
Products/service Quality shows improvement	PROPRIETORY	36	73.53
	PARTNERSHIP	42	104.42

Organizational Outcomes	Firm Type	N	Mean Rank
	PRIVATE	47	107.23
	JOINT-STOCK CO	4	176
	PVT. LTD.	82	118.77
	PUBLIC LTD.	4	176
	Total	215	
The firm has displayed proper utilization of resources.	PROPRIETARY	36	78.4
	PARTNERSHIP	42	80.62
	PRIVATE	47	122.8
	JOINT-STOCK CO	4	137
	PVT. LTD.	82	121.51
	PUBLIC LTD.	4	182
Average Number of defects of products / deficiencies in service shows a decrease	PROPRIETARY	36	82.54
	PARTNERSHIP	42	98.56
	PRIVATE	47	121.84
	JOINT-STOCK CO	4	64.25
	PVT. LTD.	82	114.36
	PUBLIC LTD.	4	187
There is an increase in the Net Profit Margin.	PROPRIETARY	36	96.79
	PARTNERSHIP	42	100.87
	PRIVATE	47	99.5
	JOINT-STOCK CO	4	199.5
	PVT. LTD.	82	116.18
	PUBLIC LTD.	4	124.5
Return on Investment (in %) has increased	PROPRIETARY	36	99.29
	PARTNERSHIP	42	105.43
	PRIVATE	47	99.53
	JOINT-STOCK CO	4	199
	PVT. LTD.	82	112.75
	PUBLIC LTD.	4	124.5
	Total	215	

TABLE 8.94 - Test Statistics^{ab}: Kruskal-Wallis Test for Type of Firm and Organizational Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	24.879	5	0
Our suppliers/ vendors are satisfied with us.	13.498	5	0.019
Measures have been taken by the firm for product/ service development	45.126	5	0
Products/service Quality shows improvement	28.481	5	0
The firm has displayed proper utilization of resources.	35.682	5	0
Average Number of defects of products / deficiencies in service shows a decrease	22.337	5	0
There is an increase in the Net Profit Margin.	15.153	5	0.01
Return on Investment (in %) has increased	12.771	5	0.026

a. Kruskal Wallis Testb. Grouping Variable: Firm Type

Interpretation

It can be seen from Table 8.94 that the p-value of all the statements on Organizational Outcomes are **less than 0.05**:

- Customer satisfaction has increased.
- Our suppliers/ vendors are satisfied with us.
- Measures have been taken by the firm for product/ service development
- Products/service Quality shows improvement
- The firm has displayed proper utilization of resources.
- Average Number of defects of products / deficiencies in service shows a decrease
- There is an increase in the Net Profit Margin.
- Return on Investment (in %) has increased

Table 8.93 shows that the mean-ranks of the **Public Limited Companies is high and is 182.5, 174.5, 182 and 187 respectively for the Organizational Outcomes related to Suppliers/ vendors satisfaction, Product/ service development, Proper utilization of resources and decrease in the average Number of defects of products / deficiencies**

in service. Thus, the owners/Managing heads in Public Ltd. SMEs believes that the above mentioned outcomes have improved in their firms.

Table 8.93 further shows that the mean-ranks of the **Joint-Stock SME firms is high and is 199.5 and 199** respectively for the **Organizational Outcomes** related to **Net Profit Margin and Organizational Outcomes**. It is to also note that the mean-ranks of both, the **Public Ltd.** as well as **Joint-stock SME firms** is high and is **181.5 and 176** for the **Organizational Outcomes** related to **Customer Satisfaction and Product/ Service Quality improvement**.

Thus, as the **p-value** of the all the statements on **Organizational Outcomes** is less than **0.05**, so we reject the null hypothesis and conclude that there is a significant influence of **Type of firm** on all the **Organizational Outcomes**. The **Public Ltd.** as well as **Joint-stock SME firms** have a significant influence on the **Organizational Outcomes**.

8.9.14. Kruskal-Wallis Test for Age of the Firm and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of Age of the Firm (i.e Age of the firm was captured in 2-5 years, 6-10 years, 11-15 years, 16-20 years or more than 20) on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₂₉: There is no significant effect of Age of Firm on HR Practices.

H_{a29}: There is a significant effect of Age of Firm on HR Practices.

TABLE 8.95 - Mean-Ranks: K-Wallis Test for Age of the Firm and HR Practices

HR Practices	Age of the Firm	N	Mean Rank
Our organization places the right person in the right job	2-5 YRS	8	99
	6-10 YRS	23	92.87
	11-15 YRS	37	85.23
	16-20 YRS	50	128.3
	MORE THAN 20 YRS	97	110.55

HR Practices	Age of the Firm	N	Mean Rank
Selection is on the basis of merit	2-5 YRS	8	108.5
	6-10 YRS	23	82.39
	11-15 YRS	37	79.28
	16-20 YRS	50	116.61
	MORE THAN 20 YRS	97	120.55
	Total	215	
Organizes training and skill development programs	2-5 YRS	8	79.63
	6-10 YRS	23	115.63
	11-15 YRS	37	94.55
	16-20 YRS	50	112.86
	MORE THAN 20 YRS	97	111.15
	Total	215	
Employees are rotated from one job to another	2-5 YRS	8	117.5
	6-10 YRS	23	112.37
	11-15 YRS	37	89.81
	16-20 YRS	50	111.64
	MORE THAN 20 YRS	97	111.24
	Total	215	
Appraises the performance of employees at regular intervals.	2-5 YRS	8	117.88
	6-10 YRS	23	92.74
	11-15 YRS	37	93.73
	16-20 YRS	50	105.92
	MORE THAN 20 YRS	97	117.32
	Total	215	
Employees receive feedback	2-5 YRS	8	132.5
	6-10 YRS	23	94.24
	11-15 YRS	37	85.07
	16-20 YRS	50	104.55
	MORE THAN 20 YRS	97	119.77
	Total	215	
Enough opportunity for career growth	2-5 YRS	8	165
	6-10 YRS	23	73.83
	11-15 YRS	37	102.58
	16-20 YRS	50	103.63
	MORE THAN 20 YRS	97	115.72
	Total	215	
Compensation is decided on the basis of competence or ability	2-5 YRS	8	118.63
	6-10 YRS	23	91.35
	11-15 YRS	37	109.41
	16-20 YRS	50	104.16
	MORE THAN 20 YRS	97	112.52
	Total	215	

HR Practices	Age of the Firm	N	Mean Rank
Good performers are given financial incentives	2-5 YRS	8	140.25
	6-10 YRS	23	87.33
	11-15 YRS	37	108.36
	16-20 YRS	50	103.49
	MORE THAN 20 YRS	97	112.43
	Total	215	
Good performers are given non-financial incentives.	2-5 YRS	8	94.63
	6-10 YRS	23	134.37
	11-15 YRS	37	100.14
	16-20 YRS	50	112.49
	MORE THAN 20 YRS	97	103.54
Good performers are given more authority and responsibility.	2-5 YRS	8	125.88
	6-10 YRS	23	71.43
	11-15 YRS	37	109.62
	16-20 YRS	50	98.92
	MORE THAN 20 YRS	97	119.26
	Total	215	
Employees participate in the decision-making process.	2-5 YRS	8	139.88
	6-10 YRS	23	103.65
	11-15 YRS	37	104.69
	16-20 YRS	50	111.2
	MORE THAN 20 YRS	97	106.02
	Total	215	
Employees are given opportunity to suggest improvement	2-5 YRS	8	147.25
	6-10 YRS	23	114.5
	11-15 YRS	37	88.05
	16-20 YRS	50	90.19
	MORE THAN 20 YRS	97	120.01
	Total	215	
Employees can openly communicate with the superiors	2-5 YRS	8	141
	6-10 YRS	23	103.07
	11-15 YRS	37	95.55
	16-20 YRS	50	95.35
	MORE THAN 20 YRS	97	117.72
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.96 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the Firm and HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	18.527	4	0.001
Selection is on the basis of merit	24.93	4	0
Organizes training and skill development programs	4.949	4	0.293
Employees are rotated from one job to another	4.566	4	0.335
Appraises the performance of employees at regular intervals.	8.544	4	0.074
Employees receive feedback	16.637	4	0.002
Enough opportunity for career growth	18.245	4	0.001
Compensation is decided on the basis of competence or ability	4.044	4	0.4
Good performers are given financial incentives	6.147	4	0.188
Good performers are given non-financial incentives.	6.261	4	0.18
Good performers are given more authority and responsibility.	16.473	4	0.002
Employees participate in the decision-making process.	2.882	4	0.578
Employees are given opportunity to suggest improvement	22.238	4	0
Employees can openly communicate with the superiors	12.576	4	0.014

a. Kruskal Wallis Testb. Grouping Variable: Age of the Firm

Interpretation

It can be seen from Table 8.96 that the p-value of the following statements on HR Practices are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘Employees receive feedback’, ‘There is enough opportunity for career growth’, ‘Good performers are given more authority and responsibility’, ‘Employees are given opportunity to suggest improvement’ and ‘Employees can openly communicate with the superiors’.

Table 8.95 shows that the **mean-ranks of SME firms which are 2-5 years old is high and is 132.5, 165, 125.88, 147.25 and 141 respectively, for the HR Practices related to Feedback mechanism, Opportunities for career growth, Delegation of power wr.t authority and responsibility, opportunities for giving suggestions for improvement as well as for an Open-Communication system.**

Table 8.95 further shows that the **mean-ranks of SME firms which are 16-20 years old is high and is 128.3 for the HR Practice related to Human Resource Planning i.e placing the right person in the right job. Whereas the mean-rank is high and is 120.55 for the firms which are more than 20 years old for the HR practice related to Selection Method i.e Selection on the basis of merit.**

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of age of the firm on HR Practices.**

For all the other statements whose p-value is more than 0.05, the age of firm does not influence the HR Practices in the SME firms.

8.9.15. Kruskal-Wallis Test for Age of the Firm and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Age of the Firm (i.e Age of the firm was captured in 2-5 years, 6-10 years, 11-15 years, 16-20 years or more than 20) on Employee Outcomes.

The null and alternate hypothesis is framed as under:

H₀₃₀: There is no significant effect of Age of Firm on Employee Outcomes.

H_{a30}: There is a significant effect of Age of Firm on Employee Outcomes.

TABLE 8.97 - Mean-Ranks: Kruskal-Wallis Test for Age of the Firm and Employee Outcomes

Employee Outcomes	Age of the Firm	N	Mean Rank
Competence of an Employee	2-5 YRS	8	79.5
	6-10 YRS	23	102.43
	11-15 YRS	37	100
	16-20 YRS	50	111.38
	MORE THAN 20 YRS	97	112.98
	Total	215	
Employee's co-operation with is satisfactory.	2-5 YRS	8	67.75
	6-10 YRS	23	98.04
	11-15 YRS	37	105.73
	16-20 YRS	50	109.5
	MORE THAN 20 YRS	97	113.77
	Total	215	
Employees co-operate among themselves	2-5 YRS	8	86.5
	6-10 YRS	23	107.52
	11-15 YRS	37	114.59
	16-20 YRS	50	99.88
	MORE THAN 20 YRS	97	111.56
	Total	215	
Employee's general behavior is good	2-5 YRS	8	97.38
	6-10 YRS	23	102.48
	11-15 YRS	37	104.27
	16-20 YRS	50	97.83
	MORE THAN 20 YRS	97	116.85
	Total	215	
Employees are committed	2-5 YRS	8	99.88
	6-10 YRS	23	112.83
	11-15 YRS	37	92.89
	16-20 YRS	50	109.2
	MORE THAN 20 YRS	97	112.67
	Total	215	
Employees are punctual and report daily	2-5 YRS	8	101.5
	6-10 YRS	23	89.28
	11-15 YRS	37	89.39
	16-20 YRS	50	104.25
	MORE THAN 20 YRS	97	122.01
	Total	215	
Employees are regular	2-5 YRS	8	97.5
	6-10 YRS	23	99.65

Employee Outcomes	Age of the Firm	N	Mean Rank
	11-15 YRS	37	112.76
	16-20 YRS	50	101.35
	MORE THAN 20 YRS	97	112.46
	Total	215	
Employees take up extra duties and responsibilities	2-5 YRS	8	124.88
	6-10 YRS	23	114.13
	11-15 YRS	37	106.95
	16-20 YRS	50	104.89
	MORE THAN 20 YRS	97	107.16
	Total	215	
Employee's follow general code of conduct and rules	2-5 YRS	8	117.5
	6-10 YRS	23	100.39
	11-15 YRS	37	96.36
	16-20 YRS	50	108.15
	MORE THAN 20 YRS	97	113.38
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.98 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the Firm and Employee Outcomes

Employee Outcomes	Chi-Square	Df	Asymp. Sig.
Competence of an Employee	5.157	4	0.272
Employee's co-operation with is satisfactory.	7.051	4	0.133
Employees co-operate among themselves	3.155	4	0.532
Employee's general behavior is good	4.93	4	0.295
Employees are committed	3.542	4	0.472
Employees are punctual and report daily	12.07	4	0.017
Employees are regular	2.303	4	0.68
Employees take up extra duties and responsibilities	1.144	4	0.887
Employee's follow general code of conduct and rules	3.152	4	0.533

a. Kruskal Wallis Test b. Grouping Variable: Age of the Firm

Interpretation

It can be seen from Table 8.98 that the p-value of the following statement on Employee Outcomes is **less than 0.05**: **'Employees are punctual and report daily for work on time'**. Table 8.97 shows that the **mean-rank of firms which are more than 20 years**

old is high and is 122.01 for the Employee Outcome related to Punctuality of employees. Thus, as the p-value of the statement on Employee Outcome is less than 0.05, so we reject the null hypothesis and conclude that there is a significant influence of type of firm on Employee Outcome related to Punctuality of employees. For all the other statements whose p-value is more than 0.05, the type of firm does not influence the Employee Outcomes in the SME firms.

8.9.16. Kruskal-Wallis Test for Age of the Firm and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Age of the Firm (i.e Age of the firm was captured in 2-5 years, 6-10 years, 11-15 years, 16-20 years or more than 20) on Organizational Outcomes.

The null and alternate hypothesis is framed as under:

H₀₃₁: There is no significant effect of Age of Firm on Organizational Outcomes.

H_{a31}: There is a significant effect of Age of Firm on Organizational Outcomes.

TABLE 8.99 - Mean-Ranks: Kruskal-Wallis Test for Age of the Firm and Organizational Outcomes

Organizational Outcomes	Age of the Firm	N	Mean Rank
Customer satisfaction has increased	2-5 YRS	8	135
	6-10 YRS	23	99.33
	11-15 YRS	37	93.04
	16-20 YRS	50	109.02
	MORE THAN 20 YRS	97	113.01
	Total	215	
Our suppliers/ vendors are satisfied with us.	2-5 YRS	8	119
	6-10 YRS	23	87.02
	11-15 YRS	37	97.96
	16-20 YRS	50	112.1
	MORE THAN 20 YRS	97	113.78
	Total	215	

Organizational Outcomes	Age of the Firm	N	Mean Rank
Measures have been taken by the firm for product/service development	2-5 YRS	8	88.25
	6-10 YRS	23	81.11
	11-15 YRS	37	95.93
	16-20 YRS	50	119
	MORE THAN 20 YRS	97	114.94
	Total	215	
Products/service Quality shows improvement	2-5 YRS	8	128.75
	6-10 YRS	23	86.46
	11-15 YRS	37	85.76
	16-20 YRS	50	106.21
	MORE THAN 20 YRS	97	120.8
	Total	215	
The firm has displayed proper utilization of resources.	2-5 YRS	8	137
	6-10 YRS	23	79.22
	11-15 YRS	37	81.73
	16-20 YRS	50	115.55
	MORE THAN 20 YRS	97	118.56
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	2-5 YRS	8	144.75
	6-10 YRS	23	86.91
	11-15 YRS	37	83.08
	16-20 YRS	50	95.85
	MORE THAN 20 YRS	97	125.74
	Total	215	
There is an increase in the Net Profit Margin.	2-5 YRS	8	109.5
	6-10 YRS	23	123.41
	11-15 YRS	37	103.89
	16-20 YRS	50	115.2
	MORE THAN 20 YRS	97	102.08
	Total	215	
Return on Investment (in %) has increased	2-5 YRS	8	89.5
	6-10 YRS	23	123.61
	11-15 YRS	37	103.88
	16-20 YRS	50	123.06
	MORE THAN 20 YRS	97	99.63
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.100 - Test Statistics^{ab}: Kruskal-Wallis Test for Age of the Firm and Organizational Outcomes

Organizational Outcomes	Chi-Square	df	Asymp. Sig.
Customer satisfaction has increased	5.911	4	0.206
Our suppliers/ vendors are satisfied with us.	5.971	4	0.201
Measures have been taken by the firm for product/ service development	11.176	4	0.025
Products/service Quality shows improvement	15.369	4	0.004
The firm has displayed proper utilization of resources.	20.421	4	0
Average Number of defects of products / deficiencies in service shows a decrease	25.405	4	0
There is an increase in the Net Profit Margin.	3.659	4	0.454
Return on Investment (in %) has increased	8.154	4	0.086

a. Kruskal Wallis Test b. Grouping Variable: Age of the Firm

Interpretation

It can be seen from Table 8.100 that the p-value of the following statements on **Organizational Outcomes** are less than **0.05**:

- Measures have been taken by the firm for product/ service development
- Products/service Quality shows improvement
- The firm has displayed proper utilization of resources.
- Average Number of defects of products / deficiencies in service shows a decrease

Table 8.99 shows that the mean-ranks of the **firms which are 2-5 years old is high and is 128.75, 137 and 144.75 respectively, for the Organizational Outcomes related to Product/ Service Quality improvement, Proper utilization of resources and decrease in the average Number of defects of products / deficiencies in service. Thus, the owners/Managing heads in the SME firms which are 2-5 years old believes that the above mentioned outcomes have improved in their firms.**

Table 1 further shows that the mean-rank of the **SME firms which are 16-20 years old is high and is 119 for the Organizational Outcome related to Product/ service development.**

Thus, as the **p-value** of the above mentioned statements on **Organizational Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Age of firm on the Organizational Outcomes related to Product/ Service Development, Product/ service Quality improvement, Proper utilization of resources and decrease in the average Number of defects of products / deficiencies in service.**

For all the other statements whose p value is more than 0.05, the age of the firm does not affect the Organizational Outcomes.

8.9.17. Kruskal-Wallis Test for Nature of the Industry and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of Nature of the industry (i.e Engineering, Chemicals, Pharmaceuticals, Locomotives, Electricals, Others) on HR Practices.

The null and alternate hypothesis is framed as under:

H₀₃₂: There is no significant effect of Nature of the Industry on HR Practices.

H_{a32}: There is a significant effect of Nature of the Industry on HR Practices.

TABLE 8.101 - Mean-Ranks: Kruskal-Wallis Test for Nature of the Industry and HR Practices

HR Practices	Nature of Industry	N	Mean Rank
Our organization places the right person in the right job	ENGINEERING	121	107.01
	CHEMICALS	1	15.5
	PHARMACEUTICALS	7	141.93
	LOCOMOTIVES	2	99
	ELECTRICAL	7	167.57
	OTHERS	77	102.49
	Total	215	

HR Practices	Nature of Industry	N	Mean Rank
Selection is on the basis of merit	ENGINEERING	121	110.46
	CHEMICALS	1	25
	PHARMACEUTICALS	7	94
	LOCOMOTIVES	2	108.5
	ELECTRICAL	7	173.14
	OTHERS	77	100.55
	Total	215	
Organizes training and skill development programs	ENGINEERING	121	115.6
	CHEMICALS	1	22.5
	PHARMACEUTICALS	7	132.71
	LOCOMOTIVES	2	121.5
	ELECTRICAL	7	174
	OTHERS	77	88.58
	Total	215	
Employees are rotated from one job to another	ENGINEERING	121	113.2
	CHEMICALS	1	70
	PHARMACEUTICALS	7	165.79
	LOCOMOTIVES	2	148.5
	ELECTRICAL	7	92.43
	OTHERS	77	95.44
	Total	215	
Appraises the performance of employees at regular intervals.	ENGINEERING	121	111.2
	CHEMICALS	1	14
	PHARMACEUTICALS	7	137.86
	LOCOMOTIVES	2	93.5
	ELECTRICAL	7	163.14
	OTHERS	77	96.84
	Total	215	
Employees receive feedback	ENGINEERING	121	113.26
	CHEMICALS	1	22.5
	PHARMACEUTICALS	7	123.21
	LOCOMOTIVES	2	110
	ELECTRICAL	7	110
	OTHERS	77	99.22
	Total	215	
Enough opportunity for career growth	ENGINEERING	121	110.71
	CHEMICALS	1	7
	PHARMACEUTICALS	7	163.64
	LOCOMOTIVES	2	103.5
	ELECTRICAL	7	62.93
	OTHERS	77	104.21
	Total	215	

HR Practices	Nature of Industry	N	Mean Rank
Compensation is decided on the basis of competence or ability	ENGINEERING	121	108.77
	CHEMICALS	1	11
	PHARMACEUTICALS	7	138.43
	LOCOMOTIVES	2	94
	ELECTRICAL	7	94
	OTHERS	77	106.92
	Total	215	
Good performers are given financial incentives	ENGINEERING	121	109.99
	CHEMICALS	1	100
	PHARMACEUTICALS	7	137.29
	LOCOMOTIVES	2	180.5
	ELECTRICAL	7	56.43
	OTHERS	77	105.12
	Total	215	
Good performers are given non-financial incentives.	ENGINEERING	121	103.02
	CHEMICALS	1	109.5
	PHARMACEUTICALS	7	128.57
	LOCOMOTIVES	2	109.5
	ELECTRICAL	7	125.93
	OTHERS	77	112.27
	Total	215	
Good performers are given more authority and responsibility.	ENGINEERING	121	117.13
	CHEMICALS	1	30.5
	PHARMACEUTICALS	7	143.5
	LOCOMOTIVES	2	104
	ELECTRICAL	7	143.5
	OTHERS	77	88.31
	Total	215	
Employees participate in the decision-making process.	ENGINEERING	121	119.53
	CHEMICALS	1	23
	PHARMACEUTICALS	7	122.64
	LOCOMOTIVES	2	120.5
	ELECTRICAL	7	72.29
	OTHERS	77	92.58
	Total	215	
Employees are given opportunity to suggest improvement	ENGINEERING	121	111.3
	CHEMICALS	1	100
	PHARMACEUTICALS	7	142.29
	LOCOMOTIVES	2	134.5
	ELECTRICAL	7	100
	OTHERS	77	98.28
	Total	215	

HR Practices	Nature of Industry	N	Mean Rank
Employees can openly communicate with the superiors	ENGINEERING	121	116.07
	CHEMICALS	1	91.5
	PHARMACEUTICALS	7	136.36
	LOCOMOTIVES	2	91.5
	ELECTRICAL	7	105.64
	OTHERS	77	93.6
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.102 - Test Statistics^{ab}: Kruskal-Wallis Test for Nature of the Industry and HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	17.623	5	0.003
Selection is on the basis of merit	16.593	5	0.005
Organizes training and skill development programs	23.373	5	0
Employees are rotated from one job to another	13.687	5	0.018
Appraises the performance of employees at regular intervals.	18.229	5	0.003
Employees receive feedback	7.122	5	0.212
Enough opportunity for career growth	14.472	5	0.013
Compensation is decided on the basis of competence or ability	7.154	5	0.209
Good performers are given financial incentives	10.592	5	0.06
Good performers are given non-financial incentives.	2.662	5	0.752
Good performers are given more authority and responsibility.	21.033	5	0.001
Employees participate in the decision-making process.	15.302	5	0.009
Employees are given opportunity to suggest improvement	12.413	5	0.03
Employees can openly communicate with the superiors	11.863	5	0.037

(a. Kruskal Wallis Testb. Grouping Variable: Nature of Industry; Primary data)

Interpretation

It can be seen from Table 8.102 that the **p-value** of the following statements on **HR Practices** are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘Organizes training and skill development programs’, ‘Employees are rotated from one job to another’, ‘Appraises the performance of employees at regular intervals’, ‘There is enough opportunity for career growth’, ‘Good

performers are given more authority and responsibility’, ‘Employees participate in the decision-making process’, ‘Employees are given opportunity to suggest improvement’ and ‘Employees can openly communicate with the superiors’.

Table 8.101 shows that the **mean-ranks of the Electrical firms is high and is 167.57, 173.14, 174 and 163.14 respectively, for the HR Practices related to Human Resource Planning i.e placing the right person in the right job, Selection practices, Training & Skill Development Programs and Performance Appraisal.**

Table 8.101 further shows that the **mean-ranks of the Pharmaceutical SME firms is high and is 165.79, 163.64, 122.64, 142.29 and 136.36 respectively, for the HR Practices related to Job-rotation, Opportunities for career growth, Participation in the decision-making process, opportunities for giving suggestions for improvement as well as for an Open-Communication system.**

Whereas, the mean-ranks of both, the Electrical as well as Pharmaceutical firms is high and is 143.5 for the HR Practice related to Delegation of power wr.t authority and responsibility.

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis and conclude that there is a significant influence of Nature of the industry on HR Practices; with maximum influence of firms from the Pharmaceutical and Electrical industry.**

For all the other statements whose p-value is more than 0.05, the Nature of the Industry does not influence the HR Practices in the SME firms.

8.9.18. Kruskal-Wallis Test for Nature of the Industry and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Nature of the industry (i.e Engineering, Chemicals, Pharmaceuticals, Locomotives, Electricals, Others) on Employee Outcomes.

The null and alternate hypothesis is framed as under:

H₀₃₃: There is no significant effect of Nature of the Industry on Employee Outcomes.

H_{a33}: There is a significant effect of Nature of the Industry on Employee Outcomes.

TABLE 8.103 - Mean-Ranks: KW Test for Nature of Industry and Emp. Outcomes

Employee Outcomes	Nature of Industry	N	Mean Rank
Competence of an Employee	ENGINEERING	121	107.29
	CHEMICALS	1	1
	PHARMACEUTICALS	7	112.36
	LOCOMOTIVES	2	125.5
	ELECTRICAL	7	109
	OTHERS	77	109.56
Employee's co-operation with is satisfactory.	ENGINEERING	121	109.4
	CHEMICALS	1	8
	PHARMACEUTICALS	7	135.43
	LOCOMOTIVES	2	110
	ELECTRICAL	7	110
	OTHERS	77	104.36
Employees co-operate among themselves	ENGINEERING	121	105.03
	CHEMICALS	1	5.5
	PHARMACEUTICALS	7	130.29
	LOCOMOTIVES	2	28
	ELECTRICAL	7	106
	OTHERS	77	114.23
Employee's general behavior is good	ENGINEERING	121	111.85
	CHEMICALS	1	32.5
	PHARMACEUTICALS	7	141.86
	LOCOMOTIVES	2	119
	ELECTRICAL	7	44.86
	OTHERS	77	105.31
Employees are committed	ENGINEERING	121	104
	CHEMICALS	1	11
	PHARMACEUTICALS	7	162.14
	LOCOMOTIVES	2	119
	ELECTRICAL	7	119
	OTHERS	77	109.34

Employee Outcomes	Nature of Industry	N	Mean Rank
Employees are punctual and report daily	ENGINEERING	121	101.34
	CHEMICALS	1	14.5
	PHARMACEUTICALS	7	177.07
	LOCOMOTIVES	2	60.5
	ELECTRICAL	7	83.93
	OTHERS	77	116.82
	Total	215	
Employees are regular	ENGINEERING	121	101.39
	CHEMICALS	1	16.5
	PHARMACEUTICALS	7	167.5
	LOCOMOTIVES	2	139
	ELECTRICAL	7	56
	OTHERS	77	118.09
	Total	215	
Employees take up extra duties and responsibilities	ENGINEERING	121	101.97
	CHEMICALS	1	13
	PHARMACEUTICALS	7	167.93
	LOCOMOTIVES	2	126.5
	ELECTRICAL	7	70.07
	OTHERS	77	116.23
	Total	215	
Employee's follow general code of conduct and rules	ENGINEERING	121	107.48
	CHEMICALS	1	37
	PHARMACEUTICALS	7	163.14
	LOCOMOTIVES	2	118
	ELECTRICAL	7	60.14
	OTHERS	77	108.82
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.104 - Test Statistics^{ab}: Kruskal-Wallis Test for Nature of the Industry and Employee Outcomes

Employee Outcomes	Competence of an Employee	Employee's co-operation with is satisfactory.	Employees co-operate among themselves	Employee's general behavior is good	Employees are committed
Chi-Square	5.113	6.218	9.903	14.644	10.021
df	5	5	5	5	5
Asymp. Sig.	.402	.286	.078	.012	.075

Test Statistics Table (Continued)

Employee Outcomes	Employees are punctual and report daily	Employees are regular	Employees take up extra duties and responsibilities	Employee's follow general code of conduct and rules
Chi-Square	18.297	20.719	16.699	13.615
df	5	5	5	5
Asymp. Sig.	.003	.001	.005	.018

a. Kruskal Wallis Test b. Grouping Variable: Nature of Industry

Interpretation

It can be seen from Table 8.104 that the p-value of the following statements on Employee Outcomes are **less than 0.05**: 'Employee's general behavior is good', 'Employees are punctual and report daily for work on time', 'Employees are regular', 'Employees take up extra duties and responsibilities' and 'Employees follow general code of conduct and rules'.

Table 8.103 shows that the **mean-rank of firms belonging to the Pharmaceutical industry is high and is 141.86, 177.07, 167.5, 167.5 and 163.14 respectively for the above mentioned statements on Employee Outcomes.**

Thus, as the **p-value** of the statements on **Employee Outcome** is **less than 0.05**, so we **reject the null hypothesis and conclude that there is a significant influence of Nature**

of Industry on Employee Outcome related to Employee’s general behavior, Punctuality and Regularity of employees, Sense of Involvement and Conformance to rules and regulations. For all the other statements whose p-value is more than 0.05, the nature of industry does not influence the Employee Outcomes in the SME firms.

8.9.19. Kruskal-Wallis Test for Nature of the Industry and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Nature of the industry (i.e Engineering, Chemicals, Pharmaceuticals, Locomotives, Electricals, Others) on Organizational Outcomes.

The null and alternate hypothesis is framed as under:

H₀₃₄: There is no significant effect of Nature of the Industry on Organizational Outcomes.

H_{a34}: There is a significant effect of Nature of the Industry on Organizational Outcomes.

TABLE 8.105 - Mean-Ranks: Kruskal-Wallis Test for Nature of the Industry and Organizational Outcomes

Organizational Outcomes	Nature of Industry	N	Mean Rank
Customer satisfaction has increased	ENGINEERING	121	104.55
	CHEMICALS	1	88.5
	PHARMACEUTICALS	7	168.21
	LOCOMOTIVES	2	161.5
	ELECTRICAL	7	88.5
	OTHERS	77	108.06
Our suppliers/ vendors are satisfied with us.	ENGINEERING	121	109.89
	CHEMICALS	1	18.5
	PHARMACEUTICALS	7	159.07
	LOCOMOTIVES	2	152.5
	ELECTRICAL	7	92.5
	OTHERS	77	101.03

Organizational Outcomes	Nature of Industry	N	Mean Rank
Measures have been taken by the firm for product/service development	ENGINEERING	121	113.16
	CHEMICALS	1	81.5
	PHARMACEUTICALS	7	161.21
	LOCOMOTIVES	2	15.5
	ELECTRICAL	7	81.5
	OTHERS	77	100.21
	Total	215	
Products/service Quality shows improvement	ENGINEERING	121	110.11
	CHEMICALS	1	81.5
	PHARMACEUTICALS	7	135.5
	LOCOMOTIVES	2	176
	ELECTRICAL	7	81.5
	OTHERS	77	103.18
The firm has displayed proper utilization of resources.	ENGINEERING	121	110.72
	CHEMICALS	1	92
	PHARMACEUTICALS	7	156.29
	LOCOMOTIVES	2	152
	ELECTRICAL	7	92
	OTHERS	77	99.08
Average Number of defects of products / deficiencies in service shows a decrease	ENGINEERING	121	108.86
	CHEMICALS	1	26
	PHARMACEUTICALS	7	122.36
	LOCOMOTIVES	2	26
	ELECTRICAL	7	102.5
	OTHERS	77	109.04
There is an increase in the Net Profit Margin.	ENGINEERING	121	108.8
	CHEMICALS	1	129.5
	PHARMACEUTICALS	7	118.07
	LOCOMOTIVES	2	49.5
	ELECTRICAL	7	95.93
	OTHERS	77	108.17
	Total	215	
Return on Investment (in %) has increased	ENGINEERING	121	110.74
	CHEMICALS	1	129
	PHARMACEUTICALS	7	58.71
	LOCOMOTIVES	2	199
	ELECTRICAL	7	96
	OTHERS	77	106.64

TABLE 8.106 - Test Statistics^{ab}: Kruskal-Wallis Test for Nature of the Industry and Organizational Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	13.114	5	0.022
Our suppliers/ vendors are satisfied with us.	13.654	5	0.018
Measures have been taken by the firm for product/ service development	15.723	5	0.008
Products/service Quality shows improvement	7.128	5	0.211
The firm has displayed proper utilization of resources.	11.42	5	0.044
Average Number of defects of products / deficiencies in service shows a decrease	6.824	5	0.234
There is an increase in the Net Profit Margin.	2.756	5	0.737
Return on Investment (in %) has increased	10.852	5	0.054

a. Kruskal Wallis Test b. Grouping Variable: Nature of Industry

Interpretation

It can be seen from Table 8.106 that the p-value of the following statements on **Organizational Outcomes** are less than **0.05**:

- Customer Satisfaction has increased.
- Our suppliers/ vendors are satisfied with us.
- Measures have been taken by the firm for product/ service development
- The firm has displayed proper utilization of resources.

Table 8.105 shows that the mean-ranks of the **SME firms belonging to the Pharmaceutical industry is high for all the above mentioned statements and is 168.21, 159.07, 161.21 and 156.29 respectively, for Organizational Outcomes related to Customer Satisfaction, Supplier/ Vendor Satisfaction, Product/ Service Development and Proper utilization of resources. Thus, the owners/Managing heads in the SME firms belonging to the Pharmaceutical industry believes that the above mentioned outcomes have improved in their firms.**

Thus, as the **p-value** of the above mentioned statements on **Organizational Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Nature of the industry on the Organizational Outcomes related to Customer Satisfaction, Supplier/ Vendor Satisfaction, Product/ Service Development and Proper utilization of resources.**

For all the other statements whose p-value is more than 0.05, the nature of industry does not influence the Organizational Outcomes in the SME firms.

8.9.20. Kruskal-Wallis Test for Total Employee Strength and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of total number of employees on HR Practices. The total employee strength was captured under three headings, firms with less than 50 employees, between 51 to 100 employees and more than 100 employees.

The null and alternate hypothesis is framed as under:

H₀₃₅: There is no significant influence of Total Employee Strength on HR Practices

H_{a35}: There is a significant influence of Total Employee Strength on HR Practices

TABLE 8.107 - Mean-Ranks: Kruskal-Wallis Test for Total Employee Strength and HR Practices

HR Practices	Total Number of Employees	N	Mean Rank
Our organization places the right person in the right job	Less than 50 employees	157	103.14
	Between 51 and 100 employees	51	124.21
	More than 100 employees	7	99
	Total	215	
Selection is on the basis of merit	Less than 50 employees	157	99.15
	Between 51 and 100 employees	51	129.85
	More than 100 employees	7	147.29
	Total	215	

HR Practices	Total Number of Employees	N	Mean Rank
Organizes training and skill development programs	Less than 50 employees	157	100.79
	Between 51 and 100 employees	51	129.49
	More than 100 employees	7	113.14
	Total	215	
Employees are rotated from one job to another	Less than 50 employees	157	103.49
	Between 51 and 100 employees	51	124.03
	More than 100 employees	7	92.43
	Total	215	
Appraises the performance of employees at regular intervals.	Less than 50 employees	157	103.31
	Between 51 and 100 employees	51	120.62
	More than 100 employees	7	121.36
	Total	215	
Employees receive feedback	Less than 50 employees	157	100.91
	Between 51 and 100 employees	51	126.03
	More than 100 employees	7	135.71
	Total	215	
Enough opportunity for career growth	Less than 50 employees	157	101.9
	Between 51 and 100 employees	51	123.13
	More than 100 employees	7	134.5
	Total	215	
Compensation is decided on the basis of competence or ability	Less than 50 employees	157	105.35
	Between 51 and 100 employees	51	118.09
	More than 100 employees	7	94
	Total	215	
Good performers are given financial incentives	Less than 50 employees	157	104.07
	Between 51 and 100 employees	51	116.45
	More than 100 employees	7	134.5
	Total	215	
Good performers are given non-financial incentives.	Less than 50 employees	157	116.19
	Between 51 and 100 employees	51	80.31
	More than 100 employees	7	125.93
	Total	215	
Good performers are given more authority and responsibility.	Less than 50 employees	157	98.62
	Between 51 and 100 employees	51	128.84
	More than 100 employees	7	166.5
	Total	215	
Employees participate in the decision-making process.	Less than 50 employees	157	106.07
	Between 51 and 100 employees	51	113.2
	More than 100 employees	7	113.36

HR Practices	Total Number of Employees	N	Mean Rank
Employees are given opportunity to suggest improvement	Less than 50 employees	157	103.05
	Between 51 and 100 employees	51	116.92
	More than 100 employees	7	154
	Total	215	
Employees can openly communicate with the superiors	Less than 50 employees	157	104.31
	Between 51 and 100 employees	51	115.79
	More than 100 employees	7	133.93

(Source: SPSS output; Primary data)

TABLE 8.108 - Test Statistics^{ab}: Kruskal-Wallis Test for Total Employee Strength and HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	7.067	2	0.029
Selection is on the basis of merit	18.322	2	0
Organizes training and skill development programs	9.502	2	0.009
Employees are rotated from one job to another	5.448	2	0.066
Appraises the performance of employees at regular intervals.	4.912	2	0.086
Employees receive feedback	11.646	2	0.003
Enough opportunity for career growth	6.741	2	0.034
Compensation is decided on the basis of competence or ability	3.079	2	0.214
Good performers are given financial incentives	3.202	2	0.202
Good performers are given non-financial incentives.	14.341	2	0.001
Good performers are given more authority and responsibility.	19.814	2	0
Employees participate in the decision-making process.	0.631	2	0.729
Employees are given opportunity to suggest improvement	8.73	2	0.013
Employees can openly communicate with the superiors	3.887	2	0.143

(Source: SPSS output; Primary data)

Interpretation

It can be seen from Table 8.108 that the **p-value** of the following statements on **HR Practices** are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘Organizes training and skill development programs’, ‘Employees receive feedback’, ‘There is enough opportunity for career growth’, ‘Good performers are given non-financial incentives’, ‘Good performers are given more authority and responsibility’ and ‘Employees are given opportunity to suggest improvement’.

