

**A critical study of strategic human resource management practices and issues of knowledge workers engaged in the computer driven manufacturing technology processes in the auto engineering industries, in Chakan industrial area, Pune**

**A Thesis Submitted To The  
Tilak Maharashtra Vidyapeeth, Pune**

**For The Degree Of  
Vidya Vachaspati (Ph.D.)  
In  
Management**

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**Under guidance of**

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**July, 2016**

### **Candidate's Declaration**

I hereby declare that the thesis entitled “A Critical Study Of Strategic Human Resource Management Practices And Issues Of Knowledge Workers Engaged In The Computer Driven Manufacturing Technology Processes In Auto Engineering Industries In Chakan Industrial Area, Pune” completed and written by me has not previously formed the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

Pune :

Date : July, 2016

Signature of the Student

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## **C E R T I F I C A T E**

This is to certify that the thesis entitled “A Critical Study Of Strategic Human Resource Management Practices And Issues Of Knowledge Workers Engaged In The Computer Driven Manufacturing Technology Processes in Auto Engineering Industries In Chakan Industrial Area, Pune” which is being submitted herewith for the award of the Degree of Vidyavachaspati (Ph.D.) in Management of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by Shri Shirish Sharad Sumant under my supervision and guidance. To the best of my knowledge and belief, the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him.

Place : Pune

Date : July, 2016

Dr. Mohan Kotwal

Research Guide

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## **Title of the study**

**A critical study of strategic human resource management practices and issues of knowledge workers engaged in the computer driven manufacturing technology processes in the auto engineering industries in Chakan industrial area, Pune**

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## **Chapter - 1**

# **Introduction**

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The first topic entitled as “Introduction” covers purpose of the study and the basic concepts associated with Knowledge workers, their behavior and the issues related with them .Their performance related career related and retention related issues. The chapter mentions about various elements in the different aspects associated with knowledge workers.

### **1.1) Purpose of the study:**

Economic reforms, in the year 1990 -91, introduction of LPG( liberalization, privatization and globalization), has a significant impact and there is a phenomenal change in business processes in India. Chakan Industrial Area, in Pune District is an “Auto Hub”. To with stand in the competitive global market, engineering (auto) industries, in Chakan, Pune revamped their manufacturing facilities and adopted advance technology in their manufacturing processes such as auto and semi-automation, rationalization, modernization, introduction of CNCs replacing conventional machines and technologies. Computer Driven Manufacturing Technology Processes have been introduced. Similarly, there is introduction of globally accepted concepts like TPS, TPM, TS, KAIZEN, POKA YOKE, Continuous Improvement, Dos and DONTs, SOPs, Flow Chart, audits. All these resulted into change in competencies at operative level. At operative level “skill” is replaced by the “knowledge”. This “knowledge” is the knowledge of operating CNCs, parameter setting / correcting / checking, and to take initiatives and interest to learn, grasp new techniques as well as the global concepts. Therefore, there has been trend to engage Diploma / Degree Engineers / Science Graduates in place of traditional workers. Here we are considering “Diploma / Degree Engineers / Science Graduates” who are engaged at operative level as KNOWLEDGE WORKERS as they have to use the knowledge in such Computer Driven Manufacturing Technology Processes.

There has been a trend in auto engineering industries, in Chakan, to engage knowledge workers at operative level on the basis of required competencies. However, there are certain issues also while engaging and managing them. Thinking of supervisory, managerial staff, Departmental Heads, and, sometimes at the Top Management is still traditional while managing them. It is leading to serious issues.

The research is to identify issues and problems and come out with the probable suggestions.

For the purpose of this study our terminologies are :

### **1.1.1) Knowledge Workers:**

#### **Knowledge Worker :**

This word was coined by Prof. Peter Drucker. According to him knowledge worker deals with the intellectuals, involved in creation of knowledge which predominantly includes the employees involved in IT programming, Design, Research & Development, Knowledge Processing Operations, and, generally dealing with the knowledge. However, this definition of knowledge worker gets extended as there has been sea change in technology, products, processes where not only creation of knowledge but also its application becomes important. **Hence in view of this the workers engaged to take care operations involved Computer Driven Technology Processes are need to be included in the definition of knowledge workers as their job is knowledge-based, element of knowledge more than the element of labour.**

Programmer or Designer creates a programme, but, one who works on that to take care of operations of CNC, needs to have a set of knowledge of application of the programme. Hence, in the today's era of Computer Driven Manufacturing Technology Processes, CNC, automation this definition of knowledge workers include the worker not only who creates a programme, but, also whose job is to use the programme and take care of processes based on such programme. Here competence requirement is to have the required set of knowledge. According to Japanese Auto Manufacturers, "All workers are Knowledge Workers in auto processes as the operational requirements call for certain set of knowledge."