Table 8.107 shows that the **mean-ranks of the SME firms whose employee strength is between 51 to 100 employees is high and is 124.21 and 129.49 respectively, for the HR Practices related to Human Resource Planning i.e replacing the right person in the right job and Training & Skill Development Programs.**

Table 8.107 further shows that the **mean-ranks of the SME firms with more than 100 employees is high and is 147.29, 135.71, 134.5, 125.93, 166.5 and 154 respectively, for the HR Practices related to Selection Methods i.e Merit-based Selection, Feedback Mechanism, Opportunities for career growth, Motivational activities related to giving non-financial incentives, Delegation of Power related to authority and responsibility and opportunities for giving suggestions for improvement.**

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis and conclude that there is a significant influence of Number of employees (or employee strength) on HR Practices; with maximum influence of firms with more than 50 employees.**

For all the other statements whose p-value is more than 0.05, the total employee strength does not influence the HR Practices in the SME firms.

8.9.21. Kruskal-Wallis Test for Total Employee Strength and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of total number of employees on Employee Outcomes. The total employee strength was captured under three headings, 'firms with less than 50 employees', 'between 51 to 100 employees' and 'more than 100 employees'.

The null and alternate hypothesis is framed as under:

H₀₃₆: There is no significant influence of Total Employee Strength on Employee Outcomes

H_{a36}: There is a significant influence of Total Employee Strength on Employee Outcomes

TABLE 8.109 - Mean-Ranks: Kruskal-Wallis Test for Total Employee Strength and Employee Outcomes

Employee Outcomes	Total Employee Strength	N	Mean Rank
Competence of an Employee	Less than 50 employees	157	101.6
	Between 51 and 100 employees	51	122.03
	More than 100 employees	7	149.36
	Total	215	
Employee's co-operation with is satisfactory.	Less than 50 employees	157	104.45
	Between 51 and 100 employees	51	121.97
	More than 100 employees	7	85.86
	Total	215	
Employees co-operate among themselves	Less than 50 employees	157	108.09
	Between 51 and 100 employees	51	111.05
	More than 100 employees	7	83.71
	Total	215	
Employee's general behavior is good	Less than 50 employees	157	104.47
	Between 51 and 100 employees	51	117.34
	More than 100 employees	7	119
	Total	215	
Employees are committed	Less than 50 employees	157	102.92
	Between 51 and 100 employees	51	125.1
	More than 100 employees	7	97.29
	Total	215	
Employees are punctual and report	Less than 50 employees	157	105.54
	Between 51 and 100 employees	51	114.05

Employee Outcomes	Total Employee Strength	N	Mean Rank
daily	More than 100 employees	7	119.07
Employees are regular	Less than 50 employees	157	107.42
	Between 51 and 100 employees	51	106.41
	More than 100 employees	7	132.5
	Total	215	
Employees take up extra duties and responsibilities	Less than 50 employees	157	102.08
	Between 51 and 100 employees	51	126.77
	More than 100 employees	7	103.93
	Total	215	
Employee's follow general code of conduct and rules	Less than 50 employees	157	103.58
	Between 51 and 100 employees	51	123.4
	More than 100 employees	7	94.86
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.110 - Mean-Ranks: Kruskal-Wallis Test for Total Employee Strength and Employee Outcomes

Employee Outcomes	Chi-Square	df	Asymp. Sig.
Competence of an Employee	11.683	2	0.003
Employee's co-operation with is satisfactory.	5.77	2	0.056
Employees co-operate among themselves	1.477	2	0.478
Employee's general behavior is good	2.401	2	0.301
Employees are committed	5.983	2	0.05
Employees are punctual and report daily	1.083	2	0.582
Employees are regular	1.353	2	0.509
Employees take up extra duties and responsibilities	7.222	2	0.027
Employee's follow general code of conduct and rules	5.227	2	0.073

a. Kruskal Wallis Test b. Grouping Variable: Total Employee Strength

Interpretation

It can be seen from Table 8.110 that the **p-value** of the following statements on **Employee Outcomes** are **less than 0.05**: 'Competence of an Employee to do their assigned task' and 'Employees take up extra duties and responsibilities'.

Table 8.109 shows that the **mean-rank of the SME firms whose employee strength is more than 100 employees is high and is 149.36 for the HR Practice related to Employee Competence (i.e ‘Competence of an Employee to do their assigned task’).**

Table 8.109 further shows that the **mean-rank of the SME firms with 51 to 100 employees is high and is 126.77 for the Employee Outcome related to Employees taking up extra duties and responsibilities i.e a Sense of Involvement.**

Thus, as the **p-value** of the two above statements on **Employee Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Number of employees (or employee strength) on Employee Outcomes; with maximum influence of firms with more than 50 employees for the outcomes related to employee competence and sense of involvement.**

For all the other statements whose p-value is more than 0.05, the total employee strength does not influence the Employee Outcomes in the SME firms.

8.9.22. Kruskal-Wallis Test for Total Employee Strength and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of total number of employees on Organizational Outcomes. The total employee strength was captured under three headings, ‘firms with less than 50 employees’, ‘between 51 to 100 employees’ and ‘more than 100 employees’.

The null and alternate hypothesis is framed as under:

H₀₃₇: There is no significant influence of Total Employee Strength on Organizational Outcomes

H_{a37}: There is a significant influence of Total Employee Strength on Organizational Outcomes

TABLE 8.111 - Mean-Ranks: Kruskal-Wallis Test for Total Employee Strength and Organizational Outcomes

Organizational Employees	Total Employee Strength	N	Mean Rank
Customer satisfaction has increased	Less than 50 employees	157	105.38
	Between 51 and 100 employees	51	118.74
	More than 100 employees	7	88.5
	Total	215	
Our suppliers/ vendors are satisfied with us.	Less than 50 employees	157	102.69
	Between 51 and 100 employees	51	129.36
	More than 100 employees	7	71.36
	Total	215	
Measures have been taken by the firm for product/ service development	Less than 50 employees	157	99.43
	Between 51 and 100 employees	51	138.03
	More than 100 employees	7	81.5
	Total	215	
Products/service Quality shows improvement	Less than 50 employees	157	101.61
	Between 51 and 100 employees	51	131.32
	More than 100 employees	7	81.5
	Total	215	
The firm has displayed proper utilization of resources.	Less than 50 employees	157	99.78
	Between 51 and 100 employees	51	139.65
	More than 100 employees	7	61.79
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	Less than 50 employees	157	102.38
	Between 51 and 100 employees	51	126.05
	More than 100 employees	7	102.5
	Total	215	
There is an increase in the Net Profit Margin.	Less than 50 employees	157	104.29
	Between 51 and 100 employees	51	119.6
	More than 100 employees	7	106.64
	Total	215	
Return on Investment (in %) has increased	Less than 50 employees	157	106.58
	Between 51 and 100 employees	51	122.47
	More than 100 employees	7	34.36
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.112 - Test Statistics^{ab}: Kruskal-Wallis Test for Total Employee Strength and Organizational Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	3.101	2	0.212
Our suppliers/ vendors are satisfied with us.	11.717	2	0.003
Measures have been taken by the firm for product/ service development	19.461	2	0
Products/service Quality shows improvement	12.386	2	0.002
The firm has displayed proper utilization of resources.	24.081	2	0
Avg No of defects of products / deficiencies in service shows decrease	6.756	2	0.034
There is an increase in the Net Profit Margin.	2.731	2	0.255
Return on Investment (in %) has increased	14.732	2	0.001

a. Kruskal Wallis Test b. Grouping Variable: Total Employee Strength

Interpretation

It can be seen from Table 8.112 that the p-value of the following statements on **Organizational Outcomes** are **less than 0.05**: Supplier Satisfaction has increased, Measures have been taken by the firm for product/ service development, Products/service Quality shows improvement, The firm has displayed proper utilization of resources, Average Number of defects of products / deficiencies in service shows a decrease and Return on Investment (in %) has increased.

Table 8.111 shows that the mean-ranks of the **SME firms with total employee strength 'between 51 to 100 employees'** is high for all the above mentioned statements and is **129.36, 138.03, 131.32, 139.69, 126.05 and 122.47** respectively.

Thus, the owners/Managing heads in the SME firms with total employee strength 'between 51 to 100 employees' believes that the above mentioned organizational outcomes have improved in their firms. Thus, as the **p-value** of the above mentioned statements on **Organizational Outcomes** is **less than 0.05**, so we reject the null hypothesis and conclude that there is a significant influence of total number of employees on the Organizational Outcomes related to Supplier/ Vendor Satisfaction, Product/ Service Development, Product/ Service quality improvement, Proper

utilization of resources, decrease in defects of products / deficiencies in service and Return on Investment (ROI); with highest influence of firms whose total employee strength is between 51 to 100 employees. For all the other statements whose p-value is more than 0.05, the total number of employees or employee strength does not influence the Organizational Outcomes in the SME firms.

8.9.23. Kruskal-Wallis Test for Total Number of Contract Employees and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of total number of Contractual employees on HR Practices. The total employee strength was captured under three headings, ‘firms with less than 50 contractual employees’, ‘firms with 50 to 94 contractual employees’ and ‘firms with more than 94 contractual employees’.

The null and alternate hypothesis is framed as under:

H₀₃₈: There is no significant influence of Total number of Contractual Employees on HR Practices

H_{a38}: There is a significant influence of Total number of Contractual Employees on HR Practices

TABLE 8.113 - Mean-Ranks: Kruskal-Wallis Test for Total number of Contractual Employees on HR Practices

HR Practices	Number of contractual employment (Binned)	N	Mean Rank
Our organization places the right person in the right job	Less than 50 employees	201	105.76
	50 to 94 Employees	7	153.86
	More than 94 employees	7	120.15
Selection is on the basis of merit	Less than 50 employees	201	103.91
	50 to 94 employees	7	73.14
	More than 94 employees	7	173.14
Organizes training and skill development programs	Less than 50 employees	201	108.32
	50 to 94 employees	7	134.14
	More than 94 employees	7	123.15
	Total	215	

HR Practices	Number of contractual employment (Binned)	N	Mean Rank
Employees are rotated from one job to another	Less than 50 employees	201	109.15
	50 to 94 employees	7	103.64
	More than 94 employees	7	112.13
Appraises the performance of employees at regular intervals.	Less than 50 employees	201	107.07
	50 to 94 employees	7	149.21
	More than 94 employees	7	90.15
Employees receive feedback	Less than 50 employees	201	108.73
	50 to 94 employees	7	67
	More than 94 employees	7	120
	Total	215	
Enough opportunity for career growth	Less than 50 employees	201	107.69
	50 to 94 employees	7	105.07
	More than 94 employees	7	162.07
	Total	215	
Compensation is decided on the basis of competence or ability	Less than 50 employees	201	108
	50 to 94 employees	7	122.14
	More than 94 employees	7	111.15
	Total	215	
Good performers are given financial incentives	Less than 50 employees	201	107.77
	50 to 94 employees	7	110.06
	More than 94 employees	7	157.5
	Total	215	
Good performers are given non-financial incentives.	Less than 50 employees	201	107.51
	50 to 94 employees	7	110.14
	More than 94 employees	7	109.5
Good performers are given more authority and responsibility.	Less than 50 employees	201	105.23
	50 to 94 employees	7	154
	More than 94 employees	7	111.36
Employees participate in the decision-making process.	Less than 50 employees	201	107.75
	50 to 94 employees	7	141.21
	More than 94 employees	7	121.33
Employees are given opportunity to suggest improvement	Less than 50 employees	201	107.62
	50 to 94 employees	7	100
	More than 94 employees	7	122
Employees can openly communicate with the superiors	Less than 50 employees	201	106.69
	50 to 94 employees	7	122.23
	More than 94 employees	7	162.21

(Source: SPSS output; Primary data)

TABLE 8-114- Test Statistics^{ab}: Kruskal-Wallis Test for Total Number of Contractual Employees on HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	7.24	2	0.027
Selection is on the basis of merit	20.133	2	0
Organizes training and skill development programs	4.048	2	0.132
Employees are rotated from one job to another	1.85	2	0.397
Appraises the performance of employees at regular intervals.	5.183	2	0.075
Employees receive feedback	1.498	2	0.473
Enough opportunity for career growth	10.436	2	0.005
Compensation is decided on the basis of competence or ability	1.113	2	0.573
Good performers are given financial incentives	8.756	2	0.013
Good performers are given non-financial incentives.	0.32	2	0.852
Good performers are given more authority and responsibility	8.005	2	0.018
Employees participate in the decision-making process.	3.651	2	0.161
Employees are given opportunity to suggest improvement	1.155	2	0.561
Employees can openly communicate with the superiors	8.926	2	0.012

a. Kruskal Wallis Test b. Grouping Variable: Total No. of contract employees

Interpretation

It can be seen from Table 8.114 that the **p-value** of the following statements on **HR Practices** are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘There is enough opportunity for career growth’, ‘Good performers are given financial incentives’, ‘Good performers are given more authority and responsibility’ and ‘Employees can openly communicate with the superiors’.

Table 8.113 shows that the **mean-ranks of the SME firms whose number of Contract employees are between 51 to 94, is high and is 153.86 and 154 respectively, for the HR Practices related to Human Resource Planning i.e placing the right person in the right job and Delegation of Power i.e. Good performers are given more authority and responsibility.** Table 8.113 further shows that the **mean-ranks of the**

SME firms with more than 94 Contractual employees is high and is 173.14, 162.07, 157.5 and 154 respectively, for the HR Practices related to Selection Methods i.e Merit-based Selection, Opportunities for career growth, Motivational activities related to giving financial incentives, Delegation of Power related to authority and responsibility and open communication with the superiors.

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Number of contractual employees on HR Practices; with maximum influence of firms with more than 50 contractual employees.** For all the other statements whose p-value is more than 0.05, the total number of contract employees does not influence the HR Practices in the SME firms.

8.9.24. Kruskal-Wallis Test for Total Number of Contract Employees and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of total number of Contractual employees on Employee Outcomes. The total employee strength was captured under three headings, 'firms with less than 50 contractual employees', 'firms with 50 to 94 contractual employees' and 'firms with more than 94 contractual employees'.

The null and alternate hypothesis is framed as under:

H₀₃₉: There is no significant influence of Total number of Contractual Employees on Employee Outcomes

H_{a39}: There is a significant influence of Total number of Contractual Employees on Employee Outcomes

TABLE 8.115 - Mean-Ranks: Kruskal-Wallis Test for Total number of Contractual Employees on Employee Outcomes

Employee Outcomes	Number of contractual employment (Binned)	N	Mean Rank
Competence of an Employee	Less than 50 employees	201	107.56
	Between 51 and 94 employees	7	79.36
	More than 94 employees	7	149.36
Employee's co-operation with is satisfactory.	Less than 50 employees	201	107.9
	Between 51 and 94 employees	7	83.36
	More than 94 employees	7	135.43
	Total	215	
Employees co-operate among themselves	Less than 50 employees	201	107.95
	Between 51 and 94 employees	7	62.93
	More than 94 employees	7	154.57
	Total	215	
Employee's general behavior is good	Less than 50 employees	201	108.65
	Between 51 and 94 employees	7	32.5
	More than 94 employees	7	164.71
	Total	215	
Employees are committed	Less than 50 employees	201	107.18
	Between 51 and 94 employees	7	77.29
	More than 94 employees	7	162.14
Employees are punctual and report daily	Less than 50 employees	201	109.12
	Between 51 and 94 employees	7	47.36
	More than 94 employees	7	136.36
	Total	215	
Employees are regular	Less than 50 employees	201	107.67
	Between 51 and 94 employees	7	39.07
	More than 94 employees	7	186.5
	Total	215	
Employees take up extra duties and responsibilities	Less than 50 employees	201	108.74
	Between 51 and 94 employees	7	47.5
	More than 94 employees	7	147.21
	Total	215	
Employee's follow general code of conduct and rules	Less than 50 employees	201	108.28
	Between 51 and 94 employees	7	67.36
	More than 94 employees	7	140.57
	Total	215	

(Source: SPSS Output; Primary data)

TABLE 8.116 - Test Statistics^{ab}: Kruskal Wallis Test for Total Number of Contractual Employees on Employee Outcomes

Employee Outcomes	Chi-Square	df	Asymp. Sig.
Competence of an Employee	7.293	2	0.026
Employee's co-operation with Mgt. is satisfactory.	3.575	2	0.167
Employees co-operate among themselves	9.432	2	0.009
Employee's general behavior is good	20.695	2	0
Employees are committed	8.254	2	0.016
Employees are punctual and report daily	9.325	2	0.009
Employees are regular	23.583	2	0
Employees take up extra duties and responsibilities	11.173	2	0.004
Employee's follow general code of conduct and rules	6.068	2	0.048

a. Kruskal Wallis Test b. Grouping Variable: Number of contractual employment (Binned)

Interpretation

It can be seen from Table 8.116 that the **p-value** of all the following statements on **Employee Outcomes** are **less than 0.05**: 'Competence of an Employee to do their assigned task', 'Employees co-operate among themselves', 'Employee's general behavior is good', 'Employees are committed', 'Employees are punctual and report daily', 'Employees are regular', 'Employees take up extra duties and responsibilities' and 'Employee's follow general code of conduct and rules'.

Table 8.115 shows that the **mean-rank of the SME firms whose employee strength is more than 94 employees is high and is 149.36, 154.57, 164.71, 162.14, 136.36, 186.5, 147.21 and 140.57 for all the above mentioned statements related to Employee Outcomes.**

Thus, as the **p-value** of all the above statements on **Employee Outcomes** is **less than 0.05**, so we **reject the null hypothesis and conclude that there is a significant influence of Number of employees (or employee strength) on Employee Outcomes; with maximum influence of firms with more than 94 Contract employees for the Employee Outcomes related to Competence of employees, Co-operate among employees, General behavior of employees, Employee Commitment, Punctuality**

and Regularity of employees, Taking up extra duties and responsibilities showing a sense of Involvement & Participation and Conformance to rules & regulations.

For the other statement whose p-value is more than 0.05, the total number of contract employees does not influence the Employee Outcomes in the SME firms.

8.9.25. Kruskal-Wallis Test for Total Number of Contract Employees and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of total number of Contractual employees on Organizational Outcomes. The total employee strength was captured under three headings, ‘firms with less than 50 contractual employees’, ‘firms with 50 to 94 contractual employees’ and ‘firms with more than 94 contractual employees’.

The null and alternate hypothesis is framed as under:

H₀₄₀: There is no significant influence of Total number of Contractual Employees on Organizational Outcomes

H_{a40}: There is a significant influence of Total number of Contractual Employees on Organizational Outcomes

TABLE 8.117 - Mean-Ranks: Kruskal-Wallis Test for Total number of Contractual Employees on Organizational Outcomes

Organizational Outcomes	Number of contractual employment (Binned)	N	Mean Rank
Customer satisfaction has increased	Less than 50 employees	201	110.22
	Between 51 and 94 employees	7	57.64
	More than 94 employees	7	94.5
	Total	215	
Our suppliers/ vendors are satisfied with us.	Less than 50 employees	201	108.92
	Between 51 and 94 employees	7	92.5
	More than 94 employees	7	97.07
	Total	215	

Organizational Outcomes	Number of contractual employment (Binned)	N	Mean Rank
Measures have been taken by the firm for product/ service development	Less than 50 employees	201	108
	Between 51 and 94 employees	7	81.5
	More than 94 employees	7	134.64
	Total	215	
Products/service Quality shows improvement	Less than 50 employees	201	108.96
	Between 51 and 94 employees	7	53
	More than 94 employees	7	135.5
	Total	215	
The firm has displayed proper utilization of resources.	Less than 50 employees	201	108.38
	Between 51 and 94 employees	7	92
	More than 94 employees	7	113.21
	Total	215	
Average Number of defects of products / deficiencies in service shows a decrease	Less than 50 employees	201	107.84
	Between 51 and 94 employees	7	69.71
	More than 94 employees	7	150.79
	Total	215	
There is an increase in the Net Profit Margin.	Less than 50 employees	201	108.09
	Between 51 and 94 employees	7	129.5
	More than 94 employees	7	83.79
	Total	215	
Return on Investment (in %) has increased	Less than 50 employees	201	109.83
	Between 51 and 94 employees	7	129
	More than 94 employees	7	34.36
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8-118 - Test Statistics^{ab}: Kruskal-Wallis Test for Total Number of Contractual Employees on Organizational Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	6.456	2	0.04
Our suppliers/ vendors are satisfied with us.	0.849	2	0.654
Measures have been taken by the firm for product/ service development	3.08	2	0.214
Products/service Quality shows improvement	8.448	2	0.015
The firm has displayed proper utilization of resources.	0.632	2	0.729

Average Number of defects of products / deficiencies in service shows a decrease	7.159	2	0.028
There is an increase in the Net Profit Margin.	2.22	2	0.33
Return on Investment (in %) has increased	12.556	2	0.002

a. Kruskal Wallis b. Grouping Variables: Number of contractual employment (Binned)

Interpretation

It can be seen from Table 8.118 that the p-value of the following statements on **Organizational Outcomes** are **less than 0.05**: Customer Satisfaction has increased, Products/service Quality shows improvement, Average Number of defects of products / deficiencies in service shows a decrease and Return on Investment (in %) has increased.

Table 8.117 shows that the mean-ranks of the **SME firms with less than 50 Contract employees is high for the statements** ‘Customer Satisfaction has increased’ and ‘Return on Investment (in %) has increased’. **Thus, the owners/Managing heads in the SME firms with less than 50 contractual employees believes that the organizational outcomes related to customer satisfaction and Return on Investment has improved in their firms.** Further, Table 8.117 shows that the mean-ranks of the **SME firms with more than 94 Contract employees is high for the statements** ‘Products/service Quality shows improvement’ and ‘Average Number of defects of products / deficiencies in service shows a decrease’. Thus, as the **p-value** of the above mentioned statements on **Organizational Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and conclude that there is a **significant influence of total number of Contractual employees on the Organizational Outcomes related to Customer Satisfaction, Product/ Service quality improvement, decrease in defects of products / deficiencies in service and Return on Investment (ROI); with highest influence of firms whose total number of contractual employees is less than 50 or more than 94 employees.** For all the other statements whose p-value is more than 0.05, the total number of contractual employees does not influence the Organizational Outcomes in the SME firms.

8.9.26. Kruskal-Wallis Test for Total Number of Women Employees and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of total number of women employees on HR Practices. The total strength of women employees was captured under three headings, ‘firms with less than 20 women employees’, ‘firms with 20 to 40 women employees’ and ‘firms with more than 40 women employees’.

The null and alternate hypothesis is framed as under:

H₀₄₁: There is no significant influence of Total number of Women Employees on HR Practices

H_{a41}: There is a significant influence of Total number of Women Employees on HR Practices

TABLE 8.119 - Mean-Ranks: Kruskal-Wallis Test for Total Number of Women Employees and HR Practices

HR Practices	Number of women employees (Binned)	N	Mean Rank
Our organization places the right person in the right job	Less than 20 employees	210	107.3
	Between 20 and 40 employees	2	195
	More than 40 employees	3	99
	Total	215	
Selection is on the basis of merit	Less than 20 employees	210	105.83
	Between 20 and 40 employees	2	199
	More than 40 employees	3	199
	Total	215	
Organizes training and skill development programs	Less than 20 employees	210	109.31
	Between 20 and 40 employees	2	53
	More than 40 employees	3	53
	Total	215	
Employees are rotated from one job to another	Less than 20 employees	210	109.34
	Between 20 and 40 employees	2	24.5
	More than 40 employees	3	70
	Total	215	

HR Practices	Number of women employees (Binned)	N	Mean Rank
Appraises the performance of employees at regular intervals.	Less than 20 employees	210	108.35
	Between 20 and 40 employees	2	93.5
	More than 40 employees	3	93.5
	Total	215	
Employees receive feedback	Less than 20 employees	210	108.79
	Between 20 and 40 employees	2	22.5
	More than 40 employees	3	110
	Total	215	
Enough opportunity for career growth	Less than 20 employees	210	106.15
	Between 20 and 40 employees	2	185.5
	More than 40 employees	3	185.5
	Total	215	
Compensation is decided on the basis of competence or ability	Less than 20 employees	210	107.4
	Between 20 and 40 employees	2	192.5
	More than 40 employees	3	94
	Total	215	
Good performers are given financial incentives	Less than 20 employees	210	106.27
	Between 20 and 40 employees	2	180.5
	More than 40 employees	3	180.5
	Total	215	
Good performers are given non-financial incentives.	Less than 20 employees	210	107.04
	Between 20 and 40 employees	2	206.5
	More than 40 employees	3	109.5
	Total	215	
Good performers are given more authority and responsibility.	Less than 20 employees	210	106.85
	Between 20 and 40 employees	2	104
	More than 40 employees	3	191.5
	Total	215	
Employees participate in the decision-making process.	Less than 20 employees	210	107.01
	Between 20 and 40 employees	2	193
	More than 40 employees	3	120.5
	Total	215	
Employees are given opportunity to suggest improvement	Less than 20 employees	210	107.29
	Between 20 and 40 employees	2	194.5
	More than 40 employees	3	100
	Total	215	
Employees can openly communicate with the superiors	Less than 20 employees	210	106.04
	Between 20 and 40 employees	2	190.5
	More than 40 employees	3	190.5
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.120- Test Statistics^{ab}: Kruskal-Wallis Test for Total Number of Women Employees and HR Practices

HR Practices	Chi-Square	df	Asymp. Sig.
Our organization places the right person in the right job	6.192	2	0.045
Selection is on the basis of merit	16.366	2	0
Organizes training and skill development programs	4.613	2	0.1
Employees are rotated from one job to another	5.645	2	0.059
Appraises the performance of employees at regular intervals.	0.412	2	0.814
Employees receive feedback	5.759	2	0.056
Enough opportunity for career growth	9.245	2	0.01
Compensation is decided on the basis of competence or ability	6.002	2	0.05
Good performers are given financial incentives	7.848	2	0.02
Good performers are given non-financial incentives.	5.419	2	0.067
Good performers are given more authority and responsibility.	7.019	2	0.03
Employees participate in the decision-making process.	4.42	2	0.11
Employees are given opportunity to suggest improvement	5.865	2	0.053
Employees can openly communicate with the superiors	13.624	2	0.001

a. Kruskal Wallis Test b. Grouping Variable: Number of women employees (Binned)

Interpretation

It can be seen from Table 8.120 that the **p-value** of the following statements on **HR Practices** are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘There is enough opportunity for career growth’, ‘Compensation is decided on the basis of competence or ability’,

‘Good performers are given financial incentives’, ‘Good performers are given more authority and responsibility’ and ‘Employees can openly communicate with the superiors’.

Table 8.119 shows that the **mean-ranks of the SME firms whose number of Women employees is between 20 to 40 is high and is 195 and 192.5, respectively, for the HR Practices related to Human Resource Planning i.e placing the right person in the**

right job and Compensation w.r.t compensation based on one's ability and competence.

Table 8.119 further shows that the **mean-ranks of the SME firms with women employees more than 20 (including between 20-40 and above 40), is high and is 199, 185.5, 180.5, 191.5 and 190.5 respectively, for the HR Practices related to Selection Methods i.e Merit-based Selection, Opportunities for career growth, Motivational activities related to giving financial incentives, Delegation of Power related to authority and responsibility and open communication with the superiors.**

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Number of women employees on HR Practices; with maximum influence of firms with more than 20 women employees.** For all the other statements whose p-value is more than 0.05, the total number of women employees does not influence the HR Practices in the SME firms.

8.9.27. Kruskal-Wallis Test for Industrial Estate and HR Practices

Kruskal-Wallis Test was done to see if there is any effect of Industrial Estate on HR Practices. The Industrial Estates in the study were the eight estates of Vadodara district, including GIDC Makarpura, BIDD Gorwa, Chhani Estate, Sardar Estate, Patel Estate, Padra Estate, Mujmahuda Estate, Vadodara City area and others (including Waghodia Estate, POR Ramangamdi and Savli).

The null and alternate hypothesis is framed as under:

H₀₄₂: There is no significant influence of Industrial Estate on HR Practices

H_{a42}: There is a significant influence of Industrial Estate on HR Practices

TABLE 8.121 - Mean-Ranks: K-Wallis Test for Industrial Estate and HR Practices

HR Practices	ESTATE	N	Mean Rank
Our organization places the right person in the right job	MUJMAHUDA	8	147
	GORWA BIDC	16	135
	CHHANI	18	80.56
	SARDAR ESTATE	13	158.08
	PATEL ESTATE	10	89.7
	PADRA ESTATE	3	99
	VADODARA CITY	23	93.91
	OTHERS	15	111.8
	GIDC MAKARPURA	109	104.11
Selection is on the basis of merit	MUJMAHUDA	8	106.25
	GORWA BIDC	16	142.44
	CHHANI	18	98.22
	SARDAR ESTATE	13	122.42
	PATEL ESTATE	10	45.25
	PADRA ESTATE	3	108.5
	VADODARA CITY	23	93.89
	OTHERS	15	132.63
	GIDC MAKARPURA	109	108.3
Organizes training and skill development programs	MUJMAHUDA	8	115.13
	GORWA BIDC	16	135.91
	CHHANI	18	102.89
	SARDAR ESTATE	13	132.81
	PATEL ESTATE	10	72
	PADRA ESTATE	3	121.5
	VADODARA CITY	23	70.57
	OTHERS	15	132.63
	GIDC MAKARPURA	109	108.71
	Total	215	
Employees are rotated from one job to another	MUJMAHUDA	8	178.75
	GORWA BIDC	16	114.91
	CHHANI	18	96.44
	SARDAR ESTATE	13	117.35
	PATEL ESTATE	10	47.25
	PADRA ESTATE	3	148.5
	VADODARA CITY	23	84.89
	OTHERS	15	125.17
	GIDC MAKARPURA	109	109.56

HR Practices	ESTATE	N	Mean Rank
Appraises the performance of employees at regular intervals.	MUJMAHUDA	8	166.63
	GORWA BIDC	16	123.97
	CHHANI	18	131.42
	SARDAR ESTATE	13	153.5
	PATEL ESTATE	10	115.4
	PADRA ESTATE	3	93.5
	VADODARA CITY	23	77
	OTHERS	15	119.5
	GIDC MAKARPURA	109	96.74
Employees receive feedback	MUJMAHUDA	8	155
	GORWA BIDC	16	138.44
	CHHANI	18	100.56
	SARDAR ESTATE	13	123.85
	PATEL ESTATE	10	78.5
	PADRA ESTATE	3	110
	VADODARA CITY	23	94.24
	OTHERS	15	122
	GIDC MAKARPURA	109	103.05
Enough opportunity for career growth	MUJMAHUDA	8	165
	GORWA BIDC	16	159.88
	CHHANI	18	120.11
	SARDAR ESTATE	13	153.96
	PATEL ESTATE	10	46.15
	PADRA ESTATE	3	103.5
	VADODARA CITY	23	101.07
	OTHERS	15	85.43
	GIDC MAKARPURA	109	99.09
Compensation is decided on the basis of competence or ability	MUJMAHUDA	8	143.25
	GORWA BIDC	16	155.56
	CHHANI	18	148.72
	SARDAR ESTATE	13	154.62
	PATEL ESTATE	10	105.8
	PADRA ESTATE	3	94
	VADODARA CITY	23	84.52
	OTHERS	15	82.93
	GIDC MAKARPURA	109	95.14
Good performers are given financial incentives	MUJMAHUDA	8	118.63
	GORWA BIDC	16	160.38
	CHHANI	18	131.17

HR Practices	ESTATE	N	Mean Rank
	SARDAR ESTATE	13	135.46
	PATEL ESTATE	10	69.9
	PADRA ESTATE	3	79.67
	VADODARA CITY	23	104.24
	OTHERS	15	90.4
	GIDC MAKARPURA	109	99.92
Good performers are given non-financial incentives	MUJMAHUDA	8	118.88
	GORWA BIDC	16	122.59
	CHHANI	18	105.06
	SARDAR ESTATE	13	87.35
	PATEL ESTATE	10	120.7
	PADRA ESTATE	3	90
	VADODARA CITY	23	134.41
	GIDC MAKARPURA	109	101.06
	OTHERS	15	113.13
Good performers are given more authority and responsibility.	MUJMAHUDA	8	147.75
	GORWA BIDC	16	111.22
	CHHANI	18	123.44
	SARDAR ESTATE	13	117.46
	PATEL ESTATE	10	30.4
	PADRA ESTATE	3	55
	VADODARA CITY	23	82.41
	OTHERS	15	127.67
	GIDC MAKARPURA	109	112.2
Employees participate in the decision-making process.	MUJMAHUDA	8	130.81
	GORWA BIDC	16	148.31
	CHHANI	18	96.89
	SARDAR ESTATE	13	95.12
	PATEL ESTATE	10	74.5
	PADRA ESTATE	3	120.5
	VADODARA CITY	23	79.09
	OTHERS	15	86.17
	GIDC MAKARPURA	109	115.61
Employees are given opportunity to suggest improvement	MUJMAHUDA	8	147.25
	GORWA BIDC	16	159.06
	CHHANI	18	89.06
	SARDAR ESTATE	13	114.54
	PATEL ESTATE	10	67.2

HR Practices	ESTATE	N	Mean Rank
	PADRA ESTATE	3	100
	VADODARA CITY	23	75.09
	OTHERS	15	126.87
	GIDC MAKARPURA	109	108.28
Employees can openly communicate with the superiors	MUJMAHUDA	8	165.75
	GORWA BIDC	16	153.38
	CHHANI	18	91.5
	SARDAR ESTATE	13	106.73
	PATEL ESTATE	10	160.8
	PADRA ESTATE	3	91.5
	VADODARA CITY	23	89.04
	OTHERS	15	89.43
	GIDC MAKARPURA	109	102.14

(Source: SPSS output; Primary data)

TABLE 8.122- Test Statistics^{ab}: Kruskal-Wallis Test for Industrial Estate and HR Practices

HR Practices	Chi-Square	Df	Asymp. Sig.
Our organization places the right person in the right job	31.994	8	0
Selection is on the basis of merit	29.531	8	0
Organizes training and skill development programs	22.707	8	0.004
Employees are rotated from one job to another	31.217	8	0
Appraises the performance of employees at regular intervals.	41.146	8	0
Employees receive feedback	21.628	8	0.006
Enough opportunity for career growth	46.567	8	0
Compensation is decided on the basis of competence or ability	58.232	8	0
Good performers are given financial incentives	27.205	8	0.001
Good performers are given non-financial incentives.	9.489	8	0.303
Good performers are given more authority and responsibility.	36.27	8	0
Employees participate in the decision-making process.	23.067	8	0.003
Employees are given opportunity to suggest improvement	41.565	8	0
Employees can openly communicate with the superiors	43.174	8	0

a. Kruskal Wallis Test b. Grouping Variable: ESTATE

Interpretation

It can be seen from Table 8.122 that the **p-value** of the following statements on **HR Practices** are **less than 0.05**: ‘Our organization places the right person in the right job’, ‘Selection is on the basis of merit’, ‘Organizes training and skill development programs’, ‘Employees are rotated from one job to another’, ‘Appraises the performance of employees at regular intervals’, ‘Employees receive feedback’, ‘There is enough opportunity for career growth’, ‘Compensation is decided on the basis of competence or ability’, ‘Good performers are given financial incentives’, ‘Good performers are given more authority and responsibility’, ‘Employees participate in the decision-making process’, ‘Employees are given opportunity to suggest improvement’ and ‘Employees can openly communicate with the superiors’.

Table 8.121 shows that the **mean-ranks of the SME firms in B IDC Gorwa Industrial Estate is high and is 142.44, 135.91, 155.56, 160.38, 148.31 and 159.06** respectively, for the HR Practices related to Selection Method i.e Merit-based Selection, Training and Skill development, Compensation w.r.t compensation based on one’s ability and competence, Motivational aspects related to receiving financial incentives, Employee Participation by way of participation in the decision-making process and opportunity to suggest improvements.

Table 8.121 shows that the mean-rank of the SME firms in the Sardar Estate is high and is 158.08 for the statement related to Manpower Planning i.e placing the right person in the right job. Table 1 further shows that the mean-ranks of the SME firms in Mujmahuda Industrial Estate is high and is 178.75, 166.63, 155, 165, 147.75 and 165.75 respectively, for the HR Practices related to Job-rotation, a regular Performance Appraisal system, Feedback mechanism, Opportunities for career growth, Delegation of Power related to authority and responsibility and open communication with the superiors.

Thus, as the **p-value** of all the above statements on **HR Practices** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of Industrial Estate on HR Practices; with maximum influence of firms in the B IDC**

Gorwa Estate, Mujmahuda Estate and Sardar Estate. For all the other statements whose p-value is more than 0.05, the Industrial Estate does not influence the HR Practices in the SME firms.

8.9.28. Kruskal-Wallis Test for Industrial Estate and Employee Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Industrial Estate on Employee Outcomes. The Industrial Estates in the study were the eight estates of Vadodara district, including GIDC Makarpura, BIDD Gorwa, Chhani Estate, Sardar Estate, Patel Estate, Padra Estate, Mujmahuda Estate, Vadodara City area and others (including Waghodia Estate, POR Ramangamdi and Savli).

The null and alternate hypothesis is framed as under:

H₀₄₃: There is no significant influence of Industrial Estate on Employee Outcomes

H_{a43}: There is a significant influence of Industrial Estate on Employee Outcomes

TABLE 8.123- Mean-Ranks: Kruskal-Wallis Test for Industrial Estate and Employee Outcomes

Employee Outcomes	Estate	N	Mean Rank
Employee's co-operation with Mgt. is satisfactory.	MUJMAHUDA	8	132.25
	GORWA BIDD	16	126.69
	CHHANI	18	110
	SARDAR ESTATE	13	110
	PATEL ESTATE	10	115.45
	PADRA ESTATE	3	110
	VADODARA CITY	23	120.5
	OTHERS	15	98.73
	GIDC MAKARPURA	109	100.81
Employees co-operate among themselves	MUJMAHUDA	8	127.25
	GORWA BIDD	16	149.38
	CHHANI	18	123.94
	SARDAR ESTATE	13	107.08
	PATEL ESTATE	10	124.4

Employee Outcomes	Estate	N	Mean Rank
	PADRA ESTATE	3	106
	VADODARA CITY	23	103.15
	OTHERS	15	95.6
	GIDC MAKARPURA	109	99.27
	Total	215	
Employee's general behavior is good	MUJMAHUDA	8	139
	GORWA BIDC	16	139
	CHHANI	18	124.11
	SARDAR ESTATE	13	79.08
	PATEL ESTATE	10	92.4
	PADRA ESTATE	3	119
	VADODARA CITY	23	116.67
	OTHERS	15	113.23
	GIDC MAKARPURA	109	100.54
		Total	215
Employees are committed	MUJMAHUDA	8	156.75
	GORWA BIDC	16	142.59
	CHHANI	18	123.72
	SARDAR ESTATE	13	118.92
	PATEL ESTATE	10	118.8
	PADRA ESTATE	3	119
	VADODARA CITY	23	117.96
	OTHERS	15	113.9
	GIDC MAKARPURA	109	91.24
		Total	215
Employees are punctual and report daily	MUJMAHUDA	8	172.75
	GORWA BIDC	16	123.09
	CHHANI	18	121.11
	SARDAR ESTATE	13	104.65
	PATEL ESTATE	10	96.9
	PADRA ESTATE	3	57.17
	VADODARA CITY	23	122.07
	OTHERS	15	124.67
	GIDC MAKARPURA	109	96.42
		Total	215
Employees are regular	MUJMAHUDA	8	133.31
	GORWA BIDC	16	143.16
	CHHANI	18	130.94
	SARDAR ESTATE	13	113.46
	PATEL ESTATE	10	97.5
	PADRA ESTATE	3	57.33

Employee Outcomes	Estate	N	Mean Rank
	VADODARA CITY	23	123.76
	OTHERS	15	124.9
	GIDC MAKARPURA	109	93.25
Employees take up extra duties and responsibilities	MUJMAHUDA	8	134.38
	GORWA BIDC	16	144.63
	CHHANI	18	117.56
	SARDAR ESTATE	13	125.5
	PATEL ESTATE	10	94.9
	PADRA ESTATE	3	126.5
	VADODARA CITY	23	119.22
	OTHERS	15	110.27
	GIDC MAKARPURA	109	95.04
Employee's follow general code of conduct and rules	MUJMAHUDA	8	157.5
	GORWA BIDC	16	147.63
	CHHANI	18	122.28
	SARDAR ESTATE	13	130.15
	PATEL ESTATE	10	101.8
	PADRA ESTATE	3	144.33
	VADODARA CITY	23	103.39
	OTHERS	15	101.67
	GIDC MAKARPURA	109	94.96
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.124- Test Statistics^{ab}: Kruskal-Wallis Test for Industrial Estate and Employee Outcomes

Employee Outcomes	Chi-Square	Df	Asymp. Sig.
Employee's co-operation with Mgt. is satisfactory.	8.075	8	0.426
Employees co-operate among themselves	15.653	8	0.048
Employee's general behavior is good	16.427	8	0.037
Employees are committed	23.957	8	0.002
Employees are punctual and report daily	21.446	8	0.006
Employees are regular	23.852	8	0.002
Employees take up extra duties and responsibilities	17.354	8	0.027
Employee's follow general code of conduct and rules	25.138	8	0.001

a. Kruskal Wallis Test b. Grouping Variable: Estate

Interpretation

It can be seen from Table 8.124 that the **p-value** of all the following statements on **Employee Outcomes** are **less than 0.05**: ‘Employees co-operate among themselves’, ‘Employee’s general behavior is good’, ‘Employees are committed’, ‘Employees are punctual and report daily’, ‘Employees are regular’, ‘Employees take up extra duties and responsibilities’ and ‘Employee’s follow general code of conduct and rules’.

Table 8.123 shows that the **mean-rank of the SME firms belonging to Mujmahuda Estate is high and is 139, 156.75, 172.75 and 157.5** respectively for the statements on **Employee Outcomes** related to **Employee’s general behavior, Employee Commitment, Punctuality and Employee’s conformance to rules and regulations**. Table 8.123 also shows that the mean rank is high and is 149.38, 139, 143.16 and 144.63 for the SME firms belonging to Gorwa Estate for the statements on **Employee Outcomes** related to **Employee’s co-operation among themselves, Employee’s general behavior, Employee’s regularity and taking up extra duties and responsibilities**.

Thus, as the **p-value** of all the above statements on **Employee Outcomes** is **less than 0.05**, so we **reject the null hypothesis** and **conclude that there is a significant influence of the Industrial Estate on Employee Outcomes; with maximum influence of SME firms belonging to Gorwa BIDD and Mujmahuda Industrial Estate for the Employee Outcomes related to Co-operation among employees, General behavior of employees, Employee Commitment, Punctuality and Regularity of employees, Taking up extra duties and responsibilities showing a sense of Involvement & Participation and Conformance to rules & regulations**.

For the other statement whose p-value is more than 0.05, the Industrial Estate does not influence the Employee Outcomes in the SME firms.

8.9.29. Kruskal-Wallis Test for Industrial Estate and Organizational Outcomes

Kruskal-Wallis Test was done to see if there is any effect of Industrial Estate on Organizational Outcomes. The Industrial Estates in the study were the eight estates of Vadodara district, including GIDC Makarpura, BIDD Gorwa, Chhani Estate, Sardar Estate, Patel Estate, Padra Estate, Mujmahuda Estate, Vadodara City area and others (including Waghodia Estate, POR Ramangamdi and Savli).

The null and alternate hypothesis is framed as under:

H₀₄₄: There is no significant influence of Industrial Estate on Organizational Outcomes

H_{a44}: There is a significant influence of Industrial Estate on Organizational Outcomes

TABLE 8.125- Mean-Ranks: Kruskal-Wallis Test for Industrial Estate and Organizational Outcomes

Organizational Outcomes	Estate	N	Mean Rank
Customer satisfaction has increased	MUJMAHUDA	8	181.5
	GORWA BIDD	16	137.63
	CHHANI	18	129.83
	SARDAR ESTATE	13	181.5
	PATEL ESTATE	10	94
	PADRA ESTATE	3	88.5
	VADODARA CITY	23	116.8
	OTHERS	15	85.1
	GIDC MAKARPURA	109	89
Our suppliers/ vendors are satisfied with us.	MUJMAHUDA	8	182.5
	GORWA BIDD	16	150.75
	CHHANI	18	112.5
	SARDAR ESTATE	13	182.5
	PATEL ESTATE	10	98.9
	PADRA ESTATE	3	73.17
	VADODARA CITY	23	107.02

Organizational Outcomes	Estate	N	Mean Rank
	OTHERS	15	78.77
	GIDC MAKARPURA	109	92.65
Measures have been taken by the firm for product/ service development	MUJMAHUDA	8	174.5
	GORWA BIDC	16	154.63
	CHHANI	18	133.17
	SARDAR ESTATE	13	174.5
	PATEL ESTATE	10	85.7
	PADRA ESTATE	3	68.5
	VADODARA CITY	23	92.59
	OTHERS	15	78.9
	GIDC MAKARPURA	109	94.58
Products/service Quality shows improvement	MUJMAHUDA	8	152.38
	GORWA BIDC	16	144.06
	CHHANI	18	144.5
	SARDAR ESTATE	13	176
	PATEL ESTATE	10	86.05
	PADRA ESTATE	3	113
	VADODARA CITY	23	115.59
	OTHERS	15	77.2
	GIDC MAKARPURA	109	89.83
The firm has displayed proper utilization of resources.	MUJMAHUDA	8	170.75
	GORWA BIDC	16	170.75
	CHHANI	18	152
	SARDAR ESTATE	13	182
	PATEL ESTATE	10	53.25
	PADRA ESTATE	3	122
	VADODARA CITY	23	117.17
	OTHERS	15	79.2
	GIDC MAKARPURA	109	84.76
Average Number of defects of products / deficiencies in service shows a decrease	MUJMAHUDA	8	141
	GORWA BIDC	16	156.31
	CHHANI	18	113.67
	SARDAR ESTATE	13	187
	PATEL ESTATE	10	64.25
	PADRA ESTATE	3	130.67
	VADODARA CITY	23	118.59
	OTHERS	15	97.93
	GIDC MAKARPURA	109	90.67

Organizational Outcomes	Estate	N	Mean Rank
There is an increase in the Net Profit Margin.	MUJMAHUDA	8	109.5
	GORWA BIDC	16	111.06
	CHHANI	18	152.83
	SARDAR ESTATE	13	170.65
	PATEL ESTATE	10	109.5
	PADRA ESTATE	3	99.5
	VADODARA CITY	23	98.2
	OTHERS	15	123.5
	GIDC MAKARPURA	109	92.6
Return on Investment (in %) has increased	MUJMAHUDA	8	57.63
	GORWA BIDC	16	134.38
	CHHANI	18	152.33
	SARDAR ESTATE	13	176.08
	PATEL ESTATE	10	95
	PADRA ESTATE	3	99.67
	VADODARA CITY	23	101.52
	OTHERS	15	97.2
	GIDC MAKARPURA	109	96.66
	Total	215	

(Source: SPSS output; Primary data)

TABLE 8.126- Test Statistics^{ab}: K-W Test for Industrial Estate and Org. Outcomes

Organizational Outcomes	Chi-Square	Df	Asymp. Sig.
Customer satisfaction has increased	60.68	8	0
Our suppliers/ vendors are satisfied with us.	59.745	8	0
Measures have been taken by the firm for product/ service development	58.123	8	0
Products/service Quality shows improvement	56.134	8	0
The firm has displayed proper utilization of resources.	95.64	8	0
Average Number of defects of products / deficiencies in service shows a decrease	57.471	8	0
There is an increase in the Net Profit Margin.	36.071	8	0
Return on Investment (in %) has increased	43.839	8	0

Interpretation

It can be seen from Table 8.126 that the p-value of all the statements on **Organizational Outcomes** are **less than 0.05**: ‘Customer Satisfaction has increased’, ‘Supplier/ Vendor Satisfaction has increased’, ‘Measures have been taken by the firm for product/ service development’, ‘Products/service Quality shows improvement’, ‘The firm has displayed proper utilization of resources’, ‘Average Number of defects of products / deficiencies in service shows a decrease’, ‘There is an increase in the Net Profit Margin’ and ‘Return on Investment (in %) has increased’.

Table 8.125 shows that the mean-ranks of the **SME firms in Mujmahuda Estate is high for the statements ‘Customer Satisfaction has increased’, ‘Supplier/ Vendor Satisfaction has increased’, ‘Measures have been taken by the firm for product/ service development’, ‘Products/service Quality shows improvement’, ‘The firm has displayed proper utilization of resources’**. Further, Table 8.125 shows that the mean-ranks of the **SME firms of Gorwa BDC Estate is high and is 170.75 and 156.3 for the statements ‘The firm has displayed proper utilization of resources’ and ‘Average Number of defects of products / deficiencies in service shows a decrease’**. Table 8.125 also shows that the mean-ranks of the **SME firms of Sardar Estate is high and is 174.5, 170.65 and 176.08 for the statements ‘Measures have been taken by the firm for product/ service development’, ‘There is an increase in the Net Profit Margin’ and ‘Return on Investment (in %) has increased’**. Thus, as the **p-value** of all the above mentioned statements on **Organizational Outcomes** is **less than 0.05**, so we reject the **null hypothesis** and **conclude that there is a significant influence of Industrial Estate on the Organizational Outcomes related to Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Product/ Service quality improvement, Proper utilization of resources, decrease in defects of products / deficiencies in service, increase in Net Profit Margin and Return on Investment (ROI); with highest influence of firms belonging to the Mujmahuda Estate, Sardar Estate and Gorwa GIDC.**

8.10. Factor Analysis

Factor Analysis is a statistical technique used to estimate factors or to reduce the dimensionality of a large number of variables to a fewer number of factors. Thus, the main applications of factor analytic techniques can be summarized as (a) to reduce the number of variables and (b) to detect the structure in the relationships between variables, that is to classify variables. Therefore, factor analysis is applied as a data reduction or structure detection method (the term factor analysis was first introduced by Thurstone (1931)).

TABLE 8.127- KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.826
	Approx. Chi-Square	4118.558
Bartlett's Test of Sphericity	Df	465
	Sig.	0

(Source: SPSS output; Primary data)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.70 indicating sufficient items for each factor. Table 8.127 shows that the results of the KMO is 0.826 which is greater than 0.7. Bartlett's Test of Sphericity should be significant (less than .05), indicating that the correlation matrix is significantly different from an identity matrix, in which correlations between variables are all zero. Table 8.127 also shows that Bartlett's Test of Sphericity (Significance: 0.000) indicates that factor analysis is significant.

TABLE 8.128- Communalities

Variables	Initial	Extraction
Our organization places the right person in the right job	1	0.494
Selection is on the basis of merit	1	0.553
Organizes training and skill development programs	1	0.323
Employees are rotated from one job to another	1	0.145
Appraises the performance of employees at regular intervals.	1	0.65
Employees receive feedback	1	0.574
Enough opportunity for career growth	1	0.539
Compensation is decided on the basis of competence or ability	1	0.507
Good performers are given financial incentives	1	0.333
Good performers are given non-financial incentives.	1	0.016
Good performers are given more authority and responsibility.	1	0.414
Employees participate in the decision-making process.	1	0.53
Employees are given opportunity to suggest improvement	1	0.546
Employees can openly communicate with the superiors	1	0.27
Competence of an Employee	1	0.378
Employee's co-operation with is satisfactory.	1	0.453
Employees co-operate among themselves	1	0.443
Employee's general behavior is good	1	0.484
Employees are committed	1	0.615
Employees are punctual and report daily	1	0.611
Employees are regular	1	0.566
Employees take up extra duties and responsibilities	1	0.588
Employee's follow general code of conduct and rules	1	0.514
Customer satisfaction has increased	1	0.637
Our suppliers/ vendors are satisfied with us.	1	0.553
Measures have been taken by the firm for product/ service development	1	0.605
Products/service Quality shows improvement	1	0.639
The firm has displayed proper utilization of resources.	1	0.606
Average Number of defects of products / deficiencies in service shows a decrease	1	0.469
There is an increase in the Net Profit Margin.	1	0.462
Return on Investment (in %) has increased	1	0.542

Extraction Method: Principal Component Analysis; (Source: SPSS output; Primary data)

TABLE 8.129- Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	9.607	30.991	30.991	9.607
2	2.949	9.513	40.504	2.949
3	2.504	8.076	48.581	2.504
4	1.729	5.578	54.158	
5	1.667	5.378	59.536	
6	1.372	4.427	63.963	
7	1.158	3.734	67.697	
8	0.959	3.093	70.79	
9	0.921	2.971	73.761	
10	0.825	2.661	76.423	
11	0.798	2.575	78.998	
12	0.721	2.326	81.324	
13	0.62	1.998	83.323	
14	0.565	1.822	85.144	
15	0.527	1.699	86.843	
16	0.451	1.454	88.297	
17	0.432	1.395	89.692	
18	0.396	1.276	90.968	
19	0.342	1.105	92.073	
20	0.33	1.063	93.136	
21	0.307	0.989	94.125	
22	0.286	0.922	95.047	
23	0.266	0.858	95.905	
24	0.23	0.741	96.646	
25	0.204	0.659	97.305	
26	0.179	0.577	97.882	
27	0.162	0.523	98.404	
28	0.147	0.475	98.879	
29	0.137	0.443	99.321	
30	0.119	0.384	99.705	
31	0.091	0.295	100	

(Source: SPSS output; Primary data)

TABLE 8.130- Total Variance Explained (Rotated)

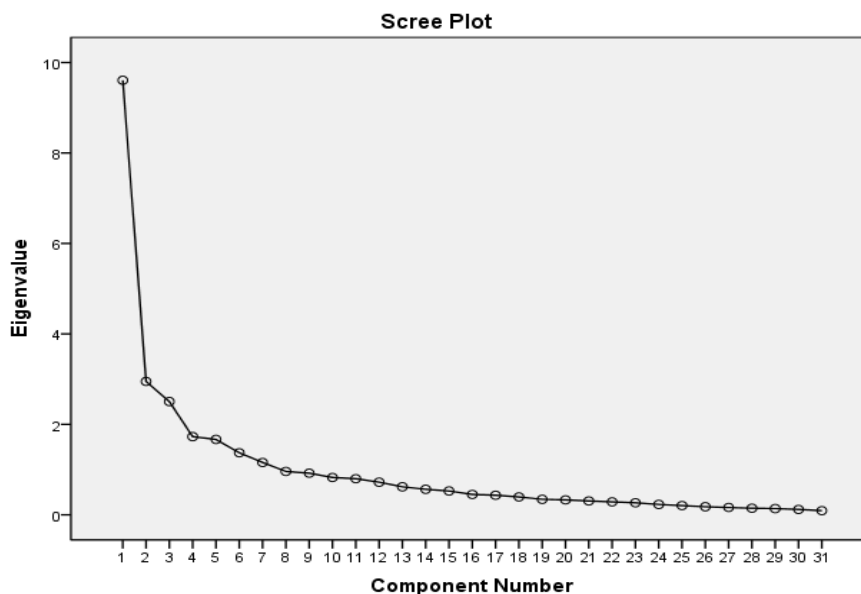
Component	Extraction Sums of Squared Loadings		Rotation Sums of Squared Loadings		
	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	30.991	30.991	6.295	20.308	20.308
2	9.513	40.504	4.466	14.407	34.715
3	8.076	48.581	4.298	13.866	48.581
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Extraction Method: Principal Component Analysis; (Source: SPSS output; Primary data)

Table 8.130 of **Total Variance Explained (Rotated)** shows how the variance is divided among the 31 possible factors. Note that three factors have **eigenvalues** (a measure of explained variance) greater than 1.0, which is a common criterion for a factor to be useful. When the eigenvalue is less than 1.0, this means that the factor explains less information than a single item would have explained. Most researchers would not consider the information gained from such a factor to be sufficient to justify keeping that factor. Thus, if not specified otherwise, the computer would have looked for the best four-factor solution by "rotating" four factors. As the researcher specified that only three factors to be rotated, only three were rotated. It can be concluded that these three factors extracted from the 31 variables are explaining about 48.58% variance of total variance.

8.10.1. Scree Plot

Scree Plot is a graphical method for determining the number of factors. The eigenvalues are plotted in the sequence of the principal factors. The number of factors is chosen where the plot levels off to a linear decreasing pattern (Shows 3 factors).



(Source: SPSS output; Primary data)

Figure 8.31 - Scree Plot

TABLE 8.131- Component Matrix^a

Variables	Component		
	1	2	3
Products/service Quality shows improvement	0.76		
Measures have been taken by the firm for product/ service development	0.739		
The firm has displayed proper utilization of resources.	0.729		
Our suppliers/ vendors are satisfied with us.	0.715		
Customer satisfaction has increased	0.702		
Average Number of defects of products / deficiencies in service shows a decrease	0.68		
Compensation is decided on the basis of competence or ability	0.667		
Employees are committed	0.66		
Employees are punctual and report daily	0.631		
Appraises the performance of employees at regular intervals.	0.631		
Employees take up extra duties and responsibilities	0.63		
Enough opportunity for career growth	0.614		
Employees receive feedback	0.607		
Employee's co-operation with is satisfactory.	0.604		
Employee's follow general code of conduct and rules	0.589		
Employee's general behavior is good	0.571		
Employees are regular	0.57		
Our organization places the right person in the right job	0.53		
Employees co-operate among themselves	0.524		
Competence of an Employee			
Good performers are given financial incentives			
Organizes training and skill development programs			
Employees can openly communicate with the superiors			
Employees are rotated from one job to another			
Selection is on the basis of merit		0.529	
Good performers are given more authority and responsibility.			
Good performers are given non-financial incentives.			
Return on Investment (in %) has increased			-0.692
Employees participate in the decision-making process.			0.649
There is an increase in the Net Profit Margin.			-0.578
Employees are given opportunity to suggest improvement			0.566

Extraction Method: Principal Component Analysis; a. 3 components extracted; (Source: SPSS output; Primary data)

TABLE 8.132- Rotated Component Matrix^a

Variables	Component		
	1	2	3
Employees are punctual and report daily	0.766		
Employees are committed	0.756		
Employees take up extra duties and responsibilities	0.755		
Employees are regular	0.744		
Employee's follow general code of conduct and rules	0.705		
Employee's general behavior is good	0.678		
Employees co-operate among themselves	0.654		
Employee's co-operation with Mgt. is satisfactory.	0.638		
Competence of an Employee	0.552		
Products/service Quality shows improvement	0.551		0.547
Average Number of defects of products / deficiencies in service shows a decrease			
Employees can openly communicate with the superiors			
Selection is on the basis of merit		0.704	
Employees are given opportunity to suggest improvement		0.686	
Enough opportunity for career growth		0.651	
Employees receive feedback		0.651	
Good performers are given more authority and responsibility.		0.635	
Employees participate in the decision-making process.		0.591	
Our organization places the right person in the right job		0.581	
Good performers are given financial incentives			
Organizes training and skill development programs			
Employees are rotated from one job to another			
Good performers are given non-financial incentives.			
Return on Investment (in %) has increased			0.717
There is an increase in the Net Profit Margin.			0.679
Customer satisfaction has increased			0.629
Appraises the performance of employees at regular intervals.		0.522	0.607
The firm has displayed proper utilization of resources.			0.59
Measures have been taken by the firm for product/ service development			0.57
Our suppliers/ vendors are satisfied with us.			0.524
Compensation is decided on the basis of competence or ability			

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; a. Rotation converged in 6 iterations; (Source: SPSS output; Primary data)

8.10.2. Naming of Factors

It can be corroborated here that through Factor Analysis also the three distinguished factors identified were same as that identified by the researcher in the questionnaire. Table 8.133 shows the different variables under the same factor as well as the naming of factors. The three Components (Factors) were identified and named as: **Component 1: Employee related Outcomes; Component 2: HR Practices** and **Component 3: Organizational related Outcomes.**

TABLE 8.133- Identification and Naming of the Factors

Component 1 (Employee-related Outcomes)	Component 2 (HR Practices)	Component 3 (Organizational related Outcomes)
Employees are punctual and report daily	Selection is on the basis of merit	Product / Service Quality
Employees are committed	Employees are given opportunity to suggest improvement	Return on Investment (in %) has increased
Employees take up extra duties and responsibilities	Enough opportunity for career growth	There is an increase in the Net Profit Margin.
Employees are regular	Employees receive feedback	Customer satisfaction has increased
Employee's follow general code of conduct and rules	Good performers are given more authority and responsibility.	The firm has displayed proper utilization of resources.
Employee's general behavior is good	Employees participate in the decision-making process.	Measures have been taken by the firm for product/ service development
Employees co-operate among themselves	Our organization places the right person in the right job	Our suppliers/ vendors are satisfied with us.
Employee's co-operation with Mgt. is satisfactory.	Appraises the performance of employees at regular intervals.	
Competence of an Employee		

(Source: Author, Input from Primary data)

TABLE 8.134- Component Transformation Matrix

Component	1	2	3
1	.712	.494	.500
2	-.656	.722	.221
3	.252	.485	-.838

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; (Source: SPSS output; Primary data)

8.11. Regression Analysis

Simple regression is used to examine the relationship between one dependent and one independent variable. After performing an analysis, the regression statistics can be used to predict the dependent variable when the independent variable is known. The **regression line** (known as the least squares line) is a plot of the expected value of the dependent variable for all values of the independent variable. Technically, it is the line that "minimizes the squared residuals". The regression line is the one that **best fits the data** on a scatterplot (Malhotra N & Dash S, 2011). Regression Analysis is carried out on summated scale of HR Practices, Employee Outcomes and Organizational Performances.

TABLE 8.135- Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	Summated Employee Outcome, Summated HR Practice	-	Enter

a. All requested variables entered .b. Dep. Variable: Summ. Org. Perf.

TABLE 8.136- Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452 ^a	.205	.197	.51437

a. Predictors: (Constant), Summated Employee Outcome, Summated HR Practice

The Adjusted R Square value is quite low but as the regression analysis is carried out on ordinal scale it is bound to happen.

The null and alternate hypothesis are framed as under:

H₀: There is no joint influence of HR Practice and Employee Outcome on Organizational Performance.

H_{1a}: There is joint influence of HR Practice and Employee Outcome on Organizational Performance.

TABLE 8.137-ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.439	2	7.22	27.287	.000 ^a
	Residual	56.091	212	0.265		
	Total	70.53	214			

a. Predictors: (Constant), Summated Employee Outcome, Summated HR Practice b. Dependent Variable: Summated Organizational Performance

As the p-value of ANOVA is 0.000 < 0.05 so we can conclude that HR Practice and Employee Outcome jointly influences Organizational Performance.

TABLE 8.138A - Coefficients^a

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	2.007	0.323
	Summated HR Practice	0.213	0.075
	Summated Employee Outcome	0.341	0.058

(Source: SPSS output; Primary data)

TABLE 8.138B- Coefficients^a

Model		Standardized Coefficients	T	Sig.
		Beta		
1	(Constant)		6.207	0
	Summated HR Practice	0.18	2.853	0.005
	Summated Employee Outcome	0.373	5.894	0

a. Dependent Variable: Summated Organizational Performance

Table 8.138B shows that the **p-value of Summated HR Practice and Summated Employee Outcome is 0.005 and 0.000 respectively which is less than 0.05 so the**

coefficients of Summated HR Practice and Summated Employee Outcome are significantly affecting Organizational Performance. The unstandardized coefficients of Summated HR Practice and Summated Employee Outcome are 0.213 and 0.341.

The model which is created using summated scale is (Refer Table 8.138B):

Summated Organizational Outcome = 0.180*Summated HR Practice + 0.373*Summated Employee

As the p-value of Summated HR Practice and Summated Employee Outcome is 0.005 and 0.000 respectively which is less than 0.05 so we reject the null hypothesis and conclude that there is a joint influence of HR Practice and Employee Outcome on Organizational Performance.

However, it is to be also noted here that the Adjusted R Square value is quite low but as the regression analysis is carried out on ordinal scale it is bound to happen this way. To overcome the limitation, Structural Equation Modeling was incorporated to better understand the linkages between HR Practices, Employee Outcomes and Organizational Outcomes.

8.12. Structural Equation Modeling (SEM)

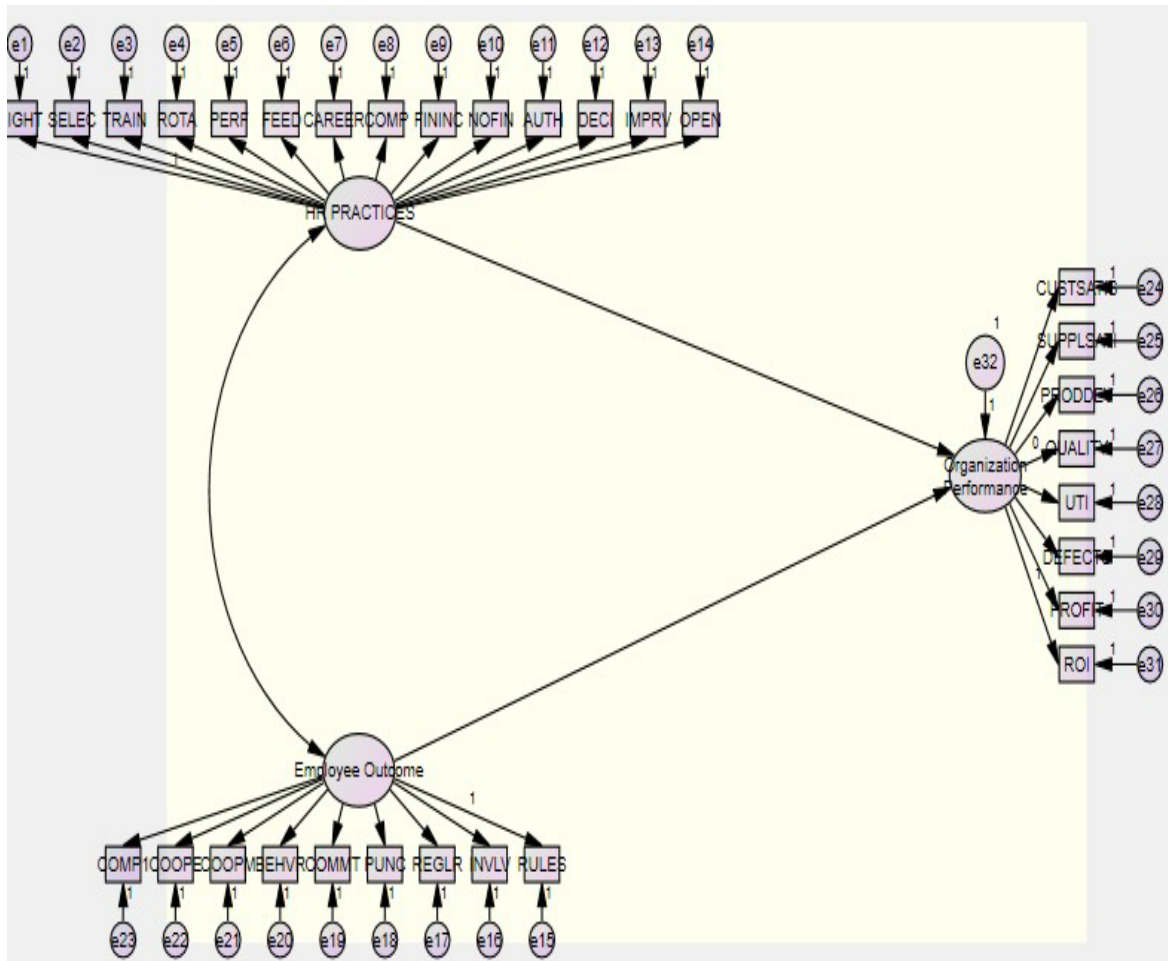
Structural Equation Modeling is a family of statistical models which seeks to explain the relationships among multiple variables. To put it simply, it is a combination of Multiple Regression Analysis and Factor Analysis. It is also known as ‘causal modeling’ or ‘analysis of co-variance structures’. Structural Models basically shows how constructs are associated with each other. It shows how measured variables together represent construct. The various types of variables in SEM include the Exogenous variables which are independent variables, Endogenous variables which are the dependent variables, Observed variables which are measured and Latent variables which are unobserved. Two special types of SEM include Path Analysis and Confirmatory Factor Analysis (CFA). It surpasses over Multiple Regression, Factor Analysis, Discriminant Analysis etc. in a way that each of these techniques can examine single relationship at a time; whereas SEM expands the researcher’s explanatory ability and enhances statistical efficiency.

Major Properties of SEM

- It is not a null-hypothesis oriented method, but a ‘model-oriented method’.
- It is a system of linear equations that describes a network of relations among variables.
- It can be applied in both, confirmatory (testing) or exploratory (model-building) mode.

In the present study three modifications have been done in the Base Model with the motive to come up with the ‘Best-Fit Model’ by doing certain modifications. The main objective of the SEM Model was to establish the linkages between HR Practices, Employee Outcomes and Organizational Outcomes. (Source: SAS/STAT User’s Guide Version 8)

8.12.1. Base Model



(Source: AMOS Output; Primary data)

Figure 8.32 - SEM BASE MODEL

A hypothesized Technology Acceptance Model was tested using Structural Equation Modeling using AMOS 18 software.

Hypotheses are as follows

Linkage 1:

H1. HR Practices positively and directly affects Organizational Performance.

Linkage 2:

H2. Employee Outcome positively and directly affects Organizational Performance.

Linkage 3: H3. There exists covariance between HR Practices and Employee Outcome.

TABLE 8.139 - Relation between Constructs

Relation Between Constructs	Estimate	P Value	Null Hypothesis
HR Practices → Organizational Performance	0.879	0	Reject
Employee Outcome → Organizational Performance	0.702	0	Reject
HR Practices ↔ Employee Outcome	0.096	0	Reject

(Interpretation based on AMOS Output)

Examination of the path coefficients and the significance level between the constructs in the model were used to test the hypotheses. The analysis in Table 8.139 shows that HR Practices has a positive significant relationship with Organizational Performance. Employee Outcome has a positive significant relationship with Organizational Performance; and that there exists a covariance between HR Practices and Employee Outcome.

TABLE 8.140 - Parameter Summary

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	36	0	1	0	0	37
Labeled	0	0	0	0	0	0
Unlabeled	29	1	33	0	0	63
Total	65	1	34	0	0	100

(Source: AMOS Output; Primary data)

H_0 : Relationships does not exist between this constructs.

H_1 : Relationships exist between this constructs.

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 496

Number of distinct parameters to be estimated: 63

Degrees of freedom (496 - 63): 433

Result (Default model)

Minimum was achieved

Chi-square = 2224.358

Degrees of freedom = 433

Probability level = .000

As the p-value of Chi-Square is less than 0.05, so null hypothesis is rejected and we conclude that relationship exists between this constructs.