Every job calls for competence. Competence is a set of knowledge + skill. During the days of conventional technology (eg. Use of grinding machine, milling machine, boring machine, lathe, welding machine for the required operations), skill was

preferred eg. Welding, grinding, cutting, molding, shearing, machining etc. However, after introduction of Computer Driven Manufacturing Technology Processes, CNC operations call for knowledge only. Knowledge has replaced the conventional skills. Hence, in the research the **Knowledge Workers are those who are engaged in Computer Driven Manufacturing Technology processes.**

In Auto engineering industries in Chakan, after economic reforms the industries preferred to go for automation and **Computer Driven Manufacturing Technology Processes.** Hence, there has been trend to engage Diploma / Degree Engineers or Science Graduates in such Computer Driven Manufacturing Technology Processes. The reason being they are in a position to quickly learn, understand the requirements of input – process – output, SOPs, Flow Chart, parameter and programme setting and operate the CNC processes by applying knowledge required for the same. This knowledge is also changing as the technology changes, and, these knowledge workers are interested in learning and applying new techniques and technology. Here they use knowledge rather than skills. Heads than the Hands. Hence, the researcher here terms these Diploma / Degree Engineers / Science Graduates in such Computer Driven Technology Processes as the **Knowledge Workers.** **This research is pertaining to these Knowledge Workers** in Auto Industry in Chakan.

#### **1.1.2) Traditional Workers :**

ITI or equivalent who have less educated / not educated and engaged, at operative level, in rough and tough process which call for conventional skills and manual labor.

### **1.2) The nature of economic reforms in India**

The nature of economic reforms in India is such that it includes in its fold the factors associated with human resources. Thus, it becomes appropriate to consider all the aspects associated with human resources. Knowledge worker and their assessment is a relatively new concept to the field of human resource management. Knowledge management literature typically starts out with various associated with Knowledge worker and their assessment. Knowledge worker and their assessment is about creating a culture that encourages the knowledge workers to be satisfied about various issues related with Knowledge worker and their assessment for continuous improvement of

business processes and thus hindering the individuals' skills, behavior and contributions.

The chapter is also about managing, measuring and monitoring acquiring of various performance indicators, performance improvement, performance reviews of knowledge worker and its assessment. It also consists of the issues of traditional employees which in thesis are termed as traditional workers. The researcher has made an attempt to compare various issues associated with traditional workers and knowledge workers so as to highlight on different issues related with productivity in relation to certain pre-established criteria and organizational objectives. The study further covers the problems associated with knowledge workers. The present study covers the aspects of development of knowledge workers and various systems used "to manage and align" all of an organization's resources in order to achieve highest possible performance. Therefore, knowledge worker and their assessment is the highest priorities of contemporary" organizations. As training, strong commitment and lots of hard works alone are not results. The major contribution of performance management is its focus on achieving results - useful for employees who are in many cases customers inside and outside the organization .Companies have understood that for The earlier economic model dominated by the concept of mass production has been replaced by the" new economy" of the post-industrial era. Parallel to this transformation process, the social characteristics of the developed economies have been subject to change and new dimensions of social analysis have emerged. The nature of the new formations brought about by post-industrial development is indicated by the terminology used in attempt to describe any associated phenomena: information economy/society, network economy/society, knowledge economy/society, learning economy/society. The change that has taken place has triggered some radical repercussions in various domains, such as the world of work, organizations as such the content of work activities, the nature of human resources as well as requirements with regards employees and managers. One of the domineering consequences of change has been an expansion of the sphere of intellectual activities at work with particular regards to the role of knowledge workers. From a macro point of view, knowledge workers represent the new social type of labor. They form a segment of the labour market that is undergoing constant growth both in terms of headcount and importance. At the same time, from a managerial point of view, knowledge workers are increasingly considered members of the organization the work