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

TABLE 8.141 - SEM Output for Estimates, Standard Errors and P-Value

		Estimate	S.E	C.R.	P
Org_Performance	<--- Employee Outcome	0.702	0.186	3.767	***
Org_Performance	<--- HR PRACTICES	0.879	0.228	3.847	***
RIGHT	<--- HR PRACTICES	1			
SELEC	<--- HR PRACTICES	1.223	0.141	8.704	***
TRAIN	<--- HR PRACTICES	1.315	0.189	6.946	***
ROTA	<--- HR PRACTICES	0.698	0.162	4.307	***
PERF	<--- HR PRACTICES	1.16	0.122	9.504	***
FEED	<--- HR PRACTICES	1.183	0.125	9.467	***
CAREER	<--- HR PRACTICES	1.373	0.157	8.75	***
COMP	<--- HR PRACTICES	0.941	0.107	8.767	***
FININC	<--- HR PRACTICES	1.346	0.181	7.454	***
NOFIN	<--- HR PRACTICES	-0.089	0.196	-0.452	0.651
AUTH	<--- HR PRACTICES	1.013	0.157	6.438	***
DECI	<--- HR PRACTICES	0.721	0.189	3.806	***
IMPRV	<--- HR PRACTICES	0.689	0.125	5.504	***
OPEN	<--- HR PRACTICES	0.521	0.102	5.095	***
RULES	<--- Employee Outcome	1			
INVLV	<--- Employee Outcome	1.291	0.14	9.232	***

			Estimate	S.E	C.R.	P
REGLR	<---	Employee Outcome	1.249	0.139	8.982	***
COMMT	<---	Employee Outcome	1.346	0.141	9.564	***
BEHVR	<---	Employee Outcome	0.946	0.113	8.398	***
COOPM	<---	Employee Outcome	0.975	0.119	8.217	***
COOPE	<---	Employee Outcome	0.924	0.115	8.037	***
COMP1	<---	Employee Outcome	0.744	0.107	6.97	***
CUSTSATIS	<---	Org_Performance	0.617	0.033	18.424	***
SUPPLSATI	<---	Org_Performance	0.601	0.034	17.75	***
PRODDEV	<---	Org_Performance	0.577	0.035	16.563	***
QUALITY	<---	Org_Performance	0			
UTI	<---	Org_Performance	0.64	0.038	17.028	***
DEFECTS	<---	Org_Performance	0.501	0.04	12.503	***
PROFIT	<---	Org_Performance	0.38	0.049	7.757	***
ROI	<---	Org_Performance	1			

(Source: AMOS Output; Primary data)

TABLE 8.142 - Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Organization_Performance	<---	Employee Outcome	0.304
Organization_Performance	<---	HR PRACTICES	0.311
RIGHT	<---	HR PRACTICES	0.663
SELEC	<---	HR PRACTICES	0.679
TRAIN	<---	HR PRACTICES	0.526
ROTA	<---	HR PRACTICES	0.317
PERF	<---	HR PRACTICES	0.754
FEED	<---	HR PRACTICES	0.75
CAREER	<---	HR PRACTICES	0.683
COMP	<---	HR PRACTICES	0.685
FININC	<---	HR PRACTICES	0.569

			Estimate
NOFIN	<---	HR PRACTICES	-0.033
AUTH	<---	HR PRACTICES	0.485
DECI	<---	HR PRACTICES	0.279
IMPRV	<---	HR PRACTICES	0.41
OPEN	<---	HR PRACTICES	0.378
RULES	<---	Employee Outcome	0.639
INVLV	<---	Employee Outcome	0.756
REGLR	<---	Employee Outcome	0.729
PUNC	<---	Employee Outcome	0.734
COMMT	<---	Employee Outcome	0.792
BEHVR	<---	Employee Outcome	0.67
COOPM	<---	Employee Outcome	0.652
COOPE	<---	Employee Outcome	0.635
COMP1	<---	Employee Outcome	0.537
CUSTSATIS	<---	Organization_Performance	0.887
SUPPLSATI	<---	Organization_Performance	0.871
PRODDEV	<---	Organization_Performance	0.841
QUALITY	<---	Organization_Performance	0
UTI	<---	Organization_Performance	0.853
DEFECTS	<---	Organization_Performance	0.713
PROFIT	<---	Organization_Performance	0.499
ROI	<---	Organization_Performance	0.764

(Source: AMOS Output; Primary data)

TABLE 8.143 - Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
HR PRACTICES	<--> Employee Outcome	0.096	0.021	4.633	***	par_30

TABLE 8.144 - Correlations: (Group number 1 - Default model)

		Estimate
HR PRACTICES	<--> Employee Outcome	.453

(Source: AMOS Output; Primary data)

TABLE 8.145 - Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
HR PRACTICES	0.173	0.033	5.223	***	par_31
Employee Outcome	0.258	0.052	5.008	***	par_32
e32	1				
e1	0.22	0.024	9.337	***	par_33
e2	0.302	0.033	9.245	***	par_34
e3	0.778	0.079	9.853	***	par_35
e4	0.751	0.074	10.201	***	par_36
e5	0.176	0.02	8.645	***	par_37
e6	0.187	0.022	8.683	***	par_38
e7	0.372	0.04	9.219	***	par_39
e8	0.173	0.019	9.21	***	par_40
e9	0.653	0.067	9.73	***	par_41
e10	1.263	0.122	10.343	***	par_42
e11	0.576	0.058	9.951	***	par_43
e12	1.06	0.104	10.236	***	par_44
e13	0.406	0.04	10.086	***	par_45
e14	0.281	0.028	10.131	***	par_46
e15	0.374	0.039	9.547	***	par_47
e16	0.324	0.037	8.799	***	par_48
e17	0.355	0.039	9.027	***	par_49
e18	0.35	0.039	8.988	***	par_50
e19	0.278	0.033	8.387	***	par_51
e20	0.283	0.03	9.401	***	par_52
e21	0.331	0.035	9.487	***	par_53
e22	0.326	0.034	9.562	***	par_54
e23	0.352	0.036	9.876	***	par_55
e24	0.143	0.018	7.747	***	par_56
e25	0.159	0.02	8.129	***	par_57
e26	0.19	0.022	8.648	***	par_58
e27	0.476	0.046	10.344	***	par_59
e28	0.212	0.025	8.465	***	par_60
e29	0.335	0.035	9.626	***	par_61
e30	0.602	0.06	10.115	***	par_62
e31	0.982	0.104	9.401	***	par_63

(Source: AMOS Output; Primary data)

TABLE 8.146 - Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
e31	<-->	Employee Outcome	25.521	-0.176
e31	<-->	HR PRACTICES	14.273	-0.108
e31	<-->	e32	12.106	-0.26
e30	<-->	e31	85.116	0.513
e29	<-->	e31	7.932	-0.119
e28	<-->	e29	20.927	0.094
e27	<-->	Employee Outcome	33.022	0.133
e27	<-->	HR PRACTICES	18.721	0.082
e27	<-->	e32	24.634	0.248
e27	<-->	e31	56.174	-0.367
e27	<-->	e29	12.53	0.1
e27	<-->	e28	5.981	0.058
e26	<-->	e29	7.237	0.052
e25	<-->	e29	8.452	-0.052
e25	<-->	e28	5.837	-0.036
e24	<-->	e30	4.136	-0.047
e24	<-->	e29	6.934	-0.046
e24	<-->	e27	9.261	0.062
e24	<-->	e25	27.92	0.067
e23	<-->	HR PRACTICES	4.036	0.034
e23	<-->	e30	7.342	-0.088
e22	<-->	e30	5.543	-0.075
e22	<-->	e26	8.133	0.055
e22	<-->	e23	33.035	0.14
e21	<-->	e31	4.461	0.09
e21	<-->	e28	8.605	-0.06
e21	<-->	e24	4.063	-0.035
e21	<-->	e23	6.688	0.064
e21	<-->	e22	5.484	0.056
e20	<-->	e30	5.208	0.068
e20	<-->	e24	5.72	-0.039
e20	<-->	e21	9.733	0.071
e19	<-->	e30	12.027	0.107
e19	<-->	e28	9.459	0.061
e19	<-->	e26	7.693	-0.052
e19	<-->	e23	7.64	-0.066
e19	<-->	e21	7.752	0.065
e19	<-->	e20	7.766	0.061

			M.I.	Par Change
e18	<-->	e32	4.258	0.094
e18	<-->	e31	15.072	-0.173
e18	<-->	e30	8.172	-0.096
e18	<-->	e24	4.065	0.037
e18	<-->	e23	4.725	-0.057
e18	<-->	e22	4.04	-0.051
e18	<-->	e20	4.667	-0.051
e17	<-->	e22	5.126	-0.058
e17	<-->	e20	4.647	-0.051
e17	<-->	e19	9.151	-0.075
e17	<-->	e18	34.907	0.16
e16	<-->	e22	7.313	-0.066
e16	<-->	e21	5.951	-0.061
e16	<-->	e18	5.441	-0.061
e15	<-->	e31	16.256	-0.181
e15	<-->	e30	9.088	-0.102
e15	<-->	e26	6.608	0.053
e15	<-->	e24	4.641	0.04
e15	<-->	e21	21.033	-0.118
e15	<-->	e20	4.744	-0.052
e15	<-->	e19	6.749	-0.065
e15	<-->	e18	4.164	0.055
e15	<-->	e16	26.865	0.136
e14	<-->	Employee Outcome	10.669	0.059
e14	<-->	e31	9.676	-0.118
e14	<-->	e28	6.859	-0.048
e14	<-->	e27	8.027	0.072
e13	<-->	e29	5.39	0.061
e13	<-->	e24	6.053	-0.047
e13	<-->	e22	4.765	-0.057
e13	<-->	e20	9.302	0.075
e13	<-->	e14	12.138	0.082
e12	<-->	e31	6.269	-0.184
e12	<-->	e30	5.288	-0.127
e12	<-->	e25	10.757	0.103
e12	<-->	e23	4.188	0.088
e12	<-->	e21	4.131	0.086
e12	<-->	e20	10.594	0.128
e12	<-->	e19	4.102	-0.083
e12	<-->	e14	5.855	0.092
e12	<-->	e13	64.462	0.366
e11	<-->	e22	5.324	-0.072

			M.I.	Par Change
e11	<-->	e20	16.995	0.121
e11	<-->	e15	10.225	-0.107
e11	<-->	e13	18.156	0.145
e11	<-->	e12	22.247	0.258
e10	<-->	e30	8.82	0.179
e10	<-->	e29	4.012	0.092
e10	<-->	e26	4.649	-0.078
e10	<-->	e23	4.452	-0.098
e10	<-->	e21	11.92	0.159
e9	<-->	e31	4.04	0.118
e9	<-->	e30	5.785	0.107
e9	<-->	e29	8.048	-0.096
e9	<-->	e18	13.831	-0.133
e9	<-->	e17	7.148	0.096
e9	<-->	e13	9.282	-0.111
e8	<-->	Employee Outcome	7.725	0.041
e8	<-->	e27	7.317	0.056
e8	<-->	e26	7.46	0.039
e8	<-->	e25	6.893	-0.035
e8	<-->	e19	5.253	0.04
e8	<-->	e15	4.209	0.039
e8	<-->	e13	8.432	-0.056
e8	<-->	e12	8.171	-0.088
e8	<-->	e11	16.413	-0.094
e7	<-->	e31	7.944	-0.128
e7	<-->	e30	8.405	-0.1
e7	<-->	e16	13.848	0.1
e7	<-->	e12	16.006	0.181
e7	<-->	e8	6.331	0.048
e6	<-->	e29	4.247	-0.039
e6	<-->	e25	11.3	0.048
e6	<-->	e21	4.634	-0.041
e6	<-->	e19	18.516	-0.079
e6	<-->	e18	5.923	0.049
e6	<-->	e15	7.154	0.054
e5	<-->	e32	7.156	0.088
e5	<-->	e30	8.031	0.069
e5	<-->	e14	4.829	-0.036
e5	<-->	e13	22.753	-0.095
e5	<-->	e12	26.072	-0.164
e5	<-->	e8	9.35	0.041
e5	<-->	e7	8.399	-0.057

			M.I.	Par Change
e5	<-->	e6	20.237	0.064
e4	<-->	e29	4.336	-0.074
e4	<-->	e26	6.407	-0.071
e4	<-->	e25	5.113	0.06
e4	<-->	e23	4.762	-0.079
e4	<-->	e17	5.957	-0.092
e4	<-->	e16	11.602	0.124
e4	<-->	e13	7.028	0.102
e4	<-->	e12	15.041	0.239
e4	<-->	e10	5.412	-0.156
e4	<-->	e6	21.481	0.129
e3	<-->	e31	4.79	0.14
e3	<-->	e29	5.104	-0.083
e3	<-->	e22	15.384	0.143
e3	<-->	e19	5.032	0.08
e3	<-->	e18	5.047	-0.087
e3	<-->	e9	9.025	0.153
e3	<-->	e7	13.726	-0.146
e2	<-->	Employee Outcome	4.548	-0.041
e2	<-->	e29	35.866	0.142
e2	<-->	e25	12.11	-0.061
e2	<-->	e24	11.985	-0.059
e2	<-->	e16	6.633	-0.062
e2	<-->	e13	6.255	0.064
e2	<-->	e11	7.535	0.084
e2	<-->	e8	9.883	-0.054
e2	<-->	e4	17.199	-0.143
e1	<-->	e23	6.96	0.054
e1	<-->	e22	6.867	0.052
e1	<-->	e20	7.269	-0.05
e1	<-->	e16	9.729	-0.064
e1	<-->	e14	5.219	-0.041
e1	<-->	e12	4.397	-0.073
e1	<-->	e6	5.454	-0.036
e1	<-->	e4	16.814	-0.12
e1	<-->	e3	4.307	0.063
e1	<-->	e2	42.263	0.125

(Source: AMOS Output; Primary data)

TABLE 8.147 - Variances: (Group number 1 - Default model)

	M.I.	Par Change
e32	38.218	-.671

TABLE 8.148 - Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
ROI	<---	Employee Outcome	54.306	-1.084
ROI	<---	HR PRACTICES	43.992	-1.2
ROI	<---	Organization_Performance	50.125	-0.44
ROI	<---	PROFIT	20.178	0.356
ROI	<---	DEFECTS	46.484	-0.586
ROI	<---	UTI	38.006	-0.496
ROI	<---	QUALITY	56.174	-0.77
ROI	<---	PRODDEV	41.876	-0.57
ROI	<---	SUPPLSATI	40.641	-0.558
ROI	<---	CUSTSATIS	43.417	-0.572
ROI	<---	COMP1	26.032	-0.514
ROI	<---	COOPE	24.425	-0.475
ROI	<---	COOPM	9.125	-0.282
ROI	<---	BEHVR	14.683	-0.379
ROI	<---	COMMT	19.604	-0.364
ROI	<---	PUNC	57.902	-0.619
ROI	<---	REGLR	29.001	-0.439
ROI	<---	INVLV	28.044	-0.433
ROI	<---	RULES	55.638	-0.665
ROI	<---	OPEN	27.235	-0.646
ROI	<---	IMPRV	8.876	-0.303
ROI	<---	DECI	17.15	-0.274
ROI	<---	AUTH	11.374	-0.276
ROI	<---	COMP	25.468	-0.627
ROI	<---	CAREER	38.832	-0.529
ROI	<---	FEED	29.294	-0.586
ROI	<---	PERF	20.89	-0.507
ROI	<---	SELEC	9.653	-0.294
ROI	<---	RIGHT	17.365	-0.472
PROFIT	<---	ROI	32.368	0.198

			M.I.	Par Change
PROFIT	<---	COMP1	7.925	-0.214
PROFIT	<---	COOPE	5.943	-0.177
PROFIT	<---	PUNC	6.824	-0.161
PROFIT	<---	RULES	8.548	-0.197
PROFIT	<---	DECI	4.6	-0.107
PROFIT	<---	NOFIN	8.773	0.141
PROFIT	<---	FININC	4.132	0.111
DEFECTS	<---	Employee Outcome	7.779	0.237
DEFECTS	<---	HR PRACTICES	6.197	0.26
DEFECTS	<---	UTI	4.823	0.102
DEFECTS	<---	QUALITY	12.53	0.21
DEFECTS	<---	BEHVR	4.557	0.122
DEFECTS	<---	COMMT	9.843	0.149
DEFECTS	<---	PUNC	8.033	0.133
DEFECTS	<---	RULES	6.628	0.133
DEFECTS	<---	IMPRV	9.344	0.179
DEFECTS	<---	COMP	8.546	0.21
DEFECTS	<---	SELEC	33.41	0.316
DEFECTS	<---	RIGHT	8.718	0.193
UTI	<---	DEFECTS	9.768	0.13
UTI	<---	QUALITY	5.981	0.122
UTI	<---	COMMT	7.968	0.113
UTI	<---	SELEC	5.367	0.107
QUALITY	<---	Employee Outcome	70.51	0.822
QUALITY	<---	HR PRACTICES	57.406	0.912
QUALITY	<---	Organization_Performance	79.448	0.37
QUALITY	<---	PROFIT	11.176	0.176
QUALITY	<---	DEFECTS	73.133	0.489
QUALITY	<---	UTI	72.681	0.456
QUALITY	<---	PRODDEV	67.102	0.48
QUALITY	<---	SUPPLSATI	55.173	0.433
QUALITY	<---	CUSTSATIS	78.971	0.513
QUALITY	<---	COMP1	16.018	0.268
QUALITY	<---	COOPE	38.392	0.396
QUALITY	<---	COOPM	14.587	0.237
QUALITY	<---	BEHVR	42.151	0.427
QUALITY	<---	COMMT	48.494	0.38
QUALITY	<---	PUNC	48.527	0.377
QUALITY	<---	REGLR	25.825	0.275

			M.I.	Par Change
QUALITY	<---	INVLV	35.429	0.323
QUALITY	<---	RULES	42.168	0.385
QUALITY	<---	OPEN	28.099	0.437
QUALITY	<---	AUTH	14.475	0.207
QUALITY	<---	FININC	13.291	0.175
QUALITY	<---	COMP	45.795	0.559
QUALITY	<---	CAREER	30.709	0.313
QUALITY	<---	FEED	26.241	0.369
QUALITY	<---	PERF	41.791	0.477
QUALITY	<---	TRAIN	14.094	0.171
QUALITY	<---	SELEC	14.778	0.242
QUALITY	<---	RIGHT	18.643	0.325
PRODDEV	<---	HR PRACTICES	4.669	0.178
PRODDEV	<---	COOPE	8.835	0.13
PRODDEV	<---	RULES	7.61	0.112
PRODDEV	<---	NOFIN	4.935	-0.064
PRODDEV	<---	COMP	10.808	0.186
PRODDEV	<---	CAREER	7.227	0.104
PRODDEV	<---	TRAIN	5.825	0.075
PRODDEV	<---	RIGHT	6.168	0.128
SUPPLSATI	<---	CUSTSATIS	4.938	0.083
SUPPLSATI	<---	OPEN	4.273	0.11
SUPPLSATI	<---	IMPRV	4.042	0.087
SUPPLSATI	<---	DECI	11.356	0.095
SUPPLSATI	<---	FEED	7.239	0.125
SUPPLSATI	<---	ROTA	5.752	0.08
CUSTSATIS	<---	QUALITY	9.261	0.13
CUSTSATIS	<---	SUPPLSATI	5.826	0.088
CUSTSATIS	<---	IMPRV	7.037	-0.112
CUSTSATIS	<---	AUTH	4.523	-0.072
CUSTSATIS	<---	SELEC	9.847	-0.123
COMP1	<---	PROFIT	6.258	-0.116
COMP1	<---	COOPE	18.432	0.241
COMP1	<---	DECI	5.833	0.093
COMP1	<---	NOFIN	4.677	-0.08
COMP1	<---	FININC	5.314	0.097
COMP1	<---	RIGHT	8.868	0.197
COOPE	<---	PRODDEV	4.974	0.112
COOPE	<---	COMP1	22.612	0.273

			M.I.	Par Change
COOPE	<---	NOFIN	4.027	-0.072
COOPE	<---	TRAIN	16.1	0.156
COOPE	<---	RIGHT	7.944	0.182
COOPM	<---	UTI	5.077	-0.104
COOPM	<---	COMP1	4.58	0.124
COOPM	<---	BEHVR	4.96	0.127
COOPM	<---	RULES	11.659	-0.175
COOPM	<---	NOFIN	11.963	0.126
BEHVR	<---	COOPM	5.212	0.114
BEHVR	<---	IMPRV	7.301	0.147
BEHVR	<---	DECI	9.471	0.109
BEHVR	<---	AUTH	12.159	0.153
BEHVR	<---	RIGHT	4.034	-0.122
COMMT	<---	PROFIT	9.89	0.139
COMMT	<---	COMP1	5.258	-0.129
COMMT	<---	COOPM	4.189	0.107
COMMT	<---	BEHVR	4.001	0.11
COMMT	<---	DECI	4.384	-0.077
COMMT	<---	FEED	9.363	-0.185
PUNC	<---	DEFECTS	4.184	0.107
PUNC	<---	SUPPLSATI	4.415	0.112
PUNC	<---	CUSTSATIS	4.768	0.115
PUNC	<---	REGLR	14.738	0.19
PUNC	<---	FININC	10.215	-0.14
PUNC	<---	TRAIN	4.296	-0.086
REGLR	<---	PUNC	14.457	0.189
REGLR	<---	DECI	4.431	-0.085
REGLR	<---	ROTA	7.194	-0.127
INVLV	<---	COOPE	4.113	-0.115
INVLV	<---	RULES	14.972	0.203
INVLV	<---	CAREER	7.29	0.135
INVLV	<---	ROTA	10.655	0.149
INVLV	<---	RIGHT	4.495	-0.141
RULES	<---	DEFECTS	4.022	0.105
RULES	<---	PRODDEV	7.265	0.145
RULES	<---	SUPPLSATI	4.425	0.113
RULES	<---	CUSTSATIS	5.59	0.125
RULES	<---	COOPM	11.252	-0.192
RULES	<---	INVLV	10.108	0.159

			M.I.	Par Change
RULES	<---	AUTH	6.767	-0.13
OPEN	<---	Employee Outcome	8.024	0.215
OPEN	<---	QUALITY	8.027	0.15
OPEN	<---	SUPPLSATI	4.313	0.094
OPEN	<---	CUSTSATIS	4.119	0.091
OPEN	<---	COOPE	6.328	0.125
OPEN	<---	BEHVR	5.12	0.115
OPEN	<---	COMMT	6.222	0.106
OPEN	<---	INVLV	6.287	0.106
OPEN	<---	RULES	9.473	0.142
OPEN	<---	IMPRV	9.878	0.165
OPEN	<---	DECI	5.348	0.079
IMPRV	<---	CUSTSATIS	5.27	-0.124
IMPRV	<---	BEHVR	4.179	0.126
IMPRV	<---	OPEN	10.218	0.246
IMPRV	<---	DECI	58.889	0.315
IMPRV	<---	AUTH	13.433	0.186
IMPRV	<---	FININC	5.953	-0.109
IMPRV	<---	COMP	4.056	-0.155
IMPRV	<---	PERF	8.427	-0.2
IMPRV	<---	ROTA	6.244	0.12
DECI	<---	ROI	4.666	-0.099
DECI	<---	PROFIT	5.643	-0.188
DECI	<---	BEHVR	7.285	0.266
DECI	<---	OPEN	4.927	0.274
DECI	<---	IMPRV	52.446	0.733
DECI	<---	AUTH	16.451	0.33
DECI	<---	CAREER	7.724	0.235
DECI	<---	PERF	9.634	-0.344
DECI	<---	ROTA	13.362	0.283
AUTH	<---	COOPE	4.613	-0.154
AUTH	<---	BEHVR	6.161	0.183
AUTH	<---	RULES	7.858	-0.186
AUTH	<---	IMPRV	14.78	0.291
AUTH	<---	DECI	20.326	0.222
AUTH	<---	COMP	7.906	-0.26
NOFIN	<---	PROFIT	6.072	0.212
NOFIN	<---	COOPM	9.972	0.32
NOFIN	<---	ROTA	4.807	-0.184

			M.I.	Par Change
FININC	<---	DEFECTS	4.076	-0.139
FININC	<---	REGLR	4.61	0.14
FININC	<---	IMPRV	7.56	-0.223
FININC	<---	TRAIN	6.264	0.137
COMP	<---	Employee Outcome	5.823	0.15
COMP	<---	DEFECTS	6.854	0.095
COMP	<---	QUALITY	7.317	0.117
COMP	<---	PRODDEV	8.593	0.109
COMP	<---	COMMT	9.543	0.107
COMP	<---	RULES	8.913	0.112
COMP	<---	IMPRV	6.875	-0.112
COMP	<---	DECI	7.471	-0.076
COMP	<---	AUTH	12.179	-0.12
COMP	<---	SELEC	4.882	-0.088
CAREER	<---	PROFIT	5.572	-0.116
CAREER	<---	INVLV	11.074	0.168
CAREER	<---	DECI	14.634	0.156
CAREER	<---	TRAIN	9.548	-0.131
FEED	<---	COOPM	5.054	-0.095
FEED	<---	COMMT	10.364	-0.119
FEED	<---	PERF	7.675	0.139
FEED	<---	ROTA	19.12	0.153
PERF	<---	PROFIT	11.068	0.115
PERF	<---	UTI	4.085	0.071
PERF	<---	CUSTSATIS	4.748	0.083
PERF	<---	OPEN	4.076	-0.109
PERF	<---	IMPRV	18.58	-0.191
PERF	<---	DECI	23.851	-0.141
PERF	<---	COMP	4.568	0.116
PERF	<---	CAREER	4.122	-0.075
PERF	<---	FEED	7.801	0.132
ROTA	<---	INVLV	6.43	0.174
ROTA	<---	IMPRV	5.718	0.204
ROTA	<---	DECI	13.74	0.206
ROTA	<---	NOFIN	5.406	-0.123
ROTA	<---	FEED	8.072	0.259
ROTA	<---	SELEC	8.413	-0.231
ROTA	<---	RIGHT	8.625	-0.279
TRAIN	<---	COOPE	11.258	0.28

			M.I.	Par Change
TRAIN	<---	FININC	5.795	0.151
TRAIN	<---	CAREER	6.648	-0.19
SELEC	<---	Organization_Performance	4.185	-0.071
SELEC	<---	DEFECTS	7.033	0.127
SELEC	<---	PRODDEV	4.373	-0.102
SELEC	<---	SUPPLSATI	10.624	-0.159
SELEC	<---	CUSTSATIS	9.997	-0.153
SELEC	<---	INVLV	8.399	-0.132
SELEC	<---	RULES	4.19	-0.102
SELEC	<---	IMPRV	5.1	0.128
SELEC	<---	AUTH	5.59	0.108
SELEC	<---	COMP	4.795	-0.151
SELEC	<---	ROTA	15.297	-0.169
SELEC	<---	RIGHT	21.867	0.295
RIGHT	<---	BEHVR	8.143	-0.134
RIGHT	<---	INVLV	8.747	-0.114
RIGHT	<---	OPEN	4.399	-0.123
RIGHT	<---	DECI	4.02	-0.063
RIGHT	<---	ROTA	14.952	-0.142
RIGHT	<---	SELEC	20.847	0.205

(Source: AMOS Output; Primary data)

TABLE 8.149 - Model Fit Summary (CMIN)

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	63	2224.358	433	0	5.137
Saturated model	496	0	0		
Independence model	31	4345.298	465	0	9.345

(Source: AMOS Output; Primary data)

Refer Table 8.149 of Model Fit Summary. Focusing on the first set of fit statistics, we see the labels NPAR (number of parameters), CMIN (minimum discrepancy), DF (degrees of freedom), P (probability value), and CMIN/DF. The value of **2224.35**, under CMIN, represents the discrepancy between the unrestricted sample covariance matrix S , and the restricted covariance matrix $\Sigma(\theta)$, and, in essence, represents the Likelihood Ratio Test statistic, most commonly expressed as a χ^2 statistic. In general, $H_0: \Sigma = \Sigma(\theta)$ is equivalent to the hypothesis that $\Sigma - \Sigma(\theta) = 0$; the χ^2 test, then, simultaneously tests the extent to

which all residuals in $\Sigma - \Sigma(\theta)$ are zero. (Bollen, 1989a). The test of our H_0 , Technology Acceptance Model fits the data, yielded a χ^2 value of **2224.35**, with **433** degrees of freedom and a probability of less than **.000** ($p < .0001$), thereby suggesting that the fit of the data to the hypothesized model is not entirely adequate. Because the χ^2 statistic equals $(N-1) F_{min}$, this value tends to be substantial when the model does *not* hold and when sample size is large (Joreskog & Sorbom, 1993). Yet, the analysis of covariance structures is grounded in large sample theory. As such, large samples are critical to the obtaining of precise parameter estimates, as well as to the tenability of asymptotic distributional approximations (MacCallum et al., 1996). Thus, findings of well-fitting hypothesized models, where the χ^2 value approximates the degrees of freedom, have proven to be unrealistic in most SEM empirical research. One of the first fit statistics to address this problem was the $\chi^2/\text{degrees of freedom}$ ratio (Wheaton, Muthen, Alwin, & Summers, 1977), which appears as CMIN/DF, and is presented in the first cluster of statistics which is **5.137** (Standard Recommended Value ≤ 5)

TABLE 8.150 - Root Mean Square (RMR) and GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.137	0.62	0.564	0.541
Saturated model	0	1		
Independence model	0.179	0.254	0.204	0.238

(Source: AMOS Output; Primary data)

Turning now to the next group of statistics in Table 8.150, we see the labels RMR, GFI, AGFI, and PGFI. The root mean square residual (RMR) represents the average residual value derived from the fitting of the variance–covariance matrix for the hypothesized model $\Sigma(\theta)$ to the variance–covariance matrix of the sample data (S). However, because these residuals are relative to the sizes of the observed variances and covariances they are difficult to interpret. Thus, they are best interpreted in the metric of the correlation matrix (Hu & Bentler, 1995; Joreskog & Sorbom, 1989). The standardized RMR, then, represents the average value across all standardized residuals, and ranges from zero to 1.00; in a well-fitting model, this value will be small (say, .05 or less). The value of **0.137** shown in Table 8.150 represents the unstandardized residual value.

The Goodness-of-Fit Index (GFI) is a measure of the relative amount of variance and covariance in S that is jointly explained by Σ . The Adjusted Goodness-of-Fit Index (AGFI) differs from the GFI only in the fact that it adjusts for the number of degrees of freedom in the specified model. As such, it also addresses the issue of parsimony by incorporating a penalty for the inclusion of additional parameters. The GFI and AGFI can be classified as absolute indices of fit because they basically compare the hypothesized model with no model at all (see Hu & Bentler, 1995). Although both indices range from zero to 1.00, with values close to 1.00 being indicative of good fit. In our model GFI = **0.620** and AGFI = **0.564** which is considered to be moderate fit.

TABLE 8.151 - Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.488	0.45	0.542	0.504	0.538
Saturated model	1		1		1
Independence model	0	0	0	0	0

(Source: AMOS Output; Primary data)

We turn now to the next set of goodness-of-fit statistics (baseline comparisons, shown in Table 8.151), which can be classified as incremental or comparative indices of fit (Hu & Bentler, 1995; Marsh et al., 1988). As with the GFI and AGFI incremental indices of fit are based on a comparison of the hypothesized model against some standard. However, whereas this standard represents no model at all for the GFI and AGFI, it represents a baseline model (typically, the independence or null model noted above for the incremental indices). We now review these incremental indices. For the better part of a decade, Bentler and Bonett's (1980) Normed Fit Index (NFI) has been the practical criterion of choice, as evidenced in large part by the current "classic" status of its original paper (see Bentler, 1992; Bentler & Bonett, 1987). However, addressing evidence that the NFI has shown a tendency to underestimate fit in small samples, Bentler (1990) revised the NFI to take sample size into account and proposed the Comparative Fit Index (CFI; see last column in Table 8.151). Values for both the NFI and CFI range from zero to 1.00

and are derived from the comparison of a hypothesized model with the independence (or null) model, as described earlier. As such, each provides a measure of complete covariation in the data. Although a value $> .90$ was originally considered representative of a well-fitting model (see Bentler, 1992), a revised cutoff value close to $.95$ has recently been advised (Hu & Bentler, 1999). Based on the NFI and CFI values reported in Table 8.151 (**0.488 and 0.538**, respectively), we can once again conclude that our hypothesized model fits the sample data moderately.

The Relative Fit Index (RFI; Bollen, 1986) represents a derivative of the NFI; as with both the NFI and CFI, the RFI coefficient values range from zero to 1.00, with values close to $.95$ indicating superior fit (see Hu & Bentler, 1999). The Incremental Index of Fit (IFI) was developed by Bollen (1989b) to address the issues of parsimony and sample size which were known to be associated with the NFI. As such, its computation is basically the same as that of the NFI, with the exception that degrees of freedom are taken into account. Thus, it is not surprising that our finding of IFI of **.583** is consistent with that of the CFI in reflecting a well-fitting model. Finally, the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973), consistent with the other indices noted here, yields values ranging from zero to 1.00, with values close to $.95$ (for large samples) being indicative of good fit (see Hu & Bentler, 1999). **Our model has RFI = 0.450, IFI = 0.542 and TLI = 0.504 which again shows that our model fits moderately.**

TABLE 8.152 - Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.931	.455	.501
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

(Source: AMOS Output; Primary data)

The next cluster of fit indices relates to the issue of model parsimony (Refer Table 8.152). The first fit index (PRATIO) relates to the initial parsimony ratio proposed by James et al. (1982). More appropriately, however, the index has subsequently been tied to other goodness-of-fit indices (see, e.g., the PGFI noted earlier). Here, it is computed relative to the NFI and CFI. In both cases, as was true for PGFI, the complexity of the model is taken into account in the assessment of model fit (see James et al.; Mulaik et al., 1989). Again, a PNFI of **0.455** and PCFI of **0.501** fall in the range of expected values.

TABLE 8.153 - Non Centrality Parameter (NCP)

Model	NCP	LO 90	HI 90
Default model	1791.358	1647.64	1942.55
Saturated model	0	0	0
Independence model	3880.298	3672.9	4095.01

(Source: AMOS Output; Primary data)

The next set of fit statistics provides us with the non-centrality parameter (NCP) estimate as shown in Table 8.153. In our initial discussion of the χ^2 statistic, we focused on the extent to which the model was tenable and could not be rejected. Now, however, let's look a little more closely at what happens when the hypothesized model is incorrect [i.e., $\Sigma \neq \Sigma(\theta)$]. In this circumstance, the χ^2 statistic has a non-central χ^2 distribution, with a non-centrality parameter, λ , that is a fixed parameter with associated degrees of freedom, and can be denoted as χ^2 (df, λ) (Bollen, 1989a; Hu & Bentler, 1995; Satorra & Saris, 1985). Turning to Table 8.153, we find that our hypothesized model yielded a non-

centrality parameter of **1791.358**. This value represents the χ^2 value minus its degrees of freedom (**2224.358 – 433**). The confidence interval indicates that we can be 90% confident that the population value of the non-centrality parameter (λ) lies between **3672.904 and 4095.010**.

TABLE 8.154 - FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	10.394	8.371	7.699	9.077
Saturated model	0	0	0	0
Independence model	20.305	18.132	17.163	19.136

(Source: AMOS Output; Primary data)

TABLE 8.155 - Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.139	0.133	0.145	0
Independence model	0.197	0.192	0.203	0

(Source: AMOS Output; Primary data)

The next set of fit statistics focuses on the root mean square error of approximation (RMSEA) (Refer Table 8.155) also called Badness of Fit Index. Although this index, and the conceptual framework within which it is embedded, was first proposed by Steiger and Lind in 1980, it has only recently been recognized as one of the most informative criteria in covariance structure modeling. This discrepancy, as measured by the RMSEA, is expressed per degree of freedom, thus making it sensitive to the number of estimated parameters in the model (i.e., the complexity of the model); values less than .05 indicate good fit, and values as high as .08 represent reasonable errors of approximation in the population (Browne & Cudeck, 1993). MacCallum et al. (1996) have recently elaborated on these cutpoints and noted that RMSEA values ranging from .08 to .10 indicate mediocre fit, and those greater than .10 indicate poor fit. Although Hu and Bentler (1999) have suggested a value of .06 to be indicative of good fit between the hypothesized model and the observed data. Our model is having RMSEA is **0.139** which suggests not good fit.

The 90 percent confidence interval for the RMSEA is between a LO of 0.133 and a HI of 0.145. Thus, even the upper bound is close to .08. In addition to reporting a confidence interval around the RMSEA value, AMOS tests for the closeness of fit (PCLOSE). That is, it tests the hypothesis that the RMSEA is “good” in the population (specifically, that it is $< .05$). Joreskog and Sorbom (1996a) have suggested that the p-value for this test should be $> .50$. In our case it is $0.000 < 0.05$ which is not good. However, the fact remains that it is difficult to have a Model which contains all the values within the prescribed ideal limits.

TABLE 8.156 - Akaike’s Information Criterion (AIC)

Model	AIC	BCC	BIC	CAIC
Default model	2350.358	2372.51	2562.71	2625.71
Saturated model	992	1166.42	2663.84	3159.84
Independence model	4407.298	4418.2	4511.79	4542.79

(Source: AMOS Output; Primary data)

The first of these is Akaike’s (1987) Information Criterion (AIC), with Bozdogan’s (1987) consistent version of the AIC (CAIC) shown at the end of the row in Table 8.156. Both criteria address the issue of parsimony in the assessment of model fit; as such, statistical goodness-of-fit as well as the number of estimated parameters are taken into account.

TABLE 8.157 - Expected Cross-Validation Index (ECVI)

Model	ECVI	LO 90	HI 90	MECVI
Default model	10.983	10.311	11.689	11.087
Saturated model	4.636	4.636	4.636	5.451
Independence model	20.595	19.626	21.598	20.646

(Source: AMOS Output; Primary data)

The Expected Cross-Validation Index (ECVI) (Refer Table 8.157) is central to the next cluster of fit statistics. The ECVI was proposed, initially, as a means of assessing, in a

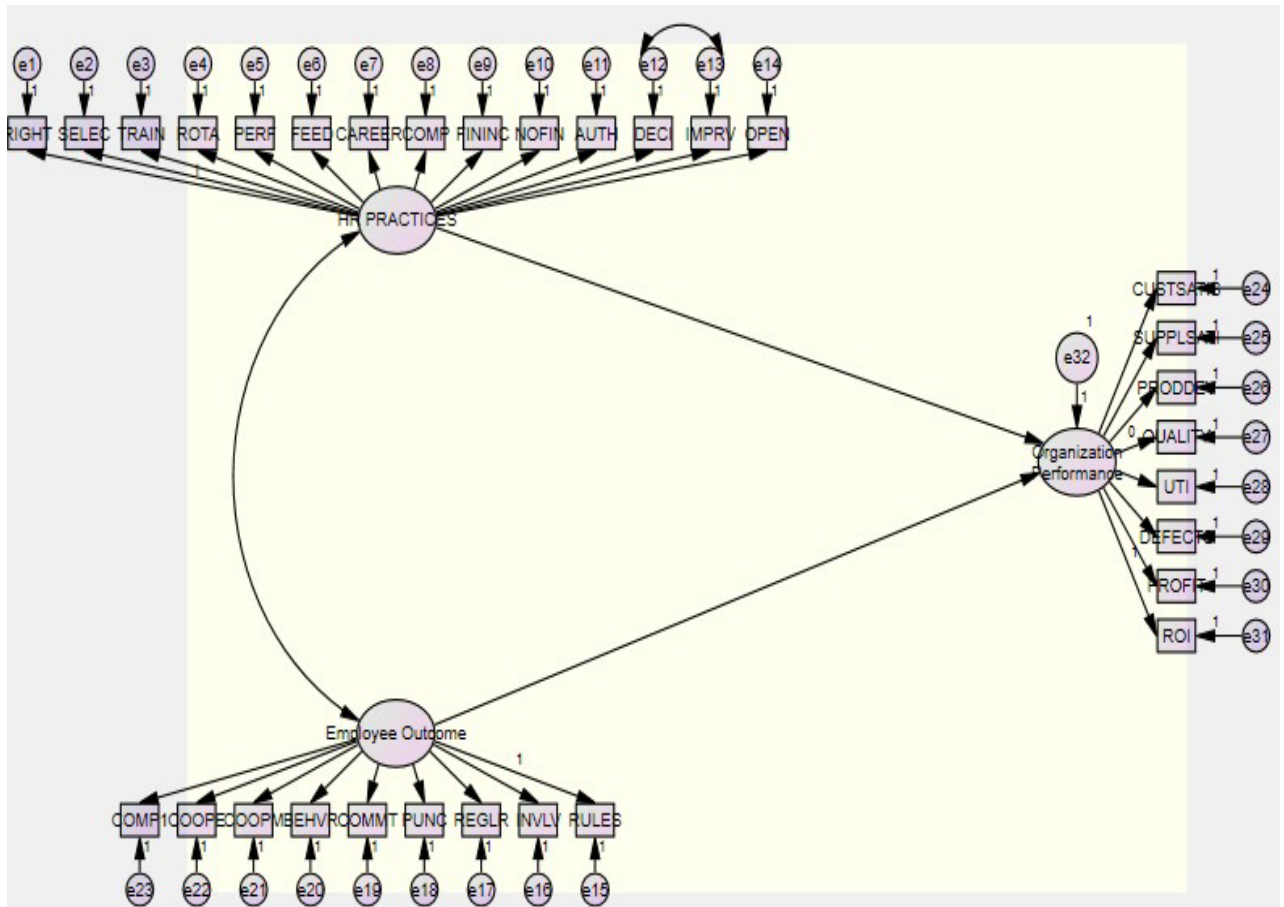
single sample, the likelihood that the model cross-validates across similar-sized samples from the same population (Browne & Cudeck, 1989).

TABLE 8.158 - HOELTER

Model	HOELTER 0.05	HOELTER 0.01
Default model	47	49
Independence model	26	27

(Source: AMOS Output; Primary data)

8.12.2. FIRST MODIFICATION [e12<-->e13]



(Source: AMOS Output; Primary data)

Figure 8.33 - First Modification Model [e12<-->e13]

TABLE 8.159 - Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Inter-cepts	Total
Fixed	36	0	1	0	0	37
Labeled	0	0	0	0	0	0
Unlabeled	29	2	33	0	0	64
Total	65	2	34	0	0	101

(Source: AMOS Output; Primary data)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 496
Number of distinct parameters to be estimated: 64
Degrees of freedom (496 - 64): 432

Result (Default model)

Minimum was achieved
Chi-square = 2148.439
Degrees of freedom = 432
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)

TABLE 8.160 - Standard Error, CR and P Table

			Esti mate	S.E.	C.R.	P	Label
Org_Perf	<---	Emp Outcme	0.7	0.186	3.766	***	par_28
Org_Perf	<---	HR PRACT	0.89	0.227	3.923	***	par_29
RIGHT	<---	HR PRACT	1				
SELEC	<---	HR PRACT	1.213	0.139	8.743	***	par_1
TRAIN	<---	HR PRACT	1.314	0.187	7.009	***	par_2
ROTA	<---	HR PRACT	0.672	0.161	4.184	***	par_3
PERF	<---	HR PRACT	1.173	0.121	9.721	***	par_4
FEED	<---	HR PRACT	1.178	0.123	9.559	***	par_5
CAREER	<---	HR PRACT	1.343	0.155	8.687	***	par_6
COMP	<---	HR PRACT	0.945	0.106	8.91	***	par_7
FININC	<---	HR PRACT	1.34	0.179	7.506	***	par_8
NOFIN	<---	HR PRACT	-0.081	0.195	-0.414	0.679	par_9
AUTH	<---	HR PRACT	0.977	0.155	6.288	***	par_10
DECI	<---	HR PRACT	0.621	0.188	3.309	***	par_11
IMPRV	<---	HR PRACT	0.644	0.124	5.201	***	par_12
OPEN	<---	HR PRACT	0.505	0.101	4.989	***	par_13
RULES	<---	Emp Outcme	1				
INVLV	<---	Emp Outcme	1.291	0.14	9.229	***	par_14
REGLR	<---	Emp Outcme	1.25	0.139	8.984	***	par_15
PUNC	<---	Emp Outcme	1.26	0.139	9.032	***	par_16
COMMT	<---	Emp Outcme	1.347	0.141	9.564	***	par_17
BEHVR	<---	Emp Outcme	0.945	0.113	8.393	***	par_18
COOPM	<---	Emp Outcme	0.974	0.119	8.213	***	par_19
COOPE	<---	Emp Outcme	0.924	0.115	8.036	***	par_20
COMP1	<---	Emp Outcme	0.744	0.107	6.965	***	par_21
CUSTSATI S	<---	Org_Perf	0.616	0.033	18.42	***	par_22
SUPPLSAT I	<---	Org_Perf	0.599	0.034	17.737	***	par_23
PRODDEV	<---	Org_Perf	0.575	0.035	16.563	***	par_24
QUALITY	<---	Org_Perf	0				
UTI	<---	Org_Perf	0.639	0.038	17.03	***	par_25
DEFECTS	<---	Org_Perf	0.5	0.04	12.503	***	par_26
PROFIT	<---	Org_Perf	0.38	0.049	7.762	***	par_27
ROI	<---	Org_Perf	1				

(Source: AMOS Output; Primary data)

TABLE 8.161 - Standard Error, CR and P Table

			Estimate	S.E.	C.R.	P	Label
Org_Perf	<---	Emp Outcome	0.7	0.186	3.766	***	par_28
Org_Perf	<---	HR PRACT	0.89	0.227	3.923	***	par_29
RIGHT	<---	HR PRACT	1				
SELEC	<---	HR PRACT	1.213	0.139	8.743	***	par_1
TRAIN	<---	HR PRACT	1.314	0.187	7.009	***	par_2
ROTA	<---	HR PRACT	0.672	0.161	4.184	***	par_3
PERF	<---	HR PRACT	1.173	0.121	9.721	***	par_4
FEED	<---	HR PRACT	1.178	0.123	9.559	***	par_5
CAREER	<---	HR PRACT	1.343	0.155	8.687	***	par_6
COMP	<---	HR PRACT	0.945	0.106	8.91	***	par_7
FININC	<---	HR PRACT	1.34	0.179	7.506	***	par_8
NOFIN	<---	HR PRACT	-0.081	0.195	-0.414	0.679	par_9
AUTH	<---	HR PRACT	0.977	0.155	6.288	***	par_10
DECI	<---	HR PRACT	0.621	0.188	3.309	***	par_11
IMPRV	<---	HR PRACT	0.644	0.124	5.201	***	par_12
OPEN	<---	HR PRACT	0.505	0.101	4.989	***	par_13
RULES	<---	Emp Outcome	1				
INLVV	<---	Emp Outcome	1.291	0.14	9.229	***	par_14
REGLR	<---	Emp Outcome	1.25	0.139	8.984	***	par_15
PUNC	<---	Emp Outcome	1.26	0.139	9.032	***	par_16
COMMT	<---	Emp Outcome	1.347	0.141	9.564	***	par_17
BEHVR	<---	Emp Outcome	0.945	0.113	8.393	***	par_18
COOPM	<---	Emp Outcome	0.974	0.119	8.213	***	par_19
COOPE	<---	Emp Outcome	0.924	0.115	8.036	***	par_20
COMP1	<---	Emp Outcome	0.744	0.107	6.965	***	par_21
CUSTSATIS	<---	Org_Perf	0.616	0.033	18.42	***	par_22
SUPPLSATI	<---	Org_Perf	0.599	0.034	17.737	***	par_23
PRODDEV	<---	Org_Perf	0.575	0.035	16.563	***	par_24
QUALITY	<---	Org_Perf	0				
UTI	<---	Org_Perf	0.639	0.038	17.03	***	par_25
DEFECTS	<---	Org_Perf	0.5	0.04	12.503	***	par_26
PROFIT	<---	Org_Perf	0.38	0.049	7.762	***	par_27
ROI	<---	Org_Perf	1				

(Source: AMOS Output; Primary data)

**TABLE 8.162 - Standardized Regression Weights:
(Group number 1 - Default model)**

			Estimate
Organization_Performance	<---	Employee Outcome	0.302
Organization_Performance	<---	HR PRACTICES	0.316
RIGHT	<---	HR PRACTICES	0.667
SELEC	<---	HR PRACTICES	0.677
TRAIN	<---	HR PRACTICES	0.529
ROTA	<---	HR PRACTICES	0.308
PERF	<---	HR PRACTICES	0.768
FEED	<---	HR PRACTICES	0.753
CAREER	<---	HR PRACTICES	0.672
COMP	<---	HR PRACTICES	0.693
FININC	<---	HR PRACTICES	0.571
NOFIN	<---	HR PRACTICES	-0.03
AUTH	<---	HR PRACTICES	0.471
DECI	<---	HR PRACTICES	0.242
IMPRV	<---	HR PRACTICES	0.385
OPEN	<---	HR PRACTICES	0.369
RULES	<---	Employee Outcome	0.639
INVLV	<---	Employee Outcome	0.755
REGLR	<---	Employee Outcome	0.729
PUNC	<---	Employee Outcome	0.734
COMMT	<---	Employee Outcome	0.792
BEHVR	<---	Employee Outcome	0.67
COOPM	<---	Employee Outcome	0.652
COOPE	<---	Employee Outcome	0.635
COMP1	<---	Employee Outcome	0.537
CUSTSATIS	<---	Organization_Performance	0.886
SUPPLSATI	<---	Organization_Performance	0.87
PRODDEV	<---	Organization_Performance	0.841
QUALITY	<---	Organization_Performance	0
UTI	<---	Organization_Performance	0.853
DEFECTS	<---	Organization_Performance	0.713
PROFIT	<---	Organization_Performance	0.499

(Source: AMOS Output; Primary data)

TABLE 8.163 - Covariances: (Group number 1 - Default model)

			Est	S. E.	C. R.	P	Label
HR PRACTICES	<-->	Employee Outcome	0.096	0.021	4.62	***	par_30
e12	<-->	e13	0.37	0.053	6.953	***	par_31

TABLE 8.164 - Correlations: (Group number 1 - Default model)

			Estimate
HR PRACTICES	<-->	Employee Outcome	0.45
e12	<-->	e13	0.552

(Source: AMOS Output; Primary data)

TABLE 8.165 - Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
HR PRACTICES	0.175	0.033	5.27	***	par_32
Employee Outcome	0.258	0.052	5.007	***	par_33
e32	1				
e1	0.218	0.023	9.311	***	par_34
e2	0.303	0.033	9.253	***	par_35
e3	0.775	0.079	9.845	***	par_36
e4	0.756	0.074	10.211	***	par_37
e5	0.167	0.02	8.488	***	par_38
e6	0.186	0.021	8.66	***	par_39
e7	0.382	0.041	9.282	***	par_40
e8	0.17	0.019	9.158	***	par_41
e9	0.651	0.067	9.725	***	par_42
e10	1.264	0.122	10.343	***	par_43
e11	0.586	0.059	9.979	***	par_44
e12	1.082	0.105	10.263	***	par_45
e13	0.415	0.041	10.121	***	par_46
e14	0.283	0.028	10.143	***	par_47
e15	0.374	0.039	9.547	***	par_48
e16	0.324	0.037	8.8	***	par_49
e17	0.354	0.039	9.024	***	par_50
e18	0.35	0.039	8.985	***	par_51

	Estimate	S.E.	C.R.	P	Label
e19	0.278	0.033	8.384	***	par_52
e20	0.284	0.03	9.403	***	par_53
e21	0.331	0.035	9.488	***	par_54
e22	0.326	0.034	9.562	***	par_55
e23	0.352	0.036	9.876	***	par_56
e24	0.143	0.018	7.748	***	par_57
e25	0.159	0.02	8.136	***	par_58
e26	0.19	0.022	8.648	***	par_59
e27	0.476	0.046	10.344	***	par_60
e28	0.212	0.025	8.464	***	par_61
e29	0.335	0.035	9.626	***	par_62
e30	0.602	0.059	10.115	***	par_63
e31	0.984	0.105	9.399	***	par_64

(Source: AMOS Output; Primary data)

TABLE 8.166 - Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
e31	<-->	Employee Outcome	26.15	-0.178
e31	<-->	HR PRACTICES	13.692	-0.107
e31	<-->	e32	12.302	-0.263
e30	<-->	e31	84.935	0.512
e29	<-->	e31	7.946	-0.119
e28	<-->	e29	20.895	0.094
e27	<-->	Employee Outcome	32.956	0.133
e27	<-->	HR PRACTICES	19.314	0.084
e27	<-->	e32	24.295	0.247
e27	<-->	e31	56.45	-0.368
e27	<-->	e29	12.521	0.1
e27	<-->	e28	5.969	0.058
e26	<-->	e29	7.22	0.052
e25	<-->	e29	8.405	-0.052
e25	<-->	e28	5.792	-0.036
e24	<-->	e30	4.17	-0.047
e24	<-->	e29	6.947	-0.046
e24	<-->	e27	9.258	0.062
e24	<-->	e25	28.033	0.067
e23	<-->	e30	7.351	-0.088

			M.I.	Par Change
e22	<-->	e30	5.567	-0.075
e22	<-->	e26	8.13	0.055
e22	<-->	e23	33.074	0.141
e21	<-->	e31	4.445	0.089
e21	<-->	e28	8.582	-0.06
e21	<-->	e24	4.055	-0.035
e21	<-->	e23	6.725	0.064
e21	<-->	e22	5.5	0.056
e20	<-->	e30	5.194	0.068
e20	<-->	e24	5.699	-0.039
e20	<-->	e21	9.792	0.071
e19	<-->	e30	12.002	0.107
e19	<-->	e28	9.437	0.061
e19	<-->	e26	7.712	-0.052
e19	<-->	e23	7.617	-0.066
e19	<-->	e21	7.77	0.065
e19	<-->	e20	7.806	0.061
e18	<-->	e32	4.153	0.093
e18	<-->	e31	15.126	-0.174
e18	<-->	e30	8.213	-0.097
e18	<-->	e24	4.041	0.037
e18	<-->	e23	4.722	-0.056
e18	<-->	e22	4.075	-0.051
e18	<-->	e20	4.659	-0.051
e17	<-->	e22	5.164	-0.058
e17	<-->	e20	4.638	-0.051
e17	<-->	e19	9.274	-0.075
e17	<-->	e18	34.79	0.159
e16	<-->	e22	7.29	-0.066
e16	<-->	e21	5.893	-0.06
e16	<-->	e18	5.467	-0.061
e15	<-->	e31	16.285	-0.182
e15	<-->	e30	9.106	-0.103
e15	<-->	e26	6.636	0.053
e15	<-->	e24	4.642	0.04
e15	<-->	e21	20.965	-0.118
e15	<-->	e20	4.701	-0.052
e15	<-->	e19	6.768	-0.065
e15	<-->	e18	4.147	0.055

			M.I.	Par Change
e15	<-->	e16	26.897	0.137
e14	<-->	Employee Outcome	11.129	0.06
e14	<-->	e31	10.185	-0.122
e14	<-->	e28	6.721	-0.048
e14	<-->	e27	8.27	0.073
e13	<-->	e29	7.107	0.059
e13	<-->	e24	4.123	-0.032
e13	<-->	e14	6.755	0.052
e12	<-->	e31	7.976	-0.174
e12	<-->	e30	4.148	-0.095
e12	<-->	e25	7.443	0.072
e12	<-->	e23	7.172	0.096
e12	<-->	e19	5.172	-0.078
e11	<-->	e22	5.198	-0.072
e11	<-->	e20	17.334	0.123
e11	<-->	e15	9.827	-0.106
e11	<-->	e13	4.181	0.059
e11	<-->	e12	9.145	0.139
e10	<-->	e30	8.832	0.179
e10	<-->	e26	4.686	-0.079
e10	<-->	e23	4.482	-0.099
e10	<-->	e21	11.881	0.158
e9	<-->	e30	5.442	0.104
e9	<-->	e29	7.958	-0.096
e9	<-->	e18	14.28	-0.135
e9	<-->	e17	6.917	0.094
e9	<-->	e16	4.203	0.071
e9	<-->	e13	11.283	-0.103
e8	<-->	Employee Outcome	7.696	0.04
e8	<-->	e27	6.856	0.054
e8	<-->	e26	7.526	0.039
e8	<-->	e25	6.503	-0.034
e8	<-->	e19	5.045	0.039
e8	<-->	e15	4.403	0.04
e8	<-->	e11	15.398	-0.091
e7	<-->	e31	8.692	-0.136
e7	<-->	e30	8.684	-0.102
e7	<-->	e16	14.03	0.101
e7	<-->	e12	17.918	0.163

			M.I.	Par Change
e7	<-->	e8	6.58	0.049
e6	<-->	e30	4.12	-0.051
e6	<-->	e29	4.141	-0.039
e6	<-->	e25	12.396	0.05
e6	<-->	e21	4.213	-0.039
e6	<-->	e19	19.45	-0.081
e6	<-->	e18	5.561	0.047
e6	<-->	e15	7.417	0.055
e5	<-->	e32	6.455	0.082
e5	<-->	e30	7.737	0.066
e5	<-->	e29	4.222	-0.037
e5	<-->	e14	4.914	-0.036
e5	<-->	e13	5.529	-0.039
e5	<-->	e12	6.336	-0.067
e5	<-->	e8	6.923	0.034
e5	<-->	e7	8.982	-0.059
e5	<-->	e6	17.432	0.058
e4	<-->	e29	4.135	-0.073
e4	<-->	e26	6.2	-0.07
e4	<-->	e25	5.328	0.061
e4	<-->	e23	4.541	-0.077
e4	<-->	e17	6.057	-0.093
e4	<-->	e16	11.74	0.125
e4	<-->	e12	8.989	0.156
e4	<-->	e10	5.455	-0.157
e4	<-->	e6	23.131	0.134
e3	<-->	e31	4.626	0.137
e3	<-->	e29	5.072	-0.083
e3	<-->	e22	15.155	0.142
e3	<-->	e19	4.86	0.078
e3	<-->	e18	5.299	-0.089
e3	<-->	e9	8.774	0.151
e3	<-->	e7	12.704	-0.142
e2	<-->	Employee Outcome	4.262	-0.04
e2	<-->	e29	36.182	0.142
e2	<-->	e25	11.247	-0.059
e2	<-->	e24	12.47	-0.06
e2	<-->	e16	6.227	-0.06
e2	<-->	e13	12.347	0.075

			M.I.	Par Change
e2	<-->	e12	4.206	-0.07
e2	<-->	e11	8.719	0.091
e2	<-->	e8	10.968	-0.057
e2	<-->	e5	5.207	-0.04
e2	<-->	e4	15.734	-0.137
e1	<-->	e23	7.298	0.055
e1	<-->	e22	6.651	0.051
e1	<-->	e20	6.687	-0.048
e1	<-->	e16	9.457	-0.063
e1	<-->	e14	4.811	-0.039
e1	<-->	e6	6.371	-0.039
e1	<-->	e4	16.011	-0.117
e1	<-->	e2	41.806	0.124

(Source: AMOS Output; Primary data)

TABLE 8.167 - Variances: (Group number 1 - Default model)

	M.I.	Par Change
e32	38.552	-0.675

TABLE 8.168 - Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
ROI	<---	Employee Outcome	54.396	-1.087
ROI	<---	HR PRACTICES	42.92	-1.179
ROI	<---	Organization_Performance	50.374	-0.441
ROI	<---	PROFIT	19.996	0.355
ROI	<---	DEFECTS	46.674	-0.588
ROI	<---	UTI	38.236	-0.498
ROI	<---	QUALITY	56.45	-0.773
ROI	<---	PRODDEV	42.102	-0.572
ROI	<---	SUPPLSATI	40.823	-0.56
ROI	<---	CUSTSATIS	43.65	-0.574
ROI	<---	COMP1	26.061	-0.515
ROI	<---	COOPE	24.526	-0.476
ROI	<---	COOPM	9.151	-0.283
ROI	<---	BEHVR	14.717	-0.38
ROI	<---	COMMT	19.708	-0.365
ROI	<---	PUNC	58.044	-0.621

			M.I.	Par Change
ROI	<---	REGLR	29.094	-0.44
ROI	<---	INVLV	28.114	-0.434
ROI	<---	RULES	55.729	-0.666
ROI	<---	OPEN	27.256	-0.647
ROI	<---	IMPRV	8.825	-0.302
ROI	<---	DECI	16.996	-0.273
ROI	<---	AUTH	11.381	-0.276
ROI	<---	COMP	25.666	-0.63
ROI	<---	CAREER	38.904	-0.53
ROI	<---	FEED	29.451	-0.588
ROI	<---	PERF	21.108	-0.511
ROI	<---	SELEC	9.72	-0.296
ROI	<---	RIGHT	17.493	-0.474
PROFIT	<---	ROI	32.249	0.198
PROFIT	<---	COMP1	7.93	-0.214
PROFIT	<---	COOPE	5.957	-0.177
PROFIT	<---	PUNC	6.838	-0.161
PROFIT	<---	RULES	8.556	-0.197
PROFIT	<---	DECI	4.567	-0.107
PROFIT	<---	NOFIN	8.772	0.141
PROFIT	<---	FININC	4.119	0.111
DEFECTS	<---	Employee Outcome	7.772	0.237
DEFECTS	<---	HR PRACTICES	5.981	0.254
DEFECTS	<---	UTI	4.814	0.102
DEFECTS	<---	QUALITY	12.521	0.21
DEFECTS	<---	BEHVR	4.569	0.122
DEFECTS	<---	COMMT	9.837	0.149
DEFECTS	<---	PUNC	8.033	0.133
DEFECTS	<---	RULES	6.638	0.133
DEFECTS	<---	IMPRV	9.397	0.18
DEFECTS	<---	COMP	8.505	0.209
DEFECTS	<---	SELEC	33.364	0.316
DEFECTS	<---	RIGHT	8.686	0.193
UTI	<---	DEFECTS	9.753	0.13
UTI	<---	QUALITY	5.969	0.122
UTI	<---	COMMT	7.961	0.113
UTI	<---	SELEC	5.334	0.106
QUALITY	<---	Employee Outcome	70.51	0.822
QUALITY	<---	HR PRACTICES	58.016	0.911

			M.I.	Par Change
QUALITY	<---	Organization_Performance	79.483	0.369
QUALITY	<---	PROFIT	11.176	0.176
QUALITY	<---	DEFECTS	73.143	0.489
QUALITY	<---	UTI	72.693	0.456
QUALITY	<---	PRODDEV	67.116	0.48
QUALITY	<---	SUPPLSATI	55.202	0.433
QUALITY	<---	CUSTSATIS	78.996	0.513
QUALITY	<---	COMP1	16.018	0.268
QUALITY	<---	COOPE	38.392	0.396
QUALITY	<---	COOPM	14.587	0.237
QUALITY	<---	BEHVR	42.151	0.427
QUALITY	<---	COMMT	48.494	0.38
QUALITY	<---	PUNC	48.527	0.377
QUALITY	<---	REGLR	25.825	0.275
QUALITY	<---	INVLV	35.429	0.323
QUALITY	<---	RULES	42.168	0.385
QUALITY	<---	OPEN	28.099	0.437
QUALITY	<---	AUTH	14.475	0.207
QUALITY	<---	FININC	13.291	0.175
QUALITY	<---	COMP	45.795	0.559
QUALITY	<---	CAREER	30.709	0.313
QUALITY	<---	FEED	26.241	0.369
QUALITY	<---	PERF	41.791	0.477
QUALITY	<---	TRAIN	14.094	0.171
QUALITY	<---	SELEC	14.778	0.242
QUALITY	<---	RIGHT	18.643	0.325
PRODDEV	<---	HR PRACTICES	4.596	0.176
PRODDEV	<---	COOPE	8.829	0.13
PRODDEV	<---	RULES	7.63	0.112
PRODDEV	<---	NOFIN	4.947	-0.064
PRODDEV	<---	COMP	10.738	0.186
PRODDEV	<---	CAREER	7.241	0.104
PRODDEV	<---	TRAIN	5.794	0.075
PRODDEV	<---	RIGHT	6.126	0.128
SUPPLSATI	<---	CUSTSATIS	4.959	0.083
SUPPLSATI	<---	OPEN	4.305	0.11
SUPPLSATI	<---	IMPRV	4.102	0.088
SUPPLSATI	<---	DECI	11.532	0.096
SUPPLSATI	<---	FEED	7.21	0.125

			M.I.	Par Change
SUPPLSATI	<---	ROTA	5.78	0.08
CUSTSATIS	<---	QUALITY	9.258	0.13
CUSTSATIS	<---	SUPPLSATI	5.865	0.088
CUSTSATIS	<---	IMPRV	6.941	-0.111
CUSTSATIS	<---	AUTH	4.488	-0.072
CUSTSATIS	<---	SELEC	9.896	-0.124
COMP1	<---	PROFIT	6.26	-0.116
COMP1	<---	COOPE	18.452	0.241
COMP1	<---	DECI	5.923	0.094
COMP1	<---	NOFIN	4.682	-0.08
COMP1	<---	FININC	5.333	0.097
COMP1	<---	RIGHT	8.885	0.197
COOPE	<---	PRODDEV	4.978	0.112
COOPE	<---	COMP1	22.651	0.273
COOPE	<---	NOFIN	4.039	-0.072
COOPE	<---	TRAIN	16.118	0.156
COOPE	<---	RIGHT	7.961	0.182
COOPM	<---	UTI	5.069	-0.104
COOPM	<---	COMP1	4.607	0.125
COOPM	<---	BEHVR	4.996	0.127
COOPM	<---	RULES	11.623	-0.175
COOPM	<---	NOFIN	11.938	0.126
BEHVR	<---	COOPM	5.248	0.115
BEHVR	<---	IMPRV	7.406	0.148
BEHVR	<---	DECI	9.632	0.11
BEHVR	<---	AUTH	12.248	0.153
BEHVR	<---	RIGHT	4.009	-0.121
COMMT	<---	PROFIT	9.867	0.139
COMMT	<---	COMP1	5.245	-0.129
COMMT	<---	COOPM	4.202	0.107
COMMT	<---	BEHVR	4.026	0.111
COMMT	<---	DECI	4.226	-0.076
COMMT	<---	FEED	9.333	-0.184
PUNC	<---	DEFECTS	4.181	0.107
PUNC	<---	SUPPLSATI	4.421	0.112
PUNC	<---	CUSTSATIS	4.751	0.115
PUNC	<---	REGLR	14.67	0.189
PUNC	<---	FININC	10.21	-0.14
PUNC	<---	TRAIN	4.299	-0.086

			M.I.	Par Change
REGLR	<---	PUNC	14.389	0.188
REGLR	<---	DECI	4.309	-0.084
REGLR	<---	ROTA	7.155	-0.127
INVLV	<---	COOPE	4.1	-0.115
INVLV	<---	RULES	14.992	0.203
INVLV	<---	CAREER	7.381	0.136
INVLV	<---	ROTA	10.727	0.15
INVLV	<---	RIGHT	4.468	-0.141
RULES	<---	DEFECTS	4.028	0.105
RULES	<---	PRODDEV	7.273	0.145
RULES	<---	SUPPLSATI	4.437	0.113
RULES	<---	CUSTSATIS	5.584	0.125
RULES	<---	COOPM	11.222	-0.191
RULES	<---	INVLV	10.128	0.159
RULES	<---	AUTH	6.702	-0.129
OPEN	<---	Employee Outcome	8.408	0.221
OPEN	<---	QUALITY	8.27	0.153
OPEN	<---	SUPPLSATI	4.547	0.097
OPEN	<---	CUSTSATIS	4.18	0.092
OPEN	<---	COOPE	6.509	0.127
OPEN	<---	BEHVR	5.501	0.12
OPEN	<---	COMMT	6.395	0.107
OPEN	<---	INVLV	6.638	0.109
OPEN	<---	RULES	9.78	0.144
OPEN	<---	IMPRV	11.104	0.175
OPEN	<---	DECI	6.559	0.088
IMPRV	<---	OPEN	5.736	0.155
IMPRV	<---	FININC	7.21	-0.101
IMPRV	<---	SELEC	6.065	0.122
DECI	<---	COMPI	7.466	0.23
DECI	<---	AUTH	6.894	0.179
DECI	<---	CAREER	8.924	0.212
DECI	<---	ROTA	8.045	0.184
AUTH	<---	COOPE	4.204	-0.148
AUTH	<---	BEHVR	6.732	0.192
AUTH	<---	RULES	7.178	-0.179
AUTH	<---	IMPRV	16.792	0.312
AUTH	<---	DECI	23.284	0.239
AUTH	<---	COMP	7.228	-0.25

			M.I.	Par Change
AUTH	<---	SELEC	4.291	0.147
NOFIN	<---	PROFIT	6.041	0.211
NOFIN	<---	COOPM	9.881	0.318
NOFIN	<---	ROTA	4.882	-0.186
FININC	<---	DEFECTS	4.166	-0.14
FININC	<---	REGLR	4.538	0.139
FININC	<---	IMPRV	6.286	-0.203
FININC	<---	TRAIN	6.06	0.134
COMP	<---	Employee Outcome	5.829	0.149
COMP	<---	DEFECTS	6.597	0.092
COMP	<---	QUALITY	6.856	0.113
COMP	<---	PRODDEV	8.156	0.105
COMP	<---	COMMT	9.39	0.105
COMP	<---	RULES	9.125	0.113
COMP	<---	IMPRV	5.571	-0.1
COMP	<---	DECI	5.122	-0.063
COMP	<---	AUTH	11.651	-0.117
COMP	<---	SELEC	5.443	-0.093
CAREER	<---	PROFIT	5.666	-0.118
CAREER	<---	COOPM	4.233	0.12
CAREER	<---	INVLV	11.709	0.175
CAREER	<---	DECI	18.881	0.18
CAREER	<---	TRAIN	8.791	-0.127
FEED	<---	COOPM	4.672	-0.091
FEED	<---	COMMT	10.634	-0.12
FEED	<---	PERF	6.208	0.124
FEED	<---	ROTA	20.744	0.159
PERF	<---	PROFIT	10.283	0.109
PERF	<---	CUSTSATIS	4.112	0.076
PERF	<---	COOPE	4.055	-0.083
PERF	<---	COOPM	4.169	-0.082
PERF	<---	OPEN	4.185	-0.109
PERF	<---	IMPRV	17.038	-0.18
PERF	<---	DECI	19.649	-0.126
PERF	<---	CAREER	4.557	-0.078
PERF	<---	FEED	6.679	0.12
ROTA	<---	INVLV	6.777	0.179
ROTA	<---	IMPRV	6.562	0.219
ROTA	<---	DECI	15.307	0.218

			M.I.	Par Change
ROTA	<---	NOFIN	5.449	-0.124
ROTA	<---	FEED	8.609	0.268
ROTA	<---	SELEC	7.728	-0.222
ROTA	<---	RIGHT	8.105	-0.272
TRAIN	<---	COOPE	11.136	0.278
TRAIN	<---	FININC	5.617	0.148
TRAIN	<---	CAREER	6.355	-0.186
SELEC	<---	Organization_Performance	4.311	-0.072
SELEC	<---	DEFECTS	7.016	0.127
SELEC	<---	PRODDEV	4.453	-0.104
SELEC	<---	SUPPLSATI	10.439	-0.158
SELEC	<---	CUSTSATIS	10.345	-0.156
SELEC	<---	INVLV	7.896	-0.128
SELEC	<---	IMPRV	6.834	0.148
SELEC	<---	AUTH	6.595	0.117
SELEC	<---	COMP	5.19	-0.158
SELEC	<---	ROTA	14.1	-0.162
SELEC	<---	RIGHT	21.349	0.291
RIGHT	<---	BEHVR	7.75	-0.13
RIGHT	<---	INVLV	8.645	-0.113
RIGHT	<---	OPEN	4.091	-0.118
RIGHT	<---	ROTA	14.346	-0.138
RIGHT	<---	SELEC	20.713	0.203

(Source: AMOS Output; Primary data)

8.12.2.1. Model Fit Summary

TABLE 8.169 - CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	64	2148.439	432	0	4.973
Saturated model	496	0	0		
Independence model	31	4345.298	465	0	9.345

(Source: AMOS Output; Primary data)

TABLE 8.170 -RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.137	.633	.579	.551
Saturated model	.000	1.000		
Independence model	.179	.254	.204	.238

(Source: AMOS Output; Primary data)

TABLE 8.171 -Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.506	.468	.561	.524	.558
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

(Source: AMOS Output; Primary data)

TABLE 8.172 -Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.929	.470	.518
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

TABLE 8.173 -NCP

Model	NCP	LO 90	HI 90
Default model	1716.439	1575.517	1864.835
Saturated model	.000	.000	.000
Independence model	3880.298	3672.904	4095.010

TABLE 8.174 - FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	10.039	8.021	7.362	8.714
Saturated model	.000	.000	.000	.000
Independence model	20.305	18.132	17.163	19.136

TABLE 8.175 - RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.136	.131	.142	.000
Independence model	.197	.192	.203	.000

TABLE 8.176 - AIC

Model	AIC	BCC	BIC	CAIC
Default model	2276.439	2298.945	2492.160	2556.160
Saturated model	992.000	1166.418	2663.836	3159.836
Independence model	4407.298	4418.199	4511.788	4542.788

(Source: AMOS Output; Primary data)

TABLE 8.177 - ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	10.638	9.979	11.331	10.743
Saturated model	4.636	4.636	4.636	5.451
Independence model	20.595	19.626	21.598	20.646

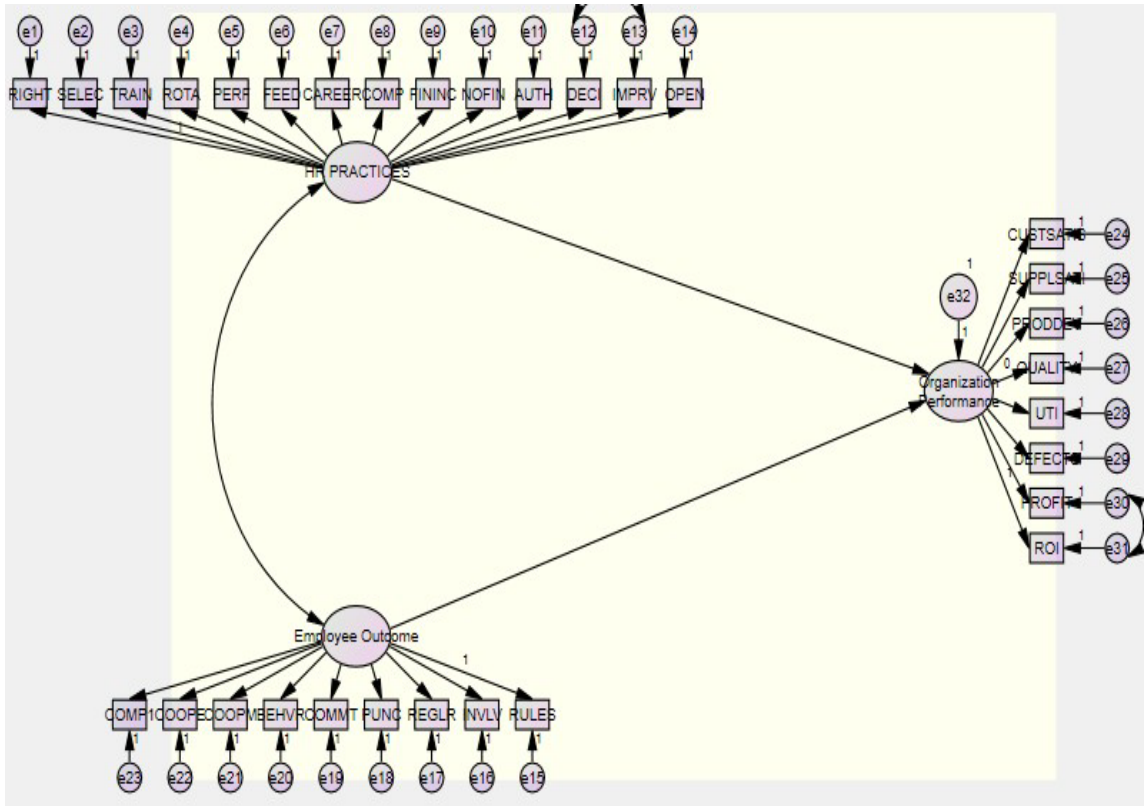
TABLE 8.178 - HOELTER

Model	HOELTER .05	HOELTER .01
Default model	48	51
Independence model	26	27

(Source: AMOS Output; Primary data)

8.12.3. SECOND MODIFICATION [e30<->e31]

The second modification was done by grouping e30 and e31, to improve the values of the various indicators.



(Source: AMOS Output; Primary data)

Figure 8.34 - Second Modification Model [e30<->e31]

8.12.3.1. Parameter Summary

TABLE 8.179 - Parameter Summary (Group number 1)

	Weights	Covariance s	Vari ances	Means	Interce pts	Total
Fixed	36	0	1	0	0	37
Labeled	0	0	0	0	0	0
Unlabe d	29	3	33	0	0	65
Total	65	3	34	0	0	102

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 496
 Number of distinct parameters to be estimated: 65
 Degrees of freedom (496 - 65): 431

Result (Default model)

Minimum was achieved
 Chi-square = 1983.768
 Degrees of freedom = 431
 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)

TABLE 8.180 -Estimates, Standard Error and P-Values

			Estimate	S.E.	C.R.	P	Label
Org_Performance	<---	Emp Outcome	0.716	0.186	3.838	***	par_28
Org_Performance	<---	HR PRACTICES	0.891	0.227	3.922	***	par_29
RIGHT	<---	HR PRACTICES	1				
SELEC	<---	HR PRACTICES	1.213	0.139	8.743	***	par_1
TRAIN	<---	HR PRACTICES	1.313	0.187	7.005	***	par_2
ROTA	<---	HR PRACTICES	0.672	0.161	4.183	***	par_3
PERF	<---	HR PRACTICES	1.173	0.121	9.719	***	par_4
FEED	<---	HR PRACTICES	1.179	0.123	9.561	***	par_5
CAREER	<---	HR PRACTICES	1.343	0.155	8.691	***	par_6
COMP	<---	HR PRACTICES	0.945	0.106	8.909	***	par_7
FININC	<---	HR PRACTICES	1.34	0.179	7.502	***	par_8
NOFIN	<---	HR PRACTICES	-0.081	0.195	-0.418	0.676	par_9
AUTH	<---	HR PRACTICES	0.977	0.155	6.288	***	par_10
DECI	<---	HR PRACTICES	0.622	0.188	3.316	***	par_11
IMPRV	<---	HR PRACTICES	0.644	0.124	5.204	***	par_12
OPEN	<---	HR PRACTICES	0.506	0.101	4.992	***	par_13

			Estimate	S.E.	C.R.	P	Label
RULES	<---	Emp Outcome	1				
INVLV	<---	Emp Outcome	1.29	0.14	9.239	***	par_14
REGLR	<---	Emp Outcome	1.249	0.139	8.996	***	par_15
PUNC	<---	Emp Outcome	1.259	0.139	9.046	***	par_16
COMMT	<---	Emp Outcome	1.345	0.141	9.571	***	par_17
BEHVR	<---	Emp Outcome	0.944	0.112	8.396	***	par_18
COOPM	<---	Emp Outcome	0.973	0.118	8.216	***	par_19
COOPE	<---	Emp Outcome	0.923	0.115	8.043	***	par_20
COMP1	<---	Emp Outcome	0.743	0.107	6.972	***	par_21
CUSTSATIS	<---	Org_Performance	0.616	0.033	18.434	***	par_22
SUPPLSATI	<---	Org_Performance	0.599	0.034	17.718	***	par_23
PRODDEV	<---	Org_Performance	0.575	0.035	16.532	***	par_24
QUALITY	<---	Org_Performance	0				
UTI	<---	Org_Performance	0.638	0.038	16.996	***	par_25
DEFECTS	<---	Org_Performance	0.502	0.04	12.589	***	par_26
PROFIT	<---	Org_Performance	0.806	0.032	24.992	***	par_27
ROI	<---	Org_Performance	1				

(Source: AMOS Output; Primary data)

TABLE 8.181 -Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Org_Performance	<---	Employee Outcome	0.308
Org_Performance	<---	HR PRACTICES	0.316
RIGHT	<---	HR PRACTICES	0.667
SELEC	<---	HR PRACTICES	0.677
TRAIN	<---	HR PRACTICES	0.529
ROTA	<---	HR PRACTICES	0.307
PERF	<---	HR PRACTICES	0.768
FEED	<---	HR PRACTICES	0.753
CAREER	<---	HR PRACTICES	0.673
COMP	<---	HR PRACTICES	0.692
FININC	<---	HR PRACTICES	0.57
NOFIN	<---	HR PRACTICES	-0.03
AUTH	<---	HR PRACTICES	0.471
DECI	<---	HR PRACTICES	0.243
IMPRV	<---	HR PRACTICES	0.386
OPEN	<---	HR PRACTICES	0.369

			Estimate
RULES	<---	Employee Outcome	0.639
INVLV	<---	Employee Outcome	0.755
REGLR	<---	Employee Outcome	0.73
PUNC	<---	Employee Outcome	0.735
COMMT	<---	Employee Outcome	0.792
BEHVR	<---	Employee Outcome	0.669
COOPM	<---	Employee Outcome	0.652
COOPE	<---	Employee Outcome	0.635
COMP1	<---	Employee Outcome	0.537
CUSTSATIS	<---	Org_Performance	0.89
SUPPLSATI	<---	Org_Performance	0.873
PRODDEV	<---	Org_Performance	0.842
QUALITY	<---	Org_Performance	0
UTI	<---	Org_Performance	0.854
DEFECTS	<---	Org_Performance	0.717
PROFIT	<---	Org_Performance	0.728
ROI	<---	Org_Performance	0.755

(Source: AMOS Output; Primary data)

TABLE 8.182 -Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
HR PRACTICES	<-->	Employee Outcome	.096	.021	4.622	***	par_30
e12	<-->	e13	.370	.053	6.951	***	par_31
e30	<-->	e31	.738	.088	8.358	***	par_32

TABLE 8.183 – Correlations: (Group number 1 - Default model)

			Estimate
HR PRACTICES	<-->	Employee Outcome	.450
e12	<-->	e13	.552
e30	<-->	e31	.804

(Source: AMOS Output; Primary data)

TABLE 8.184– Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
HR PRACTICES	0.175	0.033	5.27	***	par_33
Employee Outcome	0.259	0.052	5.013	***	par_34
e32	1				
e1	0.218	0.023	9.311	***	par_35
e2	0.303	0.033	9.253	***	par_36
e3	0.776	0.079	9.846	***	par_37
e4	0.756	0.074	10.211	***	par_38
e5	0.168	0.02	8.491	***	par_39
e6	0.186	0.021	8.658	***	par_40
e7	0.382	0.041	9.28	***	par_41
e8	0.17	0.019	9.159	***	par_42
e9	0.651	0.067	9.726	***	par_43
e10	1.264	0.122	10.343	***	par_44
e11	0.586	0.059	9.979	***	par_45
e12	1.082	0.105	10.263	***	par_46
e13	0.415	0.041	10.121	***	par_47
e14	0.283	0.028	10.142	***	par_48
e15	0.374	0.039	9.545	***	par_49
e16	0.324	0.037	8.801	***	par_50
e17	0.354	0.039	9.023	***	par_51
e18	0.349	0.039	8.981	***	par_52
e19	0.278	0.033	8.391	***	par_53
e20	0.284	0.03	9.405	***	par_54
e21	0.331	0.035	9.49	***	par_55
e22	0.326	0.034	9.562	***	par_56
e23	0.352	0.036	9.876	***	par_57
e24	0.139	0.018	7.64	***	par_58
e25	0.157	0.019	8.074	***	par_59
e26	0.188	0.022	8.617	***	par_60
e27	0.476	0.046	10.344	***	par_61
e28	0.21	0.025	8.426	***	par_62
e29	0.332	0.035	9.603	***	par_63
e30	0.804	0.084	9.563	***	par_64
e31	1.049	0.111	9.445	***	par_65

(Source: AMOS Output; Primary data)

TABLE 8.185– Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
e31	<-->	Employee Outcome	9.635	-0.064
e31	<-->	HR PRACTICES	12.064	-0.059
e29	<-->	e31	10.752	-0.082
e29	<-->	e30	5.582	0.051
e28	<-->	e29	19.604	0.09
e27	<-->	Employee Outcome	33.016	0.133
e27	<-->	HR PRACTICES	19.305	0.084
e27	<-->	e32	24.68	0.249
e27	<-->	e31	15.451	-0.114
e27	<-->	e29	11.75	0.096
e27	<-->	e28	5.387	0.055
e26	<-->	e29	6.396	0.048
e25	<-->	e29	10.194	-0.057
e25	<-->	e28	7.15	-0.04
e24	<-->	e29	9.032	-0.052
e24	<-->	e27	8.296	0.058
e24	<-->	e25	25.675	0.063
e22	<-->	e31	5.76	0.06
e22	<-->	e30	11.942	-0.075
e22	<-->	e26	7.835	0.053
e22	<-->	e23	33.049	0.14
e21	<-->	e28	8.104	-0.058
e21	<-->	e23	6.732	0.064
e21	<-->	e22	5.523	0.057
e20	<-->	e30	4.793	0.044
e20	<-->	e24	5.268	-0.037
e20	<-->	e21	9.862	0.071
e19	<-->	e30	4.957	0.047
e19	<-->	e28	10.782	0.065
e19	<-->	e26	6.808	-0.049
e19	<-->	e23	7.582	-0.066
e19	<-->	e21	7.864	0.066
e19	<-->	e20	7.901	0.061
e18	<-->	e32	4.748	0.099
e18	<-->	e23	4.782	-0.057

			M.I.	Par Change
e18	<-->	e22	4.127	-0.051
e18	<-->	e20	4.671	-0.051
e17	<-->	e22	5.194	-0.058
e17	<-->	e20	4.621	-0.051
e17	<-->	e19	9.227	-0.075
e17	<-->	e18	34.655	0.159
e16	<-->	e22	7.292	-0.066
e16	<-->	e21	5.835	-0.06
e16	<-->	e18	5.543	-0.061
e15	<-->	e32	4.526	0.098
e15	<-->	e26	5.684	0.049
e15	<-->	e21	21.005	-0.118
e15	<-->	e20	4.721	-0.052
e15	<-->	e19	6.796	-0.065
e15	<-->	e18	4.065	0.055
e15	<-->	e16	26.785	0.136
e14	<-->	Employee Outcome	11.14	0.06
e14	<-->	e31	6.182	-0.056
e14	<-->	e28	7.582	-0.051
e14	<-->	e27	8.256	0.073
e13	<-->	e29	7.316	0.06
e13	<-->	e24	4.134	-0.032
e13	<-->	e14	6.751	0.052
e12	<-->	e25	6.589	0.067
e12	<-->	e23	7.156	0.096
e12	<-->	e19	5.178	-0.078
e11	<-->	e31	9.401	-0.1
e11	<-->	e30	11.861	0.098
e11	<-->	e22	5.194	-0.072
e11	<-->	e20	17.343	0.123
e11	<-->	e15	9.853	-0.106
e11	<-->	e13	4.185	0.059
e11	<-->	e12	9.13	0.139
e10	<-->	e31	5.526	-0.111
e10	<-->	e30	12.196	0.143
e10	<-->	e29	4.304	0.095
e10	<-->	e26	4.297	-0.075
e10	<-->	e23	4.47	-0.098
e10	<-->	e21	11.897	0.159

			M.I.	Par Change
e9	<-->	e29	7.592	-0.093
e9	<-->	e18	14.297	-0.135
e9	<-->	e17	6.94	0.094
e9	<-->	e16	4.223	0.071
e9	<-->	e13	11.262	-0.103
e8	<-->	Employee Outcome	7.696	0.04
e8	<-->	e27	6.849	0.054
e8	<-->	e26	7.655	0.039
e8	<-->	e25	6.63	-0.034
e8	<-->	e19	5.072	0.039
e8	<-->	e15	4.37	0.039
e8	<-->	e11	15.386	-0.09
e7	<-->	e16	14.002	0.101
e7	<-->	e12	17.891	0.162
e7	<-->	e8	6.553	0.049
e6	<-->	e29	4.491	-0.04
e6	<-->	e25	11.824	0.048
e6	<-->	e21	4.22	-0.039
e6	<-->	e19	19.423	-0.081
e6	<-->	e18	5.511	0.047
e6	<-->	e15	7.362	0.055
e5	<-->	e32	6.098	0.08
e5	<-->	e30	4.667	0.035
e5	<-->	e29	4.022	-0.036
e5	<-->	e14	4.925	-0.036
e5	<-->	e13	5.517	-0.039
e5	<-->	e12	6.373	-0.067
e5	<-->	e8	6.957	0.035
e5	<-->	e7	9.012	-0.059
e5	<-->	e6	17.433	0.058
e4	<-->	e29	4.088	-0.072
e4	<-->	e26	6.052	-0.069
e4	<-->	e25	5.688	0.063
e4	<-->	e23	4.542	-0.077
e4	<-->	e17	6.053	-0.093
e4	<-->	e16	11.755	0.125
e4	<-->	e12	8.979	0.155
e4	<-->	e10	5.448	-0.157
e4	<-->	e6	23.145	0.134

			M.I.	Par Change
e3	<-->	e31	4.977	0.084
e3	<-->	e29	4.824	-0.081
e3	<-->	e22	15.177	0.142
e3	<-->	e19	4.898	0.079
e3	<-->	e18	5.301	-0.089
e3	<-->	e9	8.811	0.151
e3	<-->	e7	12.709	-0.142
e2	<-->	Employee Outcome	4.277	-0.04
e2	<-->	e29	36.95	0.143
e2	<-->	e25	11.324	-0.059
e2	<-->	e24	12.693	-0.06
e2	<-->	e16	6.211	-0.06
e2	<-->	e13	12.347	0.075
e2	<-->	e12	4.228	-0.071
e2	<-->	e11	8.719	0.091
e2	<-->	e8	10.951	-0.057
e2	<-->	e5	5.175	-0.04
e2	<-->	e4	15.727	-0.137
e1	<-->	e23	7.278	0.055
e1	<-->	e22	6.64	0.051
e1	<-->	e20	6.671	-0.048
e1	<-->	e16	9.464	-0.063
e1	<-->	e14	4.831	-0.039
e1	<-->	e6	6.402	-0.039
e1	<-->	e4	16.005	-0.117
e1	<-->	e2	41.806	0.124

(Source: AMOS Output; Primary data)

TABLE 8.186– Variances: (Group number 1 - Default model)

	M.I.	Par Change
e32	38.896	-.679

(Source: AMOS Output; Primary data)

TABLE 8.187 - Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
ROI	<---	Employee Outcome	25.758	-0.442
ROI	<---	HR PRACTICES	28.236	-0.565
ROI	<---	Organization_Performance	17.685	-0.154
ROI	<---	PROFIT	8.789	-0.095
ROI	<---	DEFECTS	26.323	-0.261
ROI	<---	UTI	8.207	-0.136
ROI	<---	QUALITY	15.451	-0.239
ROI	<---	PRODDEV	16.478	-0.212
ROI	<---	SUPPLSATI	11.559	-0.176
ROI	<---	CUSTSATIS	11.23	-0.172
ROI	<---	COMP1	5.479	-0.14
ROI	<---	COOPM	5.314	-0.127
ROI	<---	BEHVR	15.802	-0.233
ROI	<---	COMMT	17.261	-0.202
ROI	<---	PUNC	20.981	-0.221
ROI	<---	REGLR	13.901	-0.18
ROI	<---	INVLV	17.214	-0.201
ROI	<---	RULES	18.086	-0.224
ROI	<---	OPEN	17.151	-0.303
ROI	<---	IMPRV	7.047	-0.16
ROI	<---	DECI	10.436	-0.126
ROI	<---	AUTH	25.231	-0.243
ROI	<---	NOFIN	4.83	-0.082
ROI	<---	FININC	7.082	-0.114
ROI	<---	COMP	16.653	-0.3
ROI	<---	CAREER	16.693	-0.205
ROI	<---	FEED	11.287	-0.215
ROI	<---	PERF	22.622	-0.312
ROI	<---	ROTA	4.776	-0.1
ROI	<---	SELEC	7.529	-0.154
ROI	<---	RIGHT	9.576	-0.207
PROFIT	<---	HR PRACTICES	4.062	0.186
PROFIT	<---	BEHVR	5.13	0.115
PROFIT	<---	COMMT	4.307	0.088
PROFIT	<---	AUTH	15.099	0.163
PROFIT	<---	NOFIN	11.785	0.111
PROFIT	<---	PERF	7.453	0.156
DEFECTS	<---	Employee Outcome	7.096	0.225

			M.I.	Par Change
DEFECTS	<---	HR PRACTICES	5.64	0.245
DEFECTS	<---	UTI	4.456	0.098
DEFECTS	<---	QUALITY	11.75	0.202
DEFECTS	<---	BEHVR	4.451	0.12
DEFECTS	<---	COMMT	9.684	0.147
DEFECTS	<---	PUNC	7.108	0.125
DEFECTS	<---	RULES	5.771	0.123
DEFECTS	<---	IMPRV	9.087	0.176
DEFECTS	<---	NOFIN	4.023	0.073
DEFECTS	<---	COMP	8.256	0.205
DEFECTS	<---	SELEC	33.357	0.314
DEFECTS	<---	RIGHT	8.449	0.189
UTI	<---	DEFECTS	9.013	0.125
UTI	<---	QUALITY	5.387	0.116
UTI	<---	COMMT	7.945	0.112
UTI	<---	OPEN	4.055	-0.121
UTI	<---	SELEC	5.244	0.105
QUALITY	<---	Employee Outcome	70.603	0.822
QUALITY	<---	HR PRACTICES	58.047	0.911
QUALITY	<---	Organization_Performance	80.614	0.371
QUALITY	<---	PROFIT	5.239	0.083
QUALITY	<---	DEFECTS	72.975	0.488
QUALITY	<---	UTI	72.688	0.456
QUALITY	<---	PRODDEV	67.115	0.48
QUALITY	<---	SUPPLSATI	55.169	0.432
QUALITY	<---	CUSTSATIS	78.872	0.512
QUALITY	<---	COMP1	16.018	0.268
QUALITY	<---	COOPE	38.392	0.396
QUALITY	<---	COOPM	14.587	0.237
QUALITY	<---	BEHVR	42.151	0.427
QUALITY	<---	COMMT	48.494	0.38
QUALITY	<---	PUNC	48.527	0.377
QUALITY	<---	REGLR	25.825	0.275
QUALITY	<---	INVLV	35.429	0.323
QUALITY	<---	RULES	42.168	0.385
QUALITY	<---	OPEN	28.099	0.437
QUALITY	<---	AUTH	14.475	0.207
QUALITY	<---	FININC	13.291	0.175
QUALITY	<---	COMP	45.795	0.559

			M.I.	Par Change
QUALITY	<---	CAREER	30.709	0.313
QUALITY	<---	FEED	26.241	0.369
QUALITY	<---	PERF	41.791	0.477
QUALITY	<---	TRAIN	14.094	0.171
QUALITY	<---	SELEC	14.778	0.242
QUALITY	<---	RIGHT	18.643	0.325
PRODDEV	<---	HR PRACTICES	4.339	0.17
PRODDEV	<---	COOPE	8.069	0.124
PRODDEV	<---	RULES	6.384	0.102
PRODDEV	<---	NOFIN	4.543	-0.061
PRODDEV	<---	COMP	10.585	0.184
PRODDEV	<---	CAREER	6.391	0.098
PRODDEV	<---	TRAIN	6.149	0.077
PRODDEV	<---	RIGHT	5.945	0.125
SUPPLSATI	<---	DEFECTS	4.702	-0.079
SUPPLSATI	<---	CUSTSATIS	4.394	0.078
SUPPLSATI	<---	DECI	10.28	0.09
SUPPLSATI	<---	FEED	6.606	0.119
SUPPLSATI	<---	ROTA	6.005	0.081
CUSTSATIS	<---	DEFECTS	4.184	-0.072
CUSTSATIS	<---	QUALITY	8.296	0.122
CUSTSATIS	<---	SUPPLSATI	5.282	0.083
CUSTSATIS	<---	IMPRV	7.977	-0.118
CUSTSATIS	<---	AUTH	4.806	-0.074
CUSTSATIS	<---	SELEC	10.668	-0.128
COMP1	<---	COOPE	18.438	0.241
COMP1	<---	DECI	5.912	0.094
COMP1	<---	NOFIN	4.671	-0.08
COMP1	<---	FININC	5.341	0.097
COMP1	<---	RIGHT	8.88	0.197
COOPE	<---	PRODDEV	4.957	0.112
COOPE	<---	COMP1	22.629	0.273
COOPE	<---	NOFIN	4.024	-0.072
COOPE	<---	TRAIN	16.145	0.156
COOPE	<---	RIGHT	7.956	0.182
COOPM	<---	UTI	5.065	-0.104
COOPM	<---	COMP1	4.611	0.125
COOPM	<---	BEHVR	5.038	0.128
COOPM	<---	RULES	11.628	-0.175

			M.I.	Par Change
COOPM	<---	NOFIN	11.955	0.126
BEHVR	<---	COOPM	5.291	0.115
BEHVR	<---	IMPRV	7.404	0.148
BEHVR	<---	DECI	9.61	0.11
BEHVR	<---	AUTH	12.253	0.153
BEHVR	<---	RIGHT	4	-0.121
COMMT	<---	PROFIT	4.689	0.065
COMMT	<---	COMP1	5.219	-0.128
COMMT	<---	COOPM	4.257	0.107
COMMT	<---	BEHVR	4.079	0.111
COMMT	<---	DECI	4.226	-0.076
COMMT	<---	FEED	9.323	-0.184
PUNC	<---	DEFECTS	4.137	0.106
PUNC	<---	SUPPLSATI	4.377	0.111
PUNC	<---	CUSTSATIS	4.695	0.114
PUNC	<---	REGLR	14.601	0.189
PUNC	<---	FININC	10.226	-0.14
PUNC	<---	TRAIN	4.302	-0.086
REGLR	<---	PUNC	14.306	0.188
REGLR	<---	DECI	4.332	-0.084
REGLR	<---	ROTA	7.156	-0.126
INVLV	<---	COOPE	4.101	-0.115
INVLV	<---	RULES	14.908	0.203
INVLV	<---	CAREER	7.359	0.136
INVLV	<---	ROTA	10.741	0.15
INVLV	<---	RIGHT	4.472	-0.141
RULES	<---	PRODDEV	7.233	0.145
RULES	<---	SUPPLSATI	4.398	0.112
RULES	<---	CUSTSATIS	5.531	0.125
RULES	<---	COOPM	11.256	-0.192
RULES	<---	INVLV	10.087	0.158
RULES	<---	AUTH	6.716	-0.129
OPEN	<---	Employee Outcome	8.416	0.221
OPEN	<---	QUALITY	8.256	0.153
OPEN	<---	SUPPLSATI	4.535	0.096
OPEN	<---	CUSTSATIS	4.164	0.092
OPEN	<---	COOPE	6.5	0.127
OPEN	<---	BEHVR	5.501	0.12
OPEN	<---	COMMT	6.397	0.107

			M.I.	Par Change
OPEN	<---	INVLV	6.631	0.109
OPEN	<---	RULES	9.761	0.144
OPEN	<---	IMPRV	11.086	0.175
OPEN	<---	DECI	6.541	0.088
IMPRV	<---	OPEN	5.731	0.154
IMPRV	<---	FININC	7.202	-0.101
IMPRV	<---	SELEC	6.065	0.122
DECI	<---	COMP1	7.454	0.23
DECI	<---	AUTH	6.883	0.179
DECI	<---	CAREER	8.9	0.212
DECI	<---	ROTA	8.037	0.184
AUTH	<---	COOPE	4.207	-0.148
AUTH	<---	BEHVR	6.738	0.193
AUTH	<---	RULES	7.194	-0.179
AUTH	<---	IMPRV	16.775	0.312
AUTH	<---	DECI	23.246	0.239
AUTH	<---	COMP	7.225	-0.25
AUTH	<---	SELEC	4.292	0.147
NOFIN	<---	COOPM	9.889	0.318
NOFIN	<---	ROTA	4.876	-0.186
FININC	<---	DEFECTS	4.15	-0.14
FININC	<---	REGLR	4.54	0.139
FININC	<---	IMPRV	6.284	-0.203
FININC	<---	TRAIN	6.089	0.135
COMP	<---	Employee Outcome	5.829	0.149
COMP	<---	DEFECTS	6.572	0.092
COMP	<---	QUALITY	6.849	0.113
COMP	<---	PRODDEV	8.152	0.105
COMP	<---	COMMT	9.414	0.106
COMP	<---	RULES	9.092	0.113
COMP	<---	IMPRV	5.584	-0.101
COMP	<---	DECI	5.152	-0.063
COMP	<---	AUTH	11.641	-0.117
COMP	<---	SELEC	5.435	-0.093
CAREER	<---	COOPM	4.237	0.12
CAREER	<---	INVLV	11.7	0.174
CAREER	<---	DECI	18.826	0.179
CAREER	<---	TRAIN	8.8	-0.127
FEED	<---	COOPM	4.671	-0.091

			M.I.	Par Change
FEED	<---	COMMT	10.625	-0.12
FEED	<---	PERF	6.215	0.124
FEED	<---	ROTA	20.757	0.159
PERF	<---	PROFIT	4.9	0.052
PERF	<---	CUSTSATIS	4.099	0.076
PERF	<---	COOPE	4.049	-0.083
PERF	<---	COOPM	4.146	-0.082
PERF	<---	OPEN	4.193	-0.109
PERF	<---	IMPRV	17.041	-0.18
PERF	<---	DECI	19.697	-0.126
PERF	<---	CAREER	4.567	-0.078
PERF	<---	FEED	6.673	0.12
ROTA	<---	INVLV	6.777	0.179
ROTA	<---	IMPRV	6.557	0.219
ROTA	<---	DECI	15.289	0.218
ROTA	<---	NOFIN	5.442	-0.124
ROTA	<---	FEED	8.606	0.268
ROTA	<---	SELEC	7.724	-0.222
ROTA	<---	RIGHT	8.102	-0.272
TRAIN	<---	COOPE	11.137	0.278
TRAIN	<---	FININC	5.644	0.149
TRAIN	<---	CAREER	6.351	-0.186
SELEC	<---	Organization_Performance	4.35	-0.072
SELEC	<---	DEFECTS	6.988	0.126
SELEC	<---	PRODDEV	4.456	-0.104
SELEC	<---	SUPPLSATI	10.444	-0.158
SELEC	<---	CUSTSATIS	10.341	-0.155
SELEC	<---	INVLV	7.898	-0.128
SELEC	<---	IMPRV	6.815	0.148
SELEC	<---	AUTH	6.595	0.117
SELEC	<---	COMP	5.183	-0.158
SELEC	<---	ROTA	14.094	-0.162
SELEC	<---	RIGHT	21.349	0.291
RIGHT	<---	BEHVR	7.738	-0.13
RIGHT	<---	INVLV	8.648	-0.113
RIGHT	<---	OPEN	4.107	-0.118
RIGHT	<---	ROTA	14.342	-0.138
RIGHT	<---	SELEC	20.713	0.203

(Source: AMOS Output; Primary data)

8.12.3.2. Model Fit Summary

TABLE 8.188 - Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	65	1983.768	431	.000	4.603
Saturated model	496	.000	0		
Independence model	31	4345.298	465	.000	9.345

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.166	.648	.594	.563
Saturated model	.000	1.000		
Independence model	.179	.254	.204	.238

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.543	.507	.603	.568	.600
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

(Source: AMOS Output; Primary data)

8.12.3.3. Parsimony Adjusted Measures

TABLE 8.189 - Parsimony Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.927	.504	.556
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1552.768	1418.135	1694.891
Saturated model	.000	.000	.000
Independence model	3880.298	3672.904	4095.010

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	9.270	7.256	6.627	7.920
Saturated model	.000	.000	.000	.000
Independence model	20.305	18.132	17.163	19.136

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.130	.124	.136	.000
Independence model	.197	.192	.203	.000

(Source: AMOS Output; Primary data)

AIC

Model	AIC	BCC	BIC	CAIC
Default model	2113.768	2136.625	2332.859	2397.859
Saturated model	992.000	1166.418	2663.836	3159.836
Independence model	4407.298	4418.199	4511.788	4542.788

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	9.877	9.248	10.542	9.984
Saturated model	4.636	4.636	4.636	5.451
Independence model	20.595	19.626	21.598	20.646

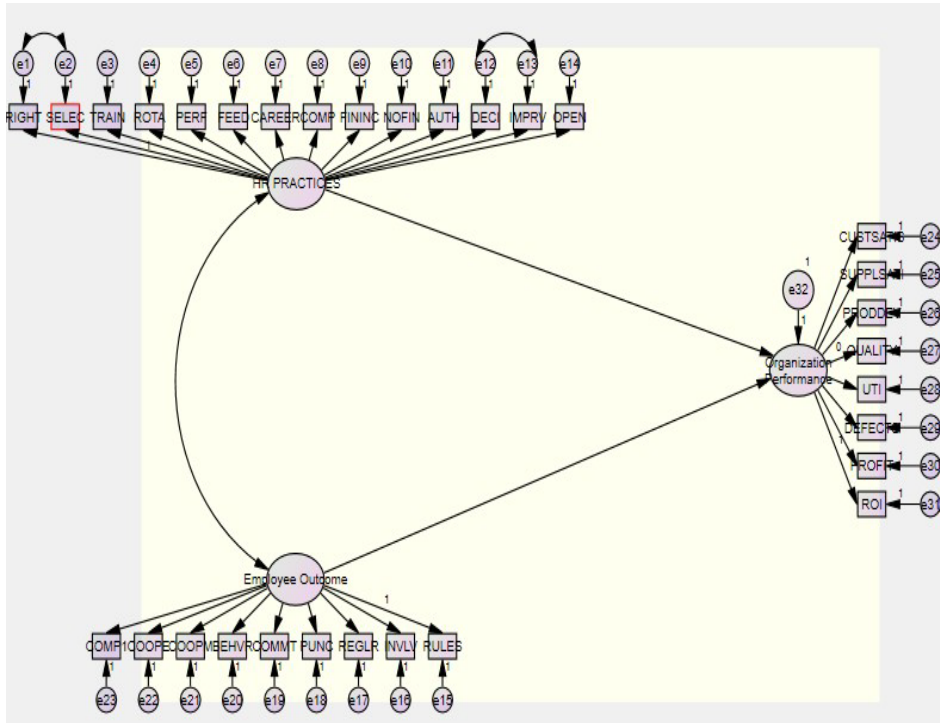
HOELTER

Model	HOELTER .05	HOELTER .01
Default model	52	55
Independence model	26	27

(Source: AMOS Output; Primary data)

8.12.4. THIRD MODIFICATION [e1<-->e2]

The third modification to improve the SEM model was done by grouping e1 and e2. The Model Fit Summary with the third modification showed improved indices as compared to the Base Model.



(Source: AMOS Output; Primary data)

Figure 8.35 - Third Modification [e1<-->e2]

8.12.4.1. Parameter summary (Third Modification)

TABLE 8.190 - Parameter summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	36	0	1	0	0	37
Labeled	0	0	0	0	0	0
Unlabeled	29	4	33	0	0	66
Total	65	4	34	0	0	103

(Source: AMOS Output; Primary data)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 496
 Number of distinct parameters to be estimated: 66
 Degrees of freedom (496 - 66): 430

Result (Default model)

Minimum was achieved
 Chi-square = 1937.965
 Degrees of freedom = 430
 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)

TABLE 8.191 - Estimates, Standard Error & P Value

			Estimate	S.E.	C.R.	P	Label
Org_Perf	<---	Emp Outcme	0.699	0.188	3.726	***	par_28
Org_Perf	<---	HR PRACT	0.994	0.255	3.903	***	par_29
RIGHT	<---	HR PRACT	1				
SELEC	<---	HR PRACT	1.214	0.116	10.481	***	par_1
TRAIN	<---	HR PRACT	1.391	0.214	6.515	***	par_2
ROTA	<---	HR PRACT	0.798	0.179	4.457	***	par_3
PERF	<---	HR PRACT	1.289	0.145	8.903	***	par_4
FEED	<---	HR PRACT	1.299	0.148	8.803	***	par_5
CAREER	<---	HR PRACT	1.457	0.181	8.036	***	par_6
COMP	<---	HR PRACT	1.042	0.125	8.302	***	par_7
FININC	<---	HR PRACT	1.47	0.206	7.131	***	par_8
NOFIN	<---	HR PRACT	-0.13	0.212	-0.615	0.539	par_9
AUTH	<---	HR PRACT	1.048	0.176	5.959	***	par_10

			Estimate	S.E.	C.R.	P	Label
DECI	<---	HR PRACT	0.685	0.207	3.317	***	par_11
IMPRV	<---	HR PRACT	0.676	0.138	4.894	***	par_12
OPEN	<---	HR PRACT	0.554	0.113	4.89	***	par_13
RULES	<---	Emp Outcme	1				
INVLV	<---	Emp Outcme	1.291	0.139	9.256	***	par_14
REGLR	<---	Emp Outcme	1.249	0.139	9.006	***	par_15
PUNC	<---	Emp Outcme	1.259	0.139	9.054	***	par_16
COMMT	<---	Emp Outcme	1.343	0.14	9.576	***	par_17
BEHVR	<---	Emp Outcme	0.943	0.112	8.403	***	par_18
COOPM	<---	Emp Outcme	0.971	0.118	8.216	***	par_19
COOPE	<---	Emp Outcme	0.921	0.115	8.042	***	par_20
COMP1	<---	Emp Outcme	0.742	0.106	6.972	***	par_21
CUSTSATIS	<---	Org_Perf	0.615	0.033	18.448	***	par_22
SUPPLSATI	<---	Org_Perf	0.598	0.034	17.737	***	par_23
PRODDEV	<---	Org_Perf	0.573	0.035	16.513	***	par_24
QUALITY	<---	Org_Perf	0				
UTI	<---	Org_Perf	0.636	0.037	16.971	***	par_25
DEFECTS	<---	Org_Perf	0.5	0.04	12.548	***	par_26
PROFIT	<---	Org_Perf	0.806	0.032	25.046	***	par_27
ROI	<---	Org_Perf	1				

(Source: AMOS Output; Primary data)

TABLE 8.192 - Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Organization_Performance	<---	Employee Outcome	0.301
Organization_Performance	<---	HR PRACTICES	0.324
RIGHT	<---	HR PRACTICES	0.616
SELEC	<---	HR PRACTICES	0.626
TRAIN	<---	HR PRACTICES	0.517
ROTA	<---	HR PRACTICES	0.337
PERF	<---	HR PRACTICES	0.778
FEED	<---	HR PRACTICES	0.765
CAREER	<---	HR PRACTICES	0.673
COMP	<---	HR PRACTICES	0.704
FININC	<---	HR PRACTICES	0.577
NOFIN	<---	HR PRACTICES	-0.045
AUTH	<---	HR PRACTICES	0.466

			Estimate
DECI	<---	HR PRACTICES	0.247
IMPRV	<---	HR PRACTICES	0.373
OPEN	<---	HR PRACTICES	0.373
RULES	<---	Employee Outcome	0.64
INVLV	<---	Employee Outcome	0.756
REGLR	<---	Employee Outcome	0.73
PUNC	<---	Employee Outcome	0.735
COMMT	<---	Employee Outcome	0.791
BEHVR	<---	Employee Outcome	0.669
COOPM	<---	Employee Outcome	0.651
COOPE	<---	Employee Outcome	0.635
COMP1	<---	Employee Outcome	0.537
CUSTSATIS	<---	Organization_Performance	0.89
SUPPLSATI	<---	Organization_Performance	0.873
PRODDEV	<---	Organization_Performance	0.842
QUALITY	<---	Organization_Performance	0
UTI	<---	Organization_Performance	0.854
DEFECTS	<---	Organization_Performance	0.716
PROFIT	<---	Organization_Performance	0.728
ROI	<---	Organization_Performance	0.756

(Source: AMOS Output; Primary data)

TABLE 8.193 - Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
HR PRACTICES	<-->	Employee Outcome	.091	.020	4.587	***	par_30
e12	<-->	e13	.371	.053	6.941	***	par_31
e30	<-->	e31	.740	.089	8.360	***	par_32
e1	<-->	e2	.135	.024	5.575	***	par_33

TABLE 8.194 - Correlations: (Group number 1 - Default model)

			Estimate
HR PRACTICES	<-->	Employee Outcome	.463
e12	<-->	e13	.551
e30	<-->	e31	.804
e1	<-->	e2	.469

TABLE 8.195 - Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
HR PRACTICES	0.149	0.031	4.727	***	par_34
Employee Outcome	0.259	0.052	5.019	***	par_35
e32	1				
e1	0.244	0.026	9.479	***	par_36
e2	0.341	0.036	9.437	***	par_37
e3	0.789	0.08	9.845	***	par_38
e4	0.74	0.073	10.169	***	par_39
e5	0.161	0.02	8.224	***	par_40
e6	0.178	0.021	8.394	***	par_41
e7	0.381	0.041	9.204	***	par_42
e8	0.164	0.018	8.992	***	par_43
e9	0.643	0.067	9.659	***	par_44
e10	1.262	0.122	10.341	***	par_45
e11	0.59	0.059	9.966	***	par_46
e12	1.08	0.105	10.255	***	par_47
e13	0.42	0.041	10.123	***	par_48
e14	0.282	0.028	10.124	***	par_49
e15	0.373	0.039	9.543	***	par_50
e16	0.323	0.037	8.794	***	par_51
e17	0.354	0.039	9.022	***	par_52
e18	0.349	0.039	8.982	***	par_53
e19	0.279	0.033	8.4	***	par_54
e20	0.284	0.03	9.406	***	par_55
e21	0.332	0.035	9.494	***	par_56

	Estimate	S.E.	C.R.	P	Label
e22	0.326	0.034	9.566	***	par_57
e23	0.352	0.036	9.878	***	par_58
e24	0.139	0.018	7.629	***	par_59
e25	0.156	0.019	8.063	***	par_60
e26	0.189	0.022	8.624	***	par_61
e27	0.476	0.046	10.344	***	par_62
e28	0.21	0.025	8.437	***	par_63
e29	0.333	0.035	9.61	***	par_64
e30	0.805	0.084	9.562	***	par_65
e31	1.052	0.111	9.445	***	par_66

(Source: AMOS Output; Primary data)

TABLE 8.196- Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
e31	<-->	Emp Outcme	9.107	-0.062
e31	<-->	HR PRACTICES	12.584	-0.056
e29	<-->	Emp Outcme	4.155	0.041
e29	<-->	e31	10.688	-0.082
e29	<-->	e30	5.582	0.051
e28	<-->	e29	19.929	0.091
e27	<-->	Emp Outcme	31.565	0.13
e27	<-->	HR PRACTICES	20.223	0.08
e27	<-->	e32	24.268	0.247
e27	<-->	e31	15.491	-0.114
e27	<-->	e29	11.864	0.097
e27	<-->	e28	5.431	0.055
e26	<-->	e29	6.589	0.049
e25	<-->	e29	10.074	-0.057
e25	<-->	e28	7.239	-0.04
e24	<-->	e29	8.867	-0.051
e24	<-->	e27	8.259	0.058
e24	<-->	e25	25.141	0.062
e22	<-->	e31	5.776	0.06
e22	<-->	e30	11.936	-0.075
e22	<-->	e26	7.867	0.053

			M.I.	Par Change
e22	<-->	e23	33.128	0.141
e21	<-->	e28	8.02	-0.058
e21	<-->	e23	6.787	0.064
e21	<-->	e22	5.608	0.057
e20	<-->	e30	4.774	0.044
e20	<-->	e24	5.324	-0.037
e20	<-->	e21	9.915	0.071
e19	<-->	e30	4.923	0.047
e19	<-->	e29	4.096	0.048
e19	<-->	e28	10.831	0.065
e19	<-->	e26	6.698	-0.048
e19	<-->	e23	7.452	-0.065
e19	<-->	e21	7.997	0.066
e19	<-->	e20	7.948	0.061
e18	<-->	e32	4.667	0.099
e18	<-->	e23	4.751	-0.057
e18	<-->	e22	4.066	-0.051
e18	<-->	e20	4.68	-0.051
e17	<-->	e22	5.145	-0.058
e17	<-->	e20	4.649	-0.051
e17	<-->	e19	9.151	-0.075
e17	<-->	e18	34.597	0.158
e16	<-->	e22	7.325	-0.066
e16	<-->	e21	5.87	-0.06
e16	<-->	e18	5.693	-0.062
e15	<-->	e32	4.387	0.096
e15	<-->	e26	5.656	0.049
e15	<-->	e21	20.978	-0.118
e15	<-->	e20	4.769	-0.052
e15	<-->	e19	6.79	-0.065
e15	<-->	e18	4.02	0.054
e15	<-->	e16	26.598	0.136
e14	<-->	Emp Outcme	10.632	0.059
e14	<-->	e31	5.947	-0.055
e14	<-->	e28	7.508	-0.051
e14	<-->	e27	7.81	0.071
e13	<-->	e29	8.145	0.063
e13	<-->	e24	4.349	-0.033
e13	<-->	e14	7.133	0.053

			M.I.	Par Change
e12	<-->	e25	6.517	0.067
e12	<-->	e23	7.039	0.095
e12	<-->	e19	5.174	-0.078
e11	<-->	e31	9.26	-0.1
e11	<-->	e30	11.777	0.098
e11	<-->	e24	4.075	-0.046
e11	<-->	e22	4.66	-0.068
e11	<-->	e20	16.86	0.122
e11	<-->	e15	10.105	-0.107
e11	<-->	e13	4.78	0.063
e11	<-->	e12	8.6	0.136
e10	<-->	e31	5.89	-0.115
e10	<-->	e30	12.425	0.145
e10	<-->	e29	4.387	0.096
e10	<-->	e26	4.133	-0.074
e10	<-->	e23	4.37	-0.097
e10	<-->	e21	11.906	0.159
e9	<-->	e29	6.329	-0.085
e9	<-->	e18	15.035	-0.138
e9	<-->	e17	6.741	0.093
e9	<-->	e13	10.282	-0.098
e8	<-->	Emp Outcme	6.333	0.036
e8	<-->	e29	5.521	0.041
e8	<-->	e27	5.795	0.049
e8	<-->	e26	8.015	0.039
e8	<-->	e25	8.45	-0.038
e8	<-->	e19	5.816	0.041
e8	<-->	e15	4.109	0.038
e8	<-->	e11	16.395	-0.093
e7	<-->	e16	12.132	0.094
e7	<-->	e12	16.505	0.156
e7	<-->	e8	5.641	0.045
e6	<-->	e25	10.4	0.045
e6	<-->	e19	19.681	-0.081
e6	<-->	e18	5.349	0.046
e6	<-->	e15	7.095	0.053
e6	<-->	e8	4.798	-0.029
e5	<-->	Emp Outcme	4.232	-0.03
e5	<-->	e32	5.353	0.074

			M.I.	Par Change
e5	<-->	e30	4.649	0.035
e5	<-->	e14	6.17	-0.04
e5	<-->	e13	4.435	-0.035
e5	<-->	e12	8.505	-0.077
e5	<-->	e8	4.688	0.028
e5	<-->	e7	11.377	-0.066
e5	<-->	e6	13.618	0.05
e4	<-->	e26	6.571	-0.072
e4	<-->	e25	5.223	0.06
e4	<-->	e23	4.686	-0.078
e4	<-->	e17	6.311	-0.094
e4	<-->	e16	11.178	0.121
e4	<-->	e12	8.794	0.152
e4	<-->	e10	5.172	-0.151
e4	<-->	e6	18.809	0.118
e3	<-->	e31	4.802	0.084
e3	<-->	e22	16.064	0.147
e3	<-->	e19	5.139	0.081
e3	<-->	e18	5.388	-0.091
e3	<-->	e9	9.214	0.155
e3	<-->	e7	11.27	-0.135
e2	<-->	e32	4.517	-0.081
e2	<-->	e29	31.347	0.12
e2	<-->	e28	5.395	0.042
e2	<-->	e25	9.026	-0.047
e2	<-->	e24	12.663	-0.054
e2	<-->	e13	11.259	0.065
e2	<-->	e11	18.397	0.12
e2	<-->	e8	9.268	-0.047
e2	<-->	e4	4.872	-0.068
e1	<-->	e26	4.659	0.031
e1	<-->	e23	7.429	0.05
e1	<-->	e22	4.886	0.039
e1	<-->	e21	5.127	0.041
e1	<-->	e20	8.031	-0.048
e1	<-->	e16	4.322	-0.038
e1	<-->	e14	5.649	-0.038
e1	<-->	e11	8.693	-0.069
e1	<-->	e8	4.8	0.028

			M.I.	Par Change
e1	<-->	e5	4.52	0.028
e1	<-->	e4	5.19	-0.06

(Source: AMOS Output; Primary data)

Variances: (Group number 1 - Default model)

	M.I.	Par Change
e32	39.335	-.684

TABLE 8.197- Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
ROI	<---	Employee Outcome	25.853	-0.442
ROI	<---	HR PRACTICES	29.434	-0.628
ROI	<---	Organization_Performance	17.755	-0.154
ROI	<---	PROFIT	8.835	-0.095
ROI	<---	DEFECTS	26.311	-0.261
ROI	<---	UTI	8.229	-0.137
ROI	<---	QUALITY	15.491	-0.239
ROI	<---	PRODDEV	16.519	-0.212
ROI	<---	SUPPLSATI	11.627	-0.177
ROI	<---	CUSTSATIS	11.291	-0.173
ROI	<---	COMPI	5.463	-0.139
ROI	<---	COOPM	5.317	-0.128
ROI	<---	BEHVR	15.819	-0.233
ROI	<---	COMMT	17.273	-0.202
ROI	<---	PUNC	20.981	-0.221
ROI	<---	REGLR	13.91	-0.18
ROI	<---	INVLV	17.253	-0.201
ROI	<---	RULES	18.088	-0.225
ROI	<---	OPEN	17.166	-0.304
ROI	<---	IMPRV	7.031	-0.159
ROI	<---	DECI	10.427	-0.126
ROI	<---	AUTH	25.249	-0.243
ROI	<---	NOFIN	4.822	-0.082

			M.I.	Par Change
ROI	<---	FININC	7.124	-0.114
ROI	<---	COMP	16.704	-0.301
ROI	<---	CAREER	16.703	-0.205
ROI	<---	FEED	11.339	-0.216
ROI	<---	PERF	22.717	-0.313
ROI	<---	ROTA	4.823	-0.101
ROI	<---	SELEC	7.477	-0.153
ROI	<---	RIGHT	9.53	-0.207
PROFIT	<---	HR PRACTICES	4.209	0.207
PROFIT	<---	BEHVR	5.131	0.115
PROFIT	<---	COMMT	4.312	0.088
PROFIT	<---	AUTH	15.099	0.163
PROFIT	<---	NOFIN	11.797	0.112
PROFIT	<---	PERF	7.442	0.156
DEFECTS	<---	Employee Outcome	7.076	0.225
DEFECTS	<---	UTI	4.549	0.099
DEFECTS	<---	QUALITY	11.864	0.204
DEFECTS	<---	BEHVR	4.487	0.121
DEFECTS	<---	COMMT	9.774	0.148
DEFECTS	<---	PUNC	7.166	0.125
DEFECTS	<---	RULES	5.814	0.124
DEFECTS	<---	IMPRV	9.101	0.176
DEFECTS	<---	NOFIN	4.036	0.073
DEFECTS	<---	COMP	8.288	0.206
DEFECTS	<---	SELEC	33.603	0.316
DEFECTS	<---	RIGHT	8.614	0.191
UTI	<---	DEFECTS	9.205	0.126
UTI	<---	QUALITY	5.431	0.116
UTI	<---	COMMT	8.022	0.113
UTI	<---	OPEN	4.037	-0.121
UTI	<---	SELEC	5.434	0.107
QUALITY	<---	Employee Outcome	70.697	0.822
QUALITY	<---	HR PRACTICES	60.757	1.014
QUALITY	<---	Organization_Performance	80.627	0.37
QUALITY	<---	PROFIT	5.223	0.082
QUALITY	<---	DEFECTS	73.063	0.488
QUALITY	<---	UTI	72.747	0.457
QUALITY	<---	PRODDEV	67.159	0.48

			M.I.	Par Change
QUALITY	<---	SUPPLSATI	55.156	0.432
QUALITY	<---	CUSTSATIS	78.865	0.512
QUALITY	<---	COMPI	16.018	0.268
QUALITY	<---	COOPE	38.392	0.396
QUALITY	<---	COOPM	14.587	0.237
QUALITY	<---	BEHVR	42.151	0.427
QUALITY	<---	COMMT	48.494	0.38
QUALITY	<---	PUNC	48.527	0.377
QUALITY	<---	REGLR	25.825	0.275
QUALITY	<---	INVLV	35.429	0.323
QUALITY	<---	RULES	42.168	0.385
QUALITY	<---	OPEN	28.099	0.437
QUALITY	<---	AUTH	14.475	0.207
QUALITY	<---	FININC	13.291	0.175
QUALITY	<---	COMP	45.795	0.559
QUALITY	<---	CAREER	30.709	0.313
QUALITY	<---	FEED	26.241	0.369
QUALITY	<---	PERF	41.791	0.477
QUALITY	<---	TRAIN	14.094	0.171
QUALITY	<---	SELEC	14.778	0.242
QUALITY	<---	RIGHT	18.643	0.325
PRODDEV	<---	HR PRACTICES	4.201	0.182
PRODDEV	<---	COOPE	8.131	0.125
PRODDEV	<---	RULES	6.389	0.103
PRODDEV	<---	NOFIN	4.481	-0.061
PRODDEV	<---	COMP	10.555	0.184
PRODDEV	<---	CAREER	6.384	0.098
PRODDEV	<---	TRAIN	6.177	0.077
PRODDEV	<---	RIGHT	6.124	0.127
SUPPLSATI	<---	DEFECTS	4.669	-0.079
SUPPLSATI	<---	CUSTSATIS	4.282	0.076
SUPPLSATI	<---	DECI	10.278	0.09
SUPPLSATI	<---	FEED	6.478	0.117
SUPPLSATI	<---	ROTA	5.86	0.08
CUSTSATIS	<---	DEFECTS	4.127	-0.072
CUSTSATIS	<---	QUALITY	8.259	0.122
CUSTSATIS	<---	SUPPLSATI	5.146	0.082
CUSTSATIS	<---	IMPRV	7.986	-0.118

			M.I.	Par Change
CUSTSATIS	<---	AUTH	4.847	-0.074
CUSTSATIS	<---	SELEC	10.433	-0.126
COMP1	<---	COOPE	18.513	0.241
COMP1	<---	DECI	5.887	0.094
COMP1	<---	NOFIN	4.63	-0.079
COMP1	<---	FININC	5.293	0.097
COMP1	<---	RIGHT	8.967	0.198
COOPE	<---	PRODDEV	4.956	0.112
COOPE	<---	COMP1	22.697	0.274
COOPE	<---	TRAIN	16.145	0.156
COOPE	<---	RIGHT	8.064	0.183
COOPM	<---	UTI	5.053	-0.104
COOPM	<---	COMP1	4.651	0.125
COOPM	<---	BEHVR	5.065	0.128
COOPM	<---	RULES	11.598	-0.175
COOPM	<---	NOFIN	12.019	0.126
BEHVR	<---	COOPM	5.329	0.116
BEHVR	<---	IMPRV	7.398	0.148
BEHVR	<---	DECI	9.561	0.11
BEHVR	<---	AUTH	12.211	0.153
COMMT	<---	PROFIT	4.647	0.065
COMMT	<---	COMP1	5.133	-0.127
COMMT	<---	COOPM	4.336	0.109
COMMT	<---	BEHVR	4.103	0.112
COMMT	<---	DECI	4.251	-0.076
COMMT	<---	FEED	9.5	-0.186
PUNC	<---	DEFECTS	4.177	0.106
PUNC	<---	SUPPLSATI	4.322	0.11
PUNC	<---	CUSTSATIS	4.648	0.113
PUNC	<---	REGLR	14.565	0.188
PUNC	<---	FININC	10.36	-0.141
PUNC	<---	TRAIN	4.305	-0.086
REGLR	<---	PUNC	14.28	0.187
REGLR	<---	DECI	4.378	-0.084
REGLR	<---	ROTA	7.331	-0.128
INVLV	<---	COOPE	4.126	-0.115
INVLV	<---	RULES	14.787	0.202
INVLV	<---	CAREER	7.246	0.134

			M.I.	Par Change
INVLV	<---	ROTA	10.539	0.148
INVLV	<---	RIGHT	4.398	-0.14
RULES	<---	DEFECTS	4.007	0.105
RULES	<---	PRODDEV	7.199	0.144
RULES	<---	SUPPLSATI	4.347	0.111
RULES	<---	CUSTSATIS	5.482	0.124
RULES	<---	COOPM	11.261	-0.191
RULES	<---	INVLV	9.978	0.158
RULES	<---	AUTH	6.762	-0.13
OPEN	<---	Employee Outcome	7.868	0.213
OPEN	<---	QUALITY	7.81	0.149
OPEN	<---	SUPPLSATI	4.093	0.092
OPEN	<---	COOPE	6.489	0.126
OPEN	<---	BEHVR	5.11	0.116
OPEN	<---	COMMT	6.171	0.105
OPEN	<---	INVLV	5.939	0.103
OPEN	<---	RULES	9.245	0.14
OPEN	<---	IMPRV	11.481	0.178
OPEN	<---	DECI	6.378	0.086
IMPRV	<---	OPEN	6.027	0.159
IMPRV	<---	FININC	6.46	-0.096
IMPRV	<---	SELEC	8.258	0.143
DECI	<---	COMP1	7.103	0.225
DECI	<---	AUTH	6.517	0.174
DECI	<---	CAREER	8.151	0.203
DECI	<---	ROTA	7.679	0.18
AUTH	<---	BEHVR	6.335	0.187
AUTH	<---	RULES	7.542	-0.184
AUTH	<---	IMPRV	17.769	0.322
AUTH	<---	DECI	23.024	0.239
AUTH	<---	COMP	7.357	-0.254
AUTH	<---	SELEC	6.4	0.18
NOFIN	<---	COOPM	10.283	0.325
NOFIN	<---	ROTA	4.516	-0.179
FININC	<---	PUNC	4.655	-0.14
FININC	<---	IMPRV	5.989	-0.198
FININC	<---	TRAIN	6.479	0.139
COMP	<---	Employee Outcome	4.702	0.132

			M.I.	Par Change
COMP	<---	DEFECTS	7.28	0.096
COMP	<---	QUALITY	5.795	0.103
COMP	<---	PRODDEV	7.37	0.099
COMP	<---	COMMT	8.843	0.101
COMP	<---	RULES	7.948	0.104
COMP	<---	IMPRV	5.401	-0.098
COMP	<---	DECI	5.981	-0.067
COMP	<---	AUTH	12.476	-0.12
CAREER	<---	COOPM	4.125	0.119
CAREER	<---	INVLV	9.842	0.16
CAREER	<---	DECI	18.457	0.178
CAREER	<---	TRAIN	7.941	-0.121
FEED	<---	COOPM	5.601	-0.098
FEED	<---	COMMT	12.807	-0.131
FEED	<---	PERF	4.6	0.106
FEED	<---	ROTA	16.473	0.14
PERF	<---	PROFIT	4.703	0.05
PERF	<---	COOPE	4.54	-0.087
PERF	<---	COOPM	4.943	-0.089
PERF	<---	INVLV	5.183	-0.079
PERF	<---	RULES	5.59	-0.09
PERF	<---	OPEN	5.234	-0.121
PERF	<---	IMPRV	16.965	-0.178
PERF	<---	DECI	22.37	-0.133
PERF	<---	CAREER	5.749	-0.087
PERF	<---	FEED	4.918	0.102
ROTA	<---	INVLV	5.599	0.162
ROTA	<---	IMPRV	6.149	0.21
ROTA	<---	DECI	14.634	0.211
ROTA	<---	NOFIN	5.16	-0.12
ROTA	<---	FEED	6.534	0.231
ROTA	<---	SELEC	8.144	-0.226
ROTA	<---	RIGHT	8.513	-0.276
TRAIN	<---	COOPE	11.581	0.286
TRAIN	<---	FININC	5.8	0.152
TRAIN	<---	CAREER	5.592	-0.176
TRAIN	<---	RIGHT	4.045	0.199
SELEC	<---	Organization_Performance	4.128	-0.063

			M.I.	Par Change
SELEC	<---	DEFECTS	5.617	0.103
SELEC	<---	PRODDEV	5.738	-0.106
SELEC	<---	SUPPLSATI	9.157	-0.134
SELEC	<---	CUSTSATIS	10.015	-0.138
SELEC	<---	IMPRV	8.75	0.152
SELEC	<---	AUTH	13.954	0.154
SELEC	<---	COMP	4.157	-0.128
SELEC	<---	ROTA	4.256	-0.081
RIGHT	<---	PRODDEV	4.749	0.082
RIGHT	<---	BEHVR	5.473	-0.099
RIGHT	<---	OPEN	4.775	-0.115
RIGHT	<---	AUTH	6.592	-0.089
RIGHT	<---	ROTA	4.534	-0.07

(Source: AMOS Output; Primary data)

8.12.4.2. Model Fit Summary (Third Modification)

TABLE 8.198 - Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	66	1937.965	430	0	4.507
Saturated model	496	0	0		
Independence model	31	4345.298	465	0	9.345

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	0.166	0.655	0.602	0.568
Saturated model	0	1		
Independence model	0.179	0.254	0.204	0.238

(Source: AMOS Output; Primary data)

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	0.554	0.518	0.615	0.58	0.611
Saturated model	1		1		1
Independence model	0	0	0	0	0

8.12.4.3. Parsimony Adjusted Measures

TABLE 8.199 - Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	0.925	0.512	0.565
Saturated model	0	0	0
Independence model	1	0	0

NCP

Model	NCP	LO 90	HI 90
Default model	1507.965	1375.118	1648.307
Saturated model	0	0	0
Independence model	3880.298	3672.904	4095.01

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	9.056	7.047	6.426	7.702
Saturated model	0	0	0	0
Independence model	20.305	18.132	17.163	19.136

RMSEA

Model	RMS EA	LO 90	HI 90	PCLOSE
Default model	0.128	0.122	0.134	0
Independence model	0.197	0.192	0.203	0

AIC

Model	AIC	BCC	BIC	CAIC
Default model	2069.965	2093.174	2292.427	2358.427
Saturated model	992.000	1166.418	2663.836	3159.836
Independence model	4407.298	4418.199	4511.788	4542.788

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	9.673	9.052	10.329	9.781
Saturated model	4.636	4.636	4.636	5.451
Independence model	20.595	19.626	21.598	20.646

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	53	56
Independence model	26	27

(Source: AMOS Output; Primary data)

8.12.5. Summary of Structural Equation Modeling

TABLE 8.200 – Summary Results of SEM Modifications

	Base Model	Modification 1	Modification 2	Modification 3
		e12 \leftrightarrow e13	e30 \leftrightarrow e31	e1 \leftrightarrow e2
Chi-Square	2224.35 (p=0.000)	2148.43 (p=0.000)	1983.76 (p=0.000)	1937.96 (p=0.000)
HRPractices \rightarrow Organizational Performance	0.879 (p=0.000)	0.89 (p=0.000)	0.891 (p=0.000)	0.994 (p=0.000)
Employee Outcome \rightarrow Organizational Performance	0.702 (p=0.000)	0.7 (p=0.000)	0.716 (p=0.000)	0.699 (p=0.000)
HR Practices \leftrightarrow Employee Outcome	0.096 (p=0.000)	0.096 (p=0.000)	0.096 (p=0.000)	0.091 (p=0.000)
CMIN	2224.35	2148.439	1983.768	1937.965
CMIN/DF	5.137	4.973	4.603	4.507
Root Mean Square Residual (RMR)	0.137	0.137	0.166	0.166
Goodness of Fit Index (GFI)	0.62	0.633	0.648	0.655
Adjusted Goodness of Fit Index (AGFI)	0.564	0.579	0.594	0.602
Normed Fit Index (NFI)	0.488	0.506	0.543	0.554
Relative Fit Index (RFI)	0.45	0.468	0.507	0.518
Incremental Fit Index (IFI)	0.542	0.561	0.603	0.615
Tucker Lewis Index (TLI)	0.504	0.524	0.568	0.58
PRATIO	0.931	0.929	0.927	0.925
PNFI	0.455	0.47	0.504	0.512
PCFI	0.501	0.518	0.556	0.565
Non Centrality Parameter (NCP)	1791.358	1716.439	1552.768	1507.965
Root Mean Square of Approximation (RMSEA)	0.139	0.136	0.13	0.128
Akaike's Information Criterion (AIC)	2350.358	2276.439	2113.768	2069.965
Expected Cross-Validation Index (ECVI)	10.983	10.638	9.877	9.673

(Source: Compiled by Author based on inputs from AMOS Output)

Thus, the summary results of the SEM Modifications as shown in Table 8.200 shows that the third modification indices shows a marked improvement over the base model. The hypothesized Technology Acceptance Model which was tested using Structural Equation Modeling using AMOS 18 software, tested the following hypotheses:

Linkage 1:

H1. HR Practices positively and directly affects Organizational Performance.

Linkage 2:

H2. Employee Outcome positively and directly affects Organizational Performance.

Linkage 3:

H3. There exists covariance between HR Practices and Employee Outcome.

The final results of the relation between the constructs rejected the null hypotheses (as the p value was less than 0.05) and concluded that:

- HR Practices positively and directly affects Organizational Performance
- Employee Outcome positively and directly affects Organizational Performance
- There exists covariance between HR Practices and Employee Outcome

CHAPTER – 9

Problems and Challenges Identified through Interviews & Interactions

9.1.Prelude

One of the objectives of the study was: ‘To identify the various problems and challenges faced by the SMEs’. (Objective No. 8; Refer Page 78).

In the present study data obtained through interviews and interactive discussions with the Managing Heads (owners, entrepreneurs, HR Managers as well as Supervisors or Departmental Heads) were noted down and transcribed. A total of **45 Managing Heads in the SME firms were ready for the interactive discussion to share about the major problems and challenges faced by the SMEs in general, or their firm, in particular.** The interviews and interactive discussions through open-ended questions on the problems and challenges faced by the SMEs with the Managing Heads helped to gain some real insights into some basic issues which the sector is facing.

9.2.The Methodology – Through Semi-structured Interviews and Open-ended Questions

The methodology to gather information on the problems and challenges faced by the SMEs included asking a few open-ended questions through semi-structured interview with the Managing Heads. A total of **45 Managing Heads** were interviewed who agreed and were willing to go forward with the interactive session and who were eager to communicate and express some problems, challenges or concerns faced by the sector.

The following steps were taken to identify the major problems and challenges faced by the SME sector:

Step 1: Identifying the problems, challenges or concerns faced by the SMEs by asking specific open-ended questions

It was observed during the pilot study and shared by the respondents that the SME firms experienced decreasing or no change in the Returns on Investment (ROI) as well as Net Profit Margin in the last two fiscal years, though the HR practices as well as management practices were good in the organization. Based on the observation, following three open-ended questions were asked to the entrepreneurs through a semi-structured open-ended questionnaire:

1. What are the major employee related problems or challenges faced by the SME firm?
2. What have been the major reasons which have helped the firm to accomplish its goals?
3. What are the major problems or challenges faced by the firm or SMEs in general which acts as hindrance to achieve desired goals?

Step 2: Transcript of the raw data received as feedback from the respondents

It is important to record the interview and interactions to confirm the exact content (Punch, 2005; Schilling, 2006). The interviews were conducted in a conducive environment at the Managing heads workplace, and the researcher assured the respondents that the feedback and interactions captured during the interactive session shall be used for academic purpose only. Further, the researcher assured the respondents that their names as well as their firm's names would be kept confidential and would not be required to be mentioned. This was done to get a real scenario of the situation from the respondents. The answers received from the respondents were transcribed and recorded in the questionnaire.

Step 3: Grouping the raw data in various major heads to identify the major problems and challenges faced by the SMEs, alongwith their reasons

According to Chadwick et al., (1984), ‘categories must be mutually exclusive so that a word, a paragraph or a theme belongs in one and only one category. Also, the categories must be exhaustive so that all units examined fit in an appropriate category’.

Researcher in the present study developed some major groups to identify the major problems and challenges faced by the SME sector, in general, keeping in mind that the groups made were mutually exclusive as well as exhaustive. These are classified into main heads below :

- Decreasing or no change in the Return on Investment (ROI) and Net Profit Margin (NPM) of the SMEs over current and the previous year
- Lack of availability of skilled manpower
- Low retention of the employees
- High absenteeism and irregularity of labour
- Regulatory hurdles and legal obligations to be fulfilled by owners / Supervisors

Table 9.1 summarizes the major problems and challenges and detailed reasons.

TABLE 9.1 – Major Problems and Challenges faced by the SMEs and the Reasons thereof

Srl.	Major problems and challenges faced by the SMEs	Reasons/ issues shared by the respondents for the problem/ challenge
1.	<ul style="list-style-type: none"> ▪ Decreasing or no change in the Return on Investment (ROI) as well as the Net Profit Margin of the SMEs over the current year as well as the previous year 	<ul style="list-style-type: none"> ▪ High level of competition from domestic & international market, especially from China. ▪ Easy availability of low cost China-made substitute products for suppliers. ▪ Overall increase in price of raw-materials and other substances. ▪ Employee’s demand for high wages, especially trained staff; at par with that of large enterprises; causing the wage-bill to increase, ultimately leading to lower profits (Net Profit Margin). ▪ Rapid technological changes vis-à-vis lack of funds for technological upgradation...thus. vicious cycle continues.

Srl.	Major problems and challenges faced by the SMEs	Reasons/ issues shared by the respondents for the problem/ challenge
		<ul style="list-style-type: none"> ▪ Government policy of Free-Trade Zone for pharmaceutical industry to few states eg. Himachal Pradesh, has affected adversely the pharma SMEs in Gujarat.
2.	Lack of availability of skilled manpower (Employee related issues)	<ul style="list-style-type: none"> ▪ Labour/ employees more lured to work for large enterprises and leave SMEs as soon as they get such opportunity. ▪ High absenteeism rate and irregularity of employees. ▪ Lack of self-motivated and dedicated employees ▪ Lack of domain-specific knowledge of employees ▪ Lack of training amenities offered by SMEs. ▪ Lack of government initiatives to deliver skilled workforce. ▪ Large companies poaching trained employees of SMEs.
3.	Low retention of the employees (Employee related issues).	<ul style="list-style-type: none"> ▪ Dissatisfaction related to Salary and Increment issues ▪ Lack of career prospects and growth in SMEs. ▪ Lack of in-house and off-the-job training amenities or encouragement ▪ Large companies poaching trained employees of SMEs.
4.	High absenteeism rate of labour and irregularity of labour (Employee related issue)	<ul style="list-style-type: none"> ▪ Lack of sense of ownership ▪ Personal problems related to drinking habits, tobacco, bedi smoking etc. ▪ Behaviour and attitude problems of employees towards work/ Management
5.	Regulatory hurdles and legal obligations to be fulfilled by owners / Supervisors	<ul style="list-style-type: none"> ▪ Governmental regulations, policies and tax-structure. Managing heads feel distressed about the plethora of regulations to be fulfilled for various governmental bodies. Single-window operations yet not practiced or prevalent. ▪ Lack of funds; nationalized banks asks for mortgages for funding small

Srl.	Major problems and challenges faced by the SMEs	Reasons/ issues shared by the respondents for the problem/ challenge
		<p>industries, due to high risks involved in funding SMEs; whereas venture capitalists charge very high ROI.</p> <ul style="list-style-type: none"> ▪ Stringent and plethora of labour laws.

(Source: Developed by author, based on interactions with Respondents)

9.2 Reasons which have helped the SME firms/ Managing heads to achieve desired organizational goals despite various problems/ challenges

Some reasons were also shared by the SME Managing Heads who believed that their firms could achieve desired goals, despite some problems and challenges faced by the sector. Some of the reasons enumerated by them are as follows:

- High level of commitment towards work by employees and Management; Hard-work of employees: Few of the entrepreneurs believed that some key personnel of their firms were greatly responsible for the achievement of goals of their firms. However, they shared that the blue-collar workers (labours) though are unreliable most of the times.
- Team-work and team-spirit of staff: They believed that there is good team-work and team-spirit among the workers.
- Honesty, integrity and ethical work practices: Few entrepreneurs shared that they believed in trust and ethical work practices which had been primarily responsible for having trusted customers with them over many years.
- Good quality products at comparatively low costs, by achieving economies of scale: Some entrepreneurs shared that ‘quality’ is their bench-mark. They shared that they could have never attained the present status had they not have guaranteed good quality products and services. They shared that it is only ‘quality’ *per se* which can beat foreign competition.
- Experienced employees and old staff, some of whom have spent more than 25 years: Some entrepreneurs shared that they value their human resources, and have maintained a ‘family-like culture’ at their work-place, which has resulted into good retention of their valued staff.

- Proactive improvement in engineering technology, product designing and services innovation: Some entrepreneurs shared that it is only ‘innovation’ which can beat tough competition. They shared that they focused significantly on upgrading technology to achieve product and engineering innovation from time to time. They added that they would import machinery and technology to be continuously ahead of the curve compared to their competitors, and in order to be sustainable.
- Good in-house training: Managing heads of almost all firms agreed that they believed a lot on cost-effectiveness; hence sending employees for outside training was not much encouraged by the Management. However, the key people and owners themselves take keen interest to mentor and train their employees. Their focus on staff skill development through in-house training and mentoring has helped their firm achieve desired goals to a great extent.
- Solving employee-related issues on time, so that they do not become big and unmanageable issues: The owners are highly involved at the work-place. They are of the belief that timely solution to these issues and problems was instrumental in solving problems at a preliminary stage, rather than letting it become unmanageable with passage of time.
- Strong leadership and Management’s commitment and vision: Few of the entrepreneurs strongly felt that it was the strong management leadership which has helped their firm to achieve their goals.
- Goodwill created by first generation owner of the firm and maintained by the present generation, which has helped to retain customers over 20 years old.
- Timely deliveries: The managers believed that their commitment to deliver on time has helped them to retain good customers and trusted suppliers over a long period of time.

9.3. Summary of the Chapter

The interactions and discussion with the Managing heads helped to get real insights about problems and challenges, which could not be gathered by the Quantitative analysis. The interactions with the SME owners, who were willing to share their experience of the

SME sector, helped to get a bird's eye-view of the sector. The interactive discussion also helped to create a good rapport with the SME owners/ managing heads. Various aspects about the sector emerged from the detailed discussions with the Managing heads of the SMEs, which otherwise would not have been possible through only a stand-alone quantitative data analysis.

CHAPTER – 10

Findings & Discussions

10.1. Prelude

The chapter mainly discusses the major findings of the quantitative and qualitative analysis. In order to get a more comprehensible view of the analysis, the hypotheses testing and its results are presented in a tabular form. It is followed by a discussion of the major findings derived from the analysis.

10.2. Tabular Presentation of Major Findings and Discussion

The major findings of the study are presented herewith in a tabular manner (Refer Table 10.1), to get a bird's eye-view of the hypotheses testing and the results.

TABLE 10.1 – Summary Sheet of Major Findings

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₁	There is no significant association between Type of firm and Documentation of HR practice.	Chi-Square Test (Cross-Tabulation)	0	Reject	Significant Association
H ₀₂	Size of firm has no significant association with Documentation of HR practice	Chi-Square Test (Cross-Tabulation)	0	Reject	Significant Association (Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₃	Documentation of HR practice is not associated with the SME firm bearing a Quality/ ISO Certification	Chi-Square Test (Cross-Tabulation)	0	Reject	Significant Association
H ₀₄	Documentation of HR practice is not associated with the presence of an internal HR Expert	Chi-Square Test (Cross-Tabulation)	0.001	Reject	Significant Association
H ₀₅	Presence of an internal HR Expert is not associated with the size of firm	Chi-Square Test (Cross-Tabulation)	0	Reject	Significant Association
H ₀₆	There is no significant influence of Gender on HR Practices	Mann-Whitney	Less Than 0.05	Reject	Significant influence of 'females' on Career growth & Compensation
H ₀₇	There is no significant influence of Quality/ ISO Certification on HR Practices	Mann-Whitney	Less Than 0.05	Reject	Significant influence of Quality/ISO Certif. on Recruitment, Selection, T&D, Perf. App., Employee Involvement, Open-Communication.
H ₀₈	There is no significant influence of Quality/ ISO Certification on Organizational Outcomes	Mann-Whitney	Less Than 0.05	Reject	Significant influence of Quality/ ISO Cert. on Customer & Supplier Satisfaction, Product/ Service dev. , Quality, Optimum utilization of resources, Defects or deficiencies in Product/ Service, Net Profit Margin, Return on Investment.
H ₀₉	There is no significant influence of Presence of an Internal HR Person on HR Practices	Mann-Whitney	Less Than 0.05	Reject	Significant influence of presence of an internal HR person on Selection, T&D, Feedback mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₁₀	There is no significant influence of Presence of an Internal HR Person and Employee Outcomes	Mann-Whitney	Less Than 0.05	Reject	Significant influence of presence of an internal HR person on employee involvement and adherence to code of conduct and rules.
H ₁₁	There is no significant influence of Presence of an Internal HR Person and Organizational Outcomes	Mann-Whitney	Less Than 0.05	Reject	Significant influence of presence of an internal HR person on Product/ service dev., quality, utilization of resources, reduction in average Number of defects of products / deficiencies in service, increase in the Net Profit Margin and Return on Investment (in %)
H ₁₂	There is no significant effect of Size of Firm on HR Practices	Mann-Whitney	Less Than 0.05	Reject	Significant effect of size of firm on T&D & job-rotation. Medium sized firms have shown to have a significant effect on the two HR practices.
H ₁₃	The size of the firm does not significantly influence the Employee Outcomes	Mann-Whitney	Less Than 0.05	Reject	Significant influence of size of firms on Employee Competence, Employee's co-operation with Management, Employee's commitment to complete assigned tasks, Punctuality, Sense of involvement as well as adherence to general code of conduct. In the present survey, medium sized firms have shown to have a significant effect on the mentioned Employee Outcomes.
H ₁₄	Size of firm does not significantly influence Organizational Outcomes	Mann-Whitney	Less Than 0.05	Reject	Size of firm has a significant effect on the Org. Outcome related to Customer Satisfaction. In the present survey, medium sized firms have shown to have a significant effect on the Customer Satisfaction.

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₁₅	There is no significant effect of Number of Women Employees on HR Practices in the SMEs	Mann-Whitney	Less Than 0.05	Reject	No. of women employees has a significant effect on the HR Practices related to Recruitment & Selection, regular implementation of Performance Appraisal System, Career growth & Management, competency-based Compensation Management System, Reward Management with respect to giving financial incentives and Open communication. Firms with more than 10 women employees have a significant effect on the mentioned HR Practices
H ₀₁₆	There is no significant influence of age of the respondents on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	Age of the respondents have a significant influence on the HR Practices related to Performance Management, Opportunities for career growth, Compensation and Reward Management with respect to giving financial incentives. Owners/Managing heads in the middle age-group 26-35 years believe the same.
H ₀₁₇	There is no significant influence of age of the respondents on Employee Outcomes.	Kruskal Wallis Test	Less Than 0.05	Reject	Age of the respondents has a significant influence on the Employee Outcome related to competence of the employees to do their assigned work. The owners/Managing heads in the age-group 36-45 years believes the same.
H ₀₁₈	There is no significant influence of age of the respondents on Organizational Outcomes.	Kruskal Wallis Test	Less Than 0.05	Reject	Age of the respondents has a significant influence on the Organizational Outcomes related to Customer satisfaction, Net Profit Margin and Return on Investment.
H ₀₁₉	There is no significant influence of number of years of service in the firm on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	Significant influence of number of years of service in the firm on HR Practices related to Recruitment & Selection, implementation of regular Performance Appraisal System and a fair Compensation Management System in the SMEs. <i>(Continued...)</i>

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₂₀	There is no significant influence of total years of work-experience of respondents on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of total years of work experience on HR Practices related to Recruitment & Selection, fair Compensation Management System and Employee Participation in the SMEs
H ₀₂₁	There is no significant influence of Educational Background of respondents on HR Practices.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of educational qualification on HR Practice related to organizing Training and Skill development programs in the SMEs.
H ₀₂₂	There is no significant influence of Educational Background of respondents on Organizational Outcomes.	Kruskal Wallis Test	More Than 0.05	FAIL To Reject	There is no significant influence of educational qualification on Organizational Outcomes in the SMEs.
H ₀₂₃	There is no significant influence of Specialization in education of respondents on HR Practices.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Specialization of educational qualification on HR Practice related to Recruitment & Selection, Training & Skill development, Performance Appraisal, Career growth, Compensation Management, job-rotation, Employee participation as well as motivational aspects related to financial incentives and authority & responsibility.
H ₀₂₄	There is no significant influence of Specialization in education of respondents on Employee Outcomes.	Kruskal Wallis Test	More Than 0.05	FAIL To Reject	There no significant influence of Specialization in education of respondents on Employee Outcomes in the SMEs. (Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₂₅	There is no significant influence of Specialization in education of respondents on Organizational Outcomes.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Specialization of educational qualification on Organizational Outcomes related to Customer satisfaction, Product/ service development, Products/service Quality improvement; proper utilization of resources; reduction in the average Number of defects of products / deficiencies in services and Net Profit Margin, over the last two years.
H ₀₂₆	There is no significant effect of Type of Firm on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of type of firm on HR Practices related to Performance Appraisal and Compensation decision based on competence and ability, employee participation and Open Communication.
H ₀₂₇	There is no significant effect of Type of Firm on Employee Outcomes.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of type of firm on Employee Outcomes related to Employee's co-operation among themselves, Employee Commitment, Regularity of employees, Employee involvement as well as Conformance to rules and regulations, for Public Ltd. Companies . Whereas, for Public Ltd. as well as joint-stock it is related to Employee's co-operation with Management/Head as well as Punctuality of employees.
H ₀₂₈	There is no significant effect of Type of Firm on Organizational Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Type of firm on all the Organizational Outcomes. The Public Ltd. as well as Joint-stock SME firms have a significant influence on the Organizational Outcomes.

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₂₉	There is no significant effect of Age of Firm on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of age of the firm on HR Practices; for the firms which are 16-20 years old , for the HR Practice related to Human Resource Planning; whereas firms which are more than 20 years old for the HR practice related to Selection Method .
H ₀₃₀	There is no significant effect of Age of Firm on Employee Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of type of firm on Employee Outcome related to Punctuality of employees.
H ₀₃₁	There is no significant effect of Age of Firm on Organizational Outcomes.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Age of firm on the Organizational Outcomes related to Product/ Service Development, Product/ service Quality improvement, Proper utilization of resources and decrease in the average Number of defects of products / deficiencies in service.
H ₀₃₂	There is no significant effect of Nature of the Industry on HR Practices.	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Nature of the industry on HR Practices; with maximum influence of firms from the Pharmaceutical and Electrical industry .
H ₀₃₃	There is no significant effect of Nature of the Industry on Employee Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Nature of Industry on Employee Outcome related to Employee's general behavior, Punctuality and Regularity of employees, Sense of Involvement and Conformance to rules and regulations.
H ₀₃₄	There is no significant effect of Nature of the Industry on Organizational Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Nature of the industry on the Organizational Outcomes related to Customer Satisfaction, Supplier/ Vendor Satisfaction, Product/ Service Development and Proper utilization of resources.

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₃₅	There is no significant influence of Total Employee Strength on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Number of employees (or employee strength) on HR Practices; with maximum influence of firms with more than 50 employees.
H ₀₃₆	There is no significant influence of Total Employee Strength on Employee Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Number of employees (or employee strength) on Employee Outcomes; with maximum influence of firms with more than 50 employees for the outcomes related to employee competence and sense of involvement.
H ₀₃₇	There is no significant influence of Total Employee Strength on Organizational Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of total number of employees on the Organizational Outcomes related to Supplier/ Vendor Satisfaction, Product/ Service Development, Product/ Service quality improvement, Proper utilization of resources, decrease in defects of products / deficiencies in service and Return on Investment (ROI); with highest influence of firms whose total employee strength is between 51 to 100 employees.
H ₀₃₈	There is no significant influence of Total number of Contractual Employees on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Number of contractual employees on HR Practices; with maximum influence of firms with more than 50 contractual employees.

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₃₉	There is no significant influence of Total number of Contractual Employees on Employee Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Number of employees (or employee strength) on Employee Outcomes; with maximum influence of firms with more than 94 Contract employees for the Employee Outcomes related to Competence of employees, Co-operate among employees, General behavior of employees, Employee Commitment, Punctuality and Regularity of employees, Taking up extra duties and responsibilities showing a sense of Involvement & Participation and Conformance to rules & regulations.
H ₀₄₀	There is no significant influence of Total number of Contractual Employees on Organizational Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of total number of Contractual employees on the Organizational Outcomes related to Customer Satisfaction, Product/ Service quality improvement, decrease in defects of products / deficiencies in service and Return on Investment (ROI); with highest influence of firms whose total number of contractual employees is less than 50 or more than 94 employees.
H ₀₄₁	There is no significant influence of Total number of Women Employees on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Number of women employees on HR Practices; with maximum influence of firms with more than 20 women employees.
H ₀₄₂	There is no significant influence of Industrial Estate on HR Practices	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Industrial Estate on HR Practices; with maximum influence of firms in the BIDC Gorwa Estate, Mujmahuda Estate and Sardar Estate. <i>(Continued...)</i>

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H ₀₄₃	There is no significant influence of Industrial Estate on Employee Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of the Industrial Estate on Employee Outcomes; with maximum influence of SME firms belonging to Gorwa BDC and Mujmahuda Industrial Estate for the Employee Outcomes related to Co-operation among employees, General behavior of employees, Employee Commitment, Punctuality and Regularity of employees, Taking up extra duties and responsibilities showing a sense of Involvement & Participation and Conformance to rules & regulations.
H ₀₄₄	There is no significant influence of Industrial Estate on Organizational Outcomes	Kruskal Wallis Test	Less Than 0.05	Reject	There is a significant influence of Industrial Estate on the Organizational Outcomes related to Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Product/ Service quality improvement, Proper utilization of resources, decrease in defects of products / deficiencies in service, increase in Net Profit Margin and Return on Investment (ROI); with highest influence of firms belonging to the Mujmahuda Estate, Sardar Estate and Gorwa GIDC.
H ₀₁	There is no joint influence of HR Practice and Employee Outcome on Organizational Performance.	Regression	0	Reject	HR Practice and Employee Outcome jointly influences Organizational Performance.
H ₀₁	HR Practices does not positively and directly affect Organizational Performance	Structural Equation Modeling	Less Than 0.05	Reject	HR Practices has a positive significant relationship with Organizational Performance.

(Continued...)

Hyp	Hypotheses	Test	P Value	Null Hyp.	Findings/ Discussion
H₀₂	Employee Outcome does not positively and directly affect Organizational Performance.	Structural Equation Modeling	Less Than 0.05	Reject	Employee Outcome has a positive significant relationship with Organizational Performance
H₀₃	There exists covariance between HR Practices and Employee Outcome	Structural Equation Modeling	Less Than 0.05	Reject	There exists a covariance between HR Practices and Employee Outcome.

(Source: Compiled by Author, based on Primary Data)

10.3. Major Findings and Discussions of the Study

The major findings of the study are summarized herewith in the section below. This includes the findings from the quantitative analysis, which is followed by the major findings from the qualitative analysis as well as from a comprehensive study of the SME sector through the secondary data inputs.

10.3.1 The major findings from Quantitative data analysis are:

1. 51% of the respondents said that their firms had a **designated internal HR expert** to take care of the HR related functions; while 49% of the firms had no internal HR expert designated to undertake the HR functions in the firm
2. 47% of the respondents agreed that their firm had **no rules, regulations or HR policies in written form** in the form of Employee Handbook, Rule-book or HR Manual.
3. About 36% of the respondents **do not take consultancy from an HR Consultant**. The greener side is that about 64% of the respondents take guidance from HR Consultants.
4. 95% of the respondents take **consultancy from Financial Consultants**, which accentuates the fact that experts from outside are consulted to enhance the functioning with respect to matters related to financial procedures.
5. About 62% of the respondents have a **Quality or ISO Certification** in their firms. SMEs are quite conscious about quality conformance, in order to be competitive.
6. 94% of the respondent firms are not associated with any **Trade Union** which shows sound Industrial Relations (IR) across the various industrial estates in the Vadodara district without any need of Trade Union intervention between employees and the management.
7. About 54% of the respondents do not feel that they have **achieved the expected levels of growth** (Refer Table 8.22 and Figure 8.20). This shows that the Managing Heads keep a high expectation of their levels of growth.
8. 94% of the respondents were from firms with less than 50 **contractual employees**.
9. 90% of the respondents were from firms with less than 10 **women employees**, whereas only about 10% of the respondents were from firms with more than 10

- women employees. Thus it can be deduced that there is a lot of scope of improvement for bringing in gender diversity in SMEs by encouraging more women employees to join SMEs.
10. Employees are not much **rotated from one job to another** (Mean= 3.40, Std. Dev= 0.916).
 11. **Product Development** has highest mean of 4.24 with standard deviation of 0.688, which is a good sign and shows the fact that SMEs undergo a lot of product development, based on customer needs.
 12. **'Interviews'** has been found to be the most important selection method, with about 41% respondents, followed by 'on-the-job-testing'.
 13. **'On-the-job testing'** was coined by the researcher as one of the prevalent methods of selection, especially for the selection of skilled, semi-skilled and unskilled workers, in the various industrial estates in Vadodara district, during pilot-study. This adds a new selection method to the body of knowledge prevalent in the SMEs
 14. Majority of the firms have a **pay based on performance** of the employees (about 30% of the respondents), followed by pay based on skills (about 26% of the respondents).
 15. ESIC with about 28% scores the highest among the other **welfare/ social security measures**, followed by annual Bonus with about 26% of the respondents agreeing for it.
 16. About 50% of the respondents agree that **performance is assessed** in their firm by the HODs/ owners, based on past performance of employees, though there is no prescribed format for the same.
 17. It is encouraging to see that a negligible portion of about 4% of firms have some **modern methods of Performance Assessment** like Psychometric Tests, Assessment Centres, Management-by-Objectives, on-line continuous assessments as well as other well devised assessment tools designed by outside HR Consultants/ Consultancy firms.
 18. It is a good to see that performance assessment is used positively to **develop employees**, as about 27% of the respondents opine that their firm uses performance

- assessment for developing the employees (only about 6% of respondents agree to use it for removing employees).
19. SMEs seems to rely more on **On-the-Job Training** (about 44%), followed by mentoring by seniors (31%). It also corroborates the fact that SMEs try to be more cost-effective in all their aspects. A negligible amount of about 2.5% of the firms has no training programs devised for employees in any form.
 20. The **'Use of Performance Assessment'** most commonly found through evaluating past performance is for 'Developing Employees' followed by 'For Promotion decisions'. (Cross-tabulation)
 21. Cross-tabulation shows that the 'Selection Methods' most common in the recruitment method of 'Employee Referrals' is found to be through **'Application Blank/ Detailed CV' and 'Interviews'**, followed by 'On-the-Job Testing'.
 22. Of the 49 respondents who have confirmed that they have an **Employee Handbook**, about 37% (18 respondents) are from firms which are more than 21 years old. Further, of the 43 respondents who have confirmed that they have an HR Manual, about 61% (26 respondents) are from firms which are more than 21 years old. Thus, age of the firm has some association with the documentation of HR policies.
 23. In chi-square testing, as the p-value is less than 0.05, so null hypothesis is rejected and it can be concluded that there is significant association between **type of firm and documentation of HR practice**. 49 respondents (about 23% of respondents) have confirmed that their firm has an Employee Hand-book of whom 20 respondents (about 41% respondents) belong to Private Ltd. Companies. Further, it is also to be noted that 43 respondents (about 20% of respondents) have confirmed that their firm has an HR Manual of whom 26 respondents (about 60.5% of respondents) are from Private Limited companies.
 24. In chi-square testing, as the p-value is less than 0.05, so we reject null hypothesis and conclude that there is significant association between **Size of firm and Documentation of HR practice**. About 101 respondents have confirmed that they have no documentation of HR Practice of which 84 respondents (about 83% respondents) belong to Small firms. Further, 43 of the respondents have confirmed

- that their firm has an HR Manual of whom 24 respondents (56%) are from Medium Enterprises.
25. In chi-square testing, as the p-value is less than 0.05, so we reject null hypothesis and conclude that **Documentation of HR practice is associated with the SME firm bearing a Quality/ ISO Certification.** 49 Managing Heads who have confirmed that they have an Employee Handbook, 53% (26 respondents) have a Quality/ ISO Certification. Further, of the 43 respondents who have said that their firm possesses an HR Manual, about 95% (41 respondents) have a Quality/ ISO Certification in their firm.
 26. In chi-square testing, as the p-value is less than 0.05, so we reject null hypothesis and conclude that **Documentation of HR practice is associated with the presence of an internal HR Expert.** Of the 109 respondents who have an internal HR person in their firm, 71 respondents (65%) have HR Policies in their firm in the form of Employee Handbook, Rule-book or HR Manual.
 27. In Mann-Whitney test, females consider that there is 'Enough opportunity for career growth' as well as that 'Compensation is given on the basis of competence and ability' in SME firms. Thus, there is a significant influence of 'gender' on 'Enough opportunity for career growth' and 'Compensation is given on the basis of competence and ability'.
 28. Mann-Whitney Test proves that there is a significant influence of **Quality/ ISO Certification** on the following **HR Practices:** Recruitment, Selection, Training & Skill Development, Performance Appraisal, Employee Involvement and Open-Communication.
 29. Mann-Whitney Test shows that there is a significant influence of **Quality/ ISO Certification** on the following **Organizational Outcomes:** Customer Satisfaction, Supplier Satisfaction, Product/ Service development, Quality, Optimum utilization of resources, Defects or deficiencies in Product or Service, Net Profit Margin, Return on Investment.
 30. There is a significant influence of **presence of an internal HR person on the following HR Practices:** Selection, Training & Skill Development, Feedback

- mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility (Delegation of power). (Mann-Whitney test)
31. There is a significant influence of **presence of an internal HR person on the Employee Outcomes** related to taking extra duties and responsibilities (employee involvement) and adherence to code of conduct and rules. (Mann-Whitney test)
 32. There is a significant influence of **presence of an internal HR person on the Organizational Outcomes** related to Product/ service development, quality of product/ service, utilization of resources, reduction in average Number of defects of products / deficiencies in service, increase in the Net Profit Margin and Return on Investment (in %). (Mann-Whitney test)
 33. **Size of firm** has a significant effect on the **HR practices** related to Training & Skill-development as well as job-rotation. In the present survey, medium sized firms have shown to have a significant effect on the HR practices related to T&D and job-rotation. (Mann-Whitney test)
 34. **Size of firm** has a significant influence on the **Employee Outcomes** related to Employee Competence, Employee's co-operation with Management, Employee's commitment to complete assigned tasks, Punctuality, Sense of involvement as well as adherence to general code of conduct. In the present survey, medium sized firms have shown to have a significant effect on the mentioned Employee Outcomes. (Mann-Whitney test)
 35. **Size of firm** has a significant effect on the **Organizational Outcome related to Customer Satisfaction**. In the present survey, medium sized firms have shown to have a significant effect on the Customer Satisfaction. (Mann-Whitney test)
 36. **Number of women employees** has a significant effect on the **HR Practices** related to Recruitment & Selection, regular implementation of Performance Appraisal System, Career growth & Management, competency-based Compensation Management System, Reward Management with respect to giving financial incentives and Open communication. In the present survey, the firms with more than 10 women employees have shown to have a significant effect on the specific mentioned HR Practices. (Mann-Whitney test)

37. The owners/Managing heads in the middle age-group **26-35 years** believes that **there is enough opportunity for career growth for good performers** in the SMEs, as well as that compensation is decided on the basis of competence or ability. They also believe that good performers are rewarded well by giving financial incentives in SME firms. (Kruskal-Wallis test)
38. The owners/Managing heads in the **age-group 18-25 years** believes that the **SME firms appraises the performance of employees at regular intervals**. Whereas, the owners/Managing heads in the **middle age-group 26-35 years** believes that **there is enough opportunity for career growth for good performers** in the SMEs, as well as that compensation is decided on the basis of competence or ability. They also believe that good performers are rewarded well by giving financial incentives in SME firms. (Kruskal-Wallis test)
39. The owners/Managing heads in the **age-group 36-45 years** believes that the competence of the employees to do their assigned work is satisfactory in the SME firms. Thus, age of the respondents has a significant influence on the **Employee Outcome** related to competence of the employees to do their assigned work in the SME firms. (Kruskal-Wallis test)
40. The owners/Managing heads in the age-group 18-25 years believes that the customer satisfaction has increased as well as the Net Profit Margin and Return on Investment (ROI) in the last two years has increased in the SMEs. (K-Wallis test)
41. The owners/Managing heads who had been **working in the organization for more than 20 years** in the same firms believes that the SMEs places the right person in the right job; Selection is on the basis of merit; their firms appraises the performance of employees at regular intervals and that compensation is decided on the basis of competence or ability in their firms. Thus, that there is a significant influence of number of years of service in the firm on HR Practices related to Recruitment & Selection, implementation of regular Performance Appraisal System and a fair Compensation Management System in the SMEs. (Kruskal-Wallis test)
42. The owners/Managing heads **whose total work experience was more than 20 years** believes that the SMEs places the right person in the right job; Selection is on the basis of merit; compensation is decided on the basis of competence or ability and that

- good performers are given more authority and responsibility in their SME firm. The owner/ Managers whose work experience was 16-20 years believed that employees participated in the decision-making process. (Kruskal-Wallis test)
43. The owners/Managing heads who possess a **Masters degree as their educational qualification** believe that the SMEs Organizes training and skill development programs for employees (need-based). Thus, there is a significant influence of educational qualification on HR Practice related to organizing Training and Skill development programs in the SMEs.
44. The owners/Managing heads who possess **HR Specialization** as their educational background believes that the SMEs have sound HR Practices related to Recruitment & Selection methods, Organizes training and skill development programs for employees (need-based), performance appraisal is done at regular intervals, there is enough opportunity for career growth in SMEs as well as that compensation is decided on the basis of competence/ ability. Whereas, the owners/Managing heads who possess Marketing Specialization as their educational background believes that the SMEs have sound Motivational systems related to giving financial incentives as well as authority and responsibility as well as Employee Participation in the decision-making process. Thus, there is a significant influence of Specialization of educational qualification on the mentioned HR Practices. (KW Test)
45. There no significant influence of **Specialization in education** of respondents on Employee Outcomes in the SMEs.
46. The owners/Managing heads who possess **Operations Specialization** as their educational background believes that the SMEs Customer satisfaction has increased; Measures have been taken by the firm for product/ service development; Products/service Quality shows improvement; the SMEs have displayed proper utilization of resources; the average Number of defects of products / deficiencies in services have decreased and that there is an increase in the Net Profit Margin, over the last two years.
47. There is a significant influence of **type of firm on HR Practices** related to Selection Method, Training & Skill development Program, Feedback mechanism, Opportunities for career growth, Delegation of power as well as opportunities for giving suggestions

- for improvement, Performance Appraisal & Open-communication for the Public Ltd. and Joint-stock companies. (KW Test)
48. There is a significant influence of **type of firm on Employee Outcomes** related to Employee's co-operation among themselves, Employee Commitment, Regularity of employees, Employee involvement as well as Conformance to rules and regulations, with maximum influence of respondents who are in Public Ltd. or Joint-stock companies.
49. There is a significant influence of **age of the firm on HR Practices**. For firms which are 2-5 years old shows maximum influence for the HR Practices related to Feedback mechanism, Opportunities for career growth, Delegation of power wr.t authority and responsibility, opportunities for giving suggestions for improvement as well as for an Open-Communication system. Whereas, SME firms which are 16-20 years old is high for the HR Practice related to Human Resource Planning i.e placing the right person in the right job. Whereas the mean-rank is high for the firms which are more than 20 years old for the HR practice related to Selection Method i.e Selection on the basis of merit. (KW Test)
50. Firms which are **2-5 years old** shows maximum influence for the Organizational Outcomes related to Product/ Service Quality improvement, Proper utilization of resources and decrease in the average Number of defects of products / deficiencies in service. Thus, the owners/Managing heads in the SME firms which are 2-5 years old believes that the above mentioned outcomes have improved in their firms. Whereas, **SME firms which are 16-20 years old** is high for the Organizational Outcome related to Product/ service development.
51. There is a significant influence of **Nature of the industry on HR Practices**; with maximum influence of firms from the Pharmaceutical and Electrical industry.
52. There is a significant influence of **Nature of Industry on Employee Outcome** related to Employee's general behavior, Punctuality and Regularity of employees, Sense of Involvement and Conformance to rules and regulations. In the present study, Pharmaceutical industry shows maximum influence.
53. The owners/Managing heads in the SME firms belonging to the Pharmaceutical industry believes that the Organizational Outcomes related to Customer Satisfaction,

- Supplier/ Vendor Satisfaction, Product/ Service Development and Proper utilization of resources. have improved in their firms. (KW Test)
54. There is a significant influence of **Number of employees (or employee strength) on HR Practices**; with maximum influence of firms with more than 50 employees.
 55. There is a significant influence of **Number of employees (or employee strength) on Employee Outcomes**; with maximum influence of firms with more than 50 employees for the outcomes related to employee competence and sense of involvement.
 56. There is a significant influence of **total number of employees on the Organizational Outcomes**, with highest influence of firms whose total employee strength is between 51 to 100 employees.
 57. There is a significant influence of **Industrial Estate on HR Practices**; with maximum influence of firms in the BIDD Gorwa Estate, Mujmahuda Estate and Sardar Estate.
 58. That there is a significant influence of the **Industrial Estate on Employee Outcomes**; with maximum influence of SME firms belonging to Gorwa BIDD and Mujmahuda Industrial Estate for the Employee Outcomes related to Co-operation among employees, General behavior of employees, Employee Commitment, Punctuality and Regularity of employees, Taking up extra duties and responsibilities showing a sense of Involvement & Participation and Conformance to rules & regulations.
 59. **Factor Analysis came up with three Components (Factors)** which were identified and named as: Component 1: Employee related Outcomes; Component 2: HR Practices and Component 3: Organizational related Outcomes.
 60. In **Regression Analysis**, as the p-value of Summated HR Practice and Summated Employee Outcome is 0.005 and 0.000 respectively which is less than 0.05 so we reject the null hypothesis and conclude that there is a joint influence of HR Practice and Employee Outcome on Organizational Performance. However, it is to be also noted here that the **Adjusted R Square value is quite low** but as the regression analysis is carried out on ordinal scale it is bound to happen this way. Thus, SEM.

61. In **Structural Equation Modeling (SEM)**, as the p-value is less than 0.05, so it has been deduced that HR Practices has a positive significant relationship with Organizational Performance. Employee Outcome has a positive significant relationship with Organizational Performance; and that there exists a covariance between HR Practices and Employee Outcome. Further, the base Model in SEM has been improved through three Modifications to get improved results.

10.3.2 The major findings from interactions and discussions with the Managing heads

Chapter 9 talks about the various findings from the interactions and discussions with the Managing Heads. The major problems and challenges identified by the Managing heads are as follows:

1. **Decreasing or no change in the Return on Investment (ROI)** as well as the **Net Profit Margin** of the SMEs over the current year as well as the previous year: The major reason for has been because of high level of competition from domestic & international market, especially from China. Easy availability of low cost China-made substitute products for suppliers.
2. The **major employee related problems faced by the sector is High Employee Turnover** and **low retention rate** as well as **high absenteeism rate**. Lack of domain-specific knowledge of employees was also identified as a major challenge.
3. Few of the **major challenges faced by the sector is rapid technological changes vis-à-vis lack of funds for technological upgradation, as well as Governmental regulations, policies and tax-structure**. SME Managing Heads feel quite overburdened by the plethora of governmental regulations to be fulfilled from time to time. Stringent and plethora of labour laws formalities.
4. High level of commitment towards work by employees and Management, team-work and availability of good quality products in comparatively low costs have helped few SME firms to have **accomplished their goals, inspite of various problems and challenges faced**.

10.3.3 The major findings from Secondary data inputs

1. There are 261760 **MSMEs Registered** in Gujarat till March 2014. The MSME registrations are increasing manifold.
2. The **Gujarat Industrial Policy 2015** aims at promoting Gujarat as a globally competitive and innovative industrial destination that stimulates sustainable development and inclusive growth.
3. Plethora of **assistance/ subsidies** are being given by the State and Central government for the assistance and upliftment of SMEs, however, due to lack of information or other reasons, most of the SME owners/ Managing Heads are not aware of it (eg. Interest subsidy, venture capital assistance, investment subsidy, quality certification subsidy, assistance for start-ups, technological assistance etc).
4. A lot of promotional schemes are also available for the SMEs. (Eg. **Cluster development scheme**, promotion of co-operative sector etc)
5. In SMEs the owners as well as Managing Heads, including HR Managers and Supervisors, are skilled enough to take care of all Functional Departments. The **senior management becomes multi-skilled over time** due to the nature of the work and knows the functioning of all departments (supported by Literature review as well as researchers' interactions with the owners/ Managing Heads).
6. Ministry of Micro, Small & Medium Enterprises (M/o MSME) envisions a vibrant MSME sector by promoting growth and development of the MSME Sector, including **Khadi, Village and Coir Industries** (which is India's legacy hallmark), in cooperation with various Departments/ Ministries, State as well as Central Government, Industry Associations and other Stakeholders.
7. In order to ensure that young entrepreneurs are encouraged and suitably equipped to go into new ventures, the Ministry has set up a **National level Entrepreneurship Development Institutes namely, National Institute for Micro, Small and Medium Enterprises (NI-MSME)** to undertake the task of entrepreneurship and skill development training on a regular basis.
8. With the aim to simplify forms to enable ease of registration of MSMEs, based on Hon. Prime Minister Shri Narendra Modi's suggestion, the M/o MSME has

notified a simple one-page Registration Form **Udyog Aadhar Memorandum (UAM)**, to enable easy and smooth registration of MSMEs.

9. Numerous Schemes and Initiatives by the present Government to initiate ease-of-doing-business like **tool-rooms, cluster development programs etc.**
10. Development of new **on-line softwares** for the o/o MSME.
11. After almost nine years of the MSMED Act, 2006, the **Micro, Small and Medium Enterprises Development (Amendment) Bill, 2015** has been introduced in the Lok Sabha on 20.04.2015. The Amendment Bill is intended to move in line with the enormous changes faced in the economy, nationally as well as internationally.

10.4. Summary of the Chapter

The Chapter focused on an understanding of the findings and discussions of the research. For making it more understandable, a tabular lay-out of the various hypotheses and its results were laid out. This was followed by a detailed findings and discussion of the quantitative analysis, qualitative analysis as well as the studies done from the secondary sources. The Chapter gave an overview of the entire analysis in a summarized manner. The objectives of the study were fulfilled successfully by getting an overall analytical and qualitative understanding of the entire context.

CHAPTER – 11

Recommendations, Limitations and Conclusions

11.1. Introduction

This being the last Chapter of the thesis gives value-added recommendations, based on the outcomes of the study. The Chapter also discusses the limitations as well as the future scope of research and conclusions. Recommendations hold a very important aspect of a research as it forms the inputs to the body of knowledge from the outcomes of the study. It also adds to the managerial implications and helps in implementation of theoretical knowledge into practice.

11.2. Major Recommendations From the Study

Recommendations adds to the body of knowledge if they are being implemented judiciously.

11.2.1. Recommendations to SME owners and Managing Heads

1. As could be seen from Table 8.15 that 49% of the firms had no internal HR expert designated to undertake the HR functions in the firm. A significant influence of **presence of an internal HR person** in the SMEs on HR Practices related to Selection, Training & Skill Development, Feedback mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility (Delegation of power) surfaced from the study. Thus, SME owners should necessarily hire an able internal HR expert, who can handle the HR related functions effectively and help improve performance of the firm. (The present study shows that there is a significant

- influence of presence of an internal HR expert on Employee Outcomes as well as Organizational Outcomes; from Mann-Whitney Test).
2. Taking **consultancy services from an outside HR expert** could also help to improve the functioning of the HR practices and bring innovation in managing resources. In the study, about 36% of the respondents do not take consultancy from an HR Consultant.
 3. Owners need to be more vigilant in terms of getting all their employees covered under **Employee State Insurance Corporation (ESIC)**. This will also enable them to reduce their liability in times of exigency. ESIC being a mandatory social security measure, it is surprising to note that its adherence is far less than the minimal expected (only about 28% respondents agreed that they have ESIC).
 4. **Motivational activities** needs to be encouraged to **enhance employee engagement**, as it emerged in the qualitative study, during interactions with the Managing Heads/ owners, that a major challenge to handle is problems related to absenteeism and high turnover rate of employees.
 5. **Non-Financial Incentive schemes** needs to be incorporated. This will help to enhance engagement and motivational aspects of the employees cost-effectively. In the study, non-financial incentives had the lowest mean of 2.98 with Standard Deviation 1.127. This shows that SME firms presently do not encourage Non-Financial incentives to a great extent.
 6. Further, **job-rotation is also encouraged** as a good HR practice. Job-rotation can help the employees to get trained in new areas of work, which can help to enhance employee motivation, as well as indirectly help owners/ Managing heads to manage work effectively, as frequent absenteeism is a major problem of the employees. (It came up in the present study that at employees are not much rotated from one job to another [Mean= 3.40, Std. Dev= 0.916]).
 7. An effective **Performance Management System** needs to be practiced in majority of the SMEs. This will help Managing Heads to identify good and efficient line managers and workers from ineffective employees. This will also be a foundation work to initiate Performance-based incentives to enhance motivation and effectiveness of employees and a spirit of competitiveness. (In the present study about

50% of the respondents agreed that performance is assessed in their firm by the HODs/ owners, based on past performance of employees, though there is no prescribed format for the same. 10% of the respondents said that their firm did not have any system of performance assessment.)

11.2.2. Recommendations to Government and Industry Associations

Based on the studies, especially the policy initiatives and the interactions had with the owners/ Managing Heads and understanding the underlying issues in this vibrant sector, some recommendations have been laid down by the researcher:

1. The **limit of investment needs to be increased** and not limiting it to the present investment limit as defined by Micro, Small and Medium Enterprises Development (MSMED) Act 2006. This investment limit somehow discourages the SME entrepreneurs to expand further and grow, as they want to continually avail the benefits of being an infant industry, eventhough their firms' capabilities might have increased.
2. The **visibility, clarity and marketing of government-aided schemes and subsidies** should be enhanced via various means like TV media, social media, mobile apps, newspapers etc, as many entrepreneurs are unaware of such initiatives.
3. Government organizations/ Ministry should engage non-government agencies, including NGO's and **export promotion centres, to exhibit the products of the SME**, ancillary and subsidiary industries, preferably biannually, through industrial exhibitions etc. For example the way VCCI (Vadodara Chamber of Commerce and Industry) and GCCI (Gujarat Chamber of Commerce and Industry) takes the initiative to exhibit the talents of this sector through Vibrant Gujarat initiatives.
4. **Mandatory Quality Control Mechanisms** for each and every produce of the SME sector will ensure a better market for the SME and also enhance their competitiveness to compete with China products.
5. Supervision of **Environmental Control Mechanisms** should be regulated, in line with national and global standards. This will also ensure export avenues for the sector.

6. **Banks**, whether Private, Nationalized or MNCs, should offer a fixed percentage of their assets for **services to SME sector in subsidized rates**, as a part of their CSR activities and community development activities. This strategy and initiative by the Central bank's directive will ensure easy loan and credit facilities for budding entrepreneurs as well as encourage MSME entrepreneurs for expansion programs..
7. **Social Accountability Audits** should be initiated. For example, **SA 8000** can be made a compulsory regulation to check the health, safety, working conditions and minimal welfare facilities of the employees of the SME sector. This is in context to the not-so-amicable working conditions in few of the shades of the SMEs observed by the researcher. (SA 8000 is an international standard for social accountability initiated by Council on Economic Priority Accreditation Agency (CEPAA)).

11.2.3. Recommendations to Academia and Industry

1. **Training and Development Institutes** should be established in collaboration with academia, corporate trainers, Counselors, industrialists, as well as economic analysts, to train the staff of the SME's.
2. **Large enterprises** need to give their **support services** related to infrastructure or finance or some other ways, to impart training to SME employees.
3. **Large enterprises** can also dedicate to get part of their services through inputs from ancillary industries like SMEs. This can lead to inclusive growth as well as a decentralized system of functioning.
4. Colleges and Universities can extend their support towards the SMEs by rendering Training as well as Learning and Development initiatives for the SME employees. This can positively help in enhancing effectiveness of employees.

11.3. Limitations of the Study

As diligently quoted by Sir Henry Ford: ‘As we advance in life, we learn the limits of our abilities’. No study or research can be devoid of limitations...it speaks the doors for future opportunities as well. The limitations of the present study are as follows:

- The study is limited to the **eight (out of twelve) industrial estates** of Vadodara district. The study could have been extended to some other districts of Gujarat as well.
- The **sample size is minimum 10%** of each industrial estate, except for the GIDC Makarpura Industrial estate, where the sample size is 6.5% (64 SME firms) due to the large size of the estate. (It is the largest industrial estate in Vadodara district with about 1000 SMEs, as mentioned in the FSSI Directory). Further, due to the researcher’s limitations of time and resources, the sample size, to the best of the ability of the researcher, was restricted to 126 SME firms and 215 respondents, who were the owners/ Managing heads in SMEs.
- Few indicators related to ‘Type of firm’ in the Kruskal-Wallis Test showed the **highest mean ranks for Public Ltd. Companies and Joint-stock companies**. However, it is to be noted that of the 215 respondents, only **seven** Managing Heads belonged to Public Ltd. Company and Joint-stock company, respectively.
- Similarly, few indicators related to ‘Nature of industry’ in the Kruskal-Wallis Test showed the **highest mean ranks for Electrical and Pharmaceutical industry**. However, it is to be noted that of the 215 respondents, only **seven** Managing Heads belonged to Electrical and Pharmaceutical industry, respectively.
- Indicator related to ‘Total number of contractual employees’ in the Kruskal-Wallis Test showed the **highest mean ranks for ‘Firms with No. of Contract employees between 50 to 94’ and ‘More than 94’**. However, it is to be noted that of the 215 respondents, only **seven** Managing Heads belonged to firms in each of these two categories.

- In **Regression Analysis, the Adjusted R Square value is quite low** but as the regression analysis is carried out on ordinal scale it is bound to happen this way. To overcome the limitation, Structural Equation Modeling was incorporated to better understand the linkages between HR Practices, Employee Outcomes and Organizational Outcomes.

11.4. Future Scope for Research

- Significant scope to broad-base this study across SME hubs – not only in the larger manufacturing hubs in Gujarat, but also across the other leading manufacturing states.
- Future research may be done to broad-base the study using more performance indicators as well as by using absolute figures of Return on Investment and Net Profit Margin.
- Future research may be administered to cover more number of SMEs and increase the sample size, by involving enumerators or a team of research scholars to cover a larger part of the population.

11.5. Conclusion

The success, survival and growth of the economy lies in a competitive based market, whereby regulations and practices are transparent, ethical, effective and appropriate; and whereby, the big corporate houses, government and the small industries work in a collaborative manner. Though a lot of initiatives have been taken up by the Government, through its various policies and plans, and also by the Private Sector, yet a lot more can be done to make this sector even more vibrant. Policy induced restrictions, high-costs of infrastructure and raw materials, licensing controls, restrictive trade practices, bureaucratic controls, discretionary approvals etc have to be removed from the system. Lot many system-wide initiatives need to be incorporated. Still a lot more needs to be done, to flourish entrepreneurship at all levels.

This detailed research in 126 SME firms with 215 SME owners/ Managing Heads as respondents, across the eight industrial estates in the manufacturing cluster of Vadodara district, showed that HR Practices has a positive significant relationship with Organizational Performance. Employee Outcome has a positive significant relationship with Organizational Performance; and that there exists a covariance between HR Practices and Employee Outcome. Further, a lot of aspects related to the various HR practices across the eight estates came to surface. The most important HR practices came up to be interviews.

A significant influence of presence of an internal HR person in the SMEs on HR Practices related to Selection, Training & Skill Development, Feedback mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility (Delegation of power) surfaced from the study. Thus, SME owners need to understand the importance of an internal HR person in the organization. As well as taking HR Consultancy from time to time also plays an important part for development of the firms. The semi-structured interviews helped to find out various intricate issues and major problems and challenges faced by the sector, as well as the reasons thereof. For example, the major reason for decreasing ROI and Net Profit Margin over the last two years has been because of high level of competition from domestic and international market, especially from China. Easy availability of low cost China-made substitute products for suppliers have come up as a big challenge for the sector.

In view of the significant share of MSMEs in our nation's future growth, and given the fact that more than 100 million jobs will be created at MSMEs over the next five years (Report of the Working Group on MSMEs, 2012-17 Plan), there is significant scope to broad-base this study across MSME hubs – not only in the larger manufacturing hubs in Gujarat, but also across the other leading manufacturing states, so as to help come up with a policy framework that may help MSMEs achieve better economic outcomes. Major changes to the existing Labour and Employment Laws are anticipated over the coming year to enhance ease of doing business, and assessing and introducing HRM best practices will be key to sustain business performance in this important segment for maintaining the competitive advantage of our country.

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2. Times of India, March 13, 2012, 'Budget 2012: Nasscom for removal of MAT on SEZ, clear transfer pricing norms'

LIST OF PUBLICATIONS RELATED TO PhD WORK

Year	Sr. No.	Description
2015-16	1	<i>'An empirical analysis of the HRM Practices and SMEs Performance in Vadodara District- A Prelude'</i> , 'Research Trends in Economics, Finance & HRM', Excel Publishers, April 2016. (ISBN: 978-93-85777-44-8)
	2	<i>'An empirical analysis of the governance in SMEs at Vadodara district: The road ahead'</i> , Sankalpa-Journal of Mgt. & Research', Volume 6, Conference Issue, February 2016, Impact Factor: 2.813 (ISRA: JIF, Year 2016). ISSN 2231:1904. *
2014-15	3	<i>'SMEs priority for sustainability: Customer over profits'</i> , Sankalpa-Journal of Mgt. & Research', Volume 5, Conference Issue, February 2015, Impact Factor: 2.372 (ISRA: JIF, Year 2015). ISSN 2231:1904. *
	4	<i>'The linkage between HRM Practices & Performance of SMEs: A conceptual understanding'</i> , Management of SMEs in global era, Excel India Publishers (2015), ISBN: 978-93-84869-34-2*
2013-14	5	<i>'SMEs innovative Human Resource Management practices for competitive advantage'</i> , Protsahan-A Journal to encourage young researchers, Vol.1, No.1, Part-II (Sept 2013), ISSN: 2321-869X.*
2012-13	6	<i>'Improving Corporate Governance of SMEs for inclusive growth in an emerging economy like India'</i> , 'Sankalpa-Journal of Management

LIST OF PUBLICATIONS RELATED TO PhD WORK

		& Research', Vol 3, Special Issue (February 2013), ISSN No. 2231-1904.*
	7	<i>'Small and medium enterprises...A panacea for economic growth & development - An analytical study of the global scenario'</i> , IES Mumbai (Feb, 2013), Sita Publications, Mumbai, ISBN No. 978-81-86052-08-2.
	8	<i>'Micro, Small and Medium Enterprises...A silver-lining for economic stability & growth'</i> , NICM Bulletin- The Journal of Management & Co-operation, Vol IX, No.3 (July-September 2012), ISSN No. 2249-2275.*

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Ranjita is an Asst. Professor in **CKSV Institute of Management, Vadodara (Affiliated to Gujarat Technological University), the only Institute in western India accredited by ACBSP, USA.** Her areas of interest are Strategic Human Resource Management, Business Ethics & Corporate Governance, Managerial Economics, Organizational Development, HRD and HRM. She has 15 years of work experience of which 10 years are in MBA teaching, 3 years in corporate and 2 years in School teaching.

Her Professional Teaching career is across two MBA Colleges and in a variety of roles. Besides being responsible for HR Specialization as faculty, she has played variety of organizational roles like Head of Department as MBA in-Charge, driving National and international Accreditations, Content Management through Syllabus Designing for specialized new Post-Graduation Courses, developing industry-academia relationships, editing and report-writing for various institutes' published matters, Master of Ceremony for numerous occasions, Event Management and responsibility for publication as the Principal Asst. Editor of the Institute's Journal 'Sankalpa: Journal of Mgt. & Research' (ISSN 2231-1904, indexed in ProQuest) in addition to being a mentor and problem-solver.

Her corporate HR experience included work in HRM, introducing Performance Management Systems in the organization, compliance system, Compensation Management system, Training & Development and more...from where she drew the inspiration to conduct this study to examine existence of linkages if any, between HR practices and organizational performance.

She has to her credit, publication of 14 Papers in renowned International level Journals and has presented over 12 Papers in various National and International Conferences. She has also received 'Best Paper Awards' for 4 of her papers. She co-edited a book with **Dr. Rajesh Khajuria, Director, CKSV Institute of Management**, titled '**CSR Profile of India Inc-Case Studies**' published by **Excel India Publishers (ISBN: 978-93-84869-61-8)**, which included 19 Case Studies of Corporate India. She is the elected **Managing Committee member of ISTD (Indian Society for Training & Development) - Vadodara Chapter**, since the last four consecutive years.

She truly believes that learning is a life-long process...it never stops...'*Never stop learning as life never stops teaching and only sky is the limit of unearthing...!*'