and intellectual capacity of who is to be effectively leveraged and mental potential thoroughly capitalized upon. Performance and retention in this field is becoming a critical success or failure factor as far as overall achievements are concerned. The specific features of knowledge work and knowledge workers can be approached from a variety of different angles. In the following researcher has made an attempt to discuss the definition and characteristics of knowledge workers from the point of view of work related competencies. It is beyond the scope of this paper to explore such important issues as knowledge and mental capital or the subject of knowledge management despite its manifold implications for both practical and theoretical thought. On the other hand, questions related to these issues are discussed in numerous publications, like the Chęstochowa University of Technology. are changing the nature of the work force. Blue-collar workers are being replaced by information specialists called “knowledge workers” workers who are “equipped to maintain and expand our technological leadership role in the next century.”

### **1.3) The research purpose:**

- a) To study issues and problems of knowledge workers engaged in Computer Driven Manufacturing Technology Processes, in the Auto engineering industries in Chakan Industrial Area, Pune.
- b) To identify HR strategies to deal effectively with these issues of knowledge workers engaged in Computer Driven Manufacturing Technology Processes in Auto Engineering Industries, in Chakan Industrial Area, Pune.
- c) To suggest ways and methods to implement the strategies for effective Human Resource Management practices for the knowledge workers engaged Computer Driven Manufacturing Technology Processes in Auto Engineering Industries, in Chakan Industrial Area, Pune.

### **1.4) Impact of LPG:**

Liberalization, Privatization and Globalization has changed in the scenario of Industrialization in India, 1991 onwards. It attracted the Foreign Investors and the Foreign Investors have come forward either with the joint ventures with the Indian Companies, or at their own established the business. With this business opportunities and consequently, employment opportunities are considerably increased.

As a result of liberalization of industrial economic policy, in the year 1991, in India, there has been phenomenon growth of industries and commerce as :

1. There has been expansion of capacities of the industries.
2. The industries aggressively diversified their business and tried to capture the products, projects, services, for which there was and is a market potential in domestic as well as global market.
3. Tie-ups with the foreign partners for both – technical as well as techno commercial objectives.
4. Investments of foreign Companies and establishment of Multi National Companies in India.
5. Emerging of new sectors and avenues IT, BPO, Service, Telecom, Pharma, Aviation etc.
6. Expansion of Auto Sector to take care of increasing demands of the Domestic as well as Global Market.
7. Process of privatization of education geared up.

#### **Impact of LPG on Engineering Sector:**

To withstand with the competition in the domestic and global market the Auto Engineering Sector has been undergoing a paradigm shift from the traditional, conventional to the modern industrial environment and practices. There is a reengineering in terms of technology, resources, processes, work environment, production techniques, lay outs, competence requirements, skill and knowledge requirements. **Chakan Industrial Area is an Auto Hub. It is discussed more in detail in the Scope : point No. 1.1.8. There is a similar of impact of LPG as discussed herein.**

## **Changing Needs and Environment of the Engineering (Auto) industries in the Chakan Industrial Area.**

Due to global competition, “CQD”, Cost, Quality and Delivery became important for the business process. “Customer Satisfaction” becomes a focus point. To meet these requirements of Domestic and Inter National customers the industries have undergone the following changes :

- a) Changes in Technologies:** Manufacturing facilities have undergone advanced changes. Conventional Machines have been replaced by the CNCs. Computerization, Modernization, automation, Special Purpose Machines have been given importance to have the maximum productivity with high precision quality. Computer Driven Manufacturing Technology Processes preferred for competitive cost, quality and delivery – for precision and speed at competitive cost.
- b) Changes in Management Attitude:** Management looks forward to have standardization, systems, Quality Management Systems, Tools which are world wide accepted are introduced. E.g. TS, TPM, TPS, ISO, Kaizen, 5 S which lead to overall organizational improvisation.
- c) Learning Organization ;** Learning process takes place at all levels of the Organization to understand changes in the market and keep the organization updated in respect of all technical and business process to stand in the competition.
- d) Change in skill requirements:** To adopt changes, the management has realized that the traditional type of man power will not be suitable for their business processes. Preference is being given to the Knowledge Workers as the “knowledge” has become essential than the conventional “Skills”.

## **Preference for Engagement of Knowledge Workers in Computer Driven Manufacturing Technology Processes in Auto Engineering Industries, Chakan.**

Emergence of engagement of Knowledge Workers at Operative Level in by the Engineering (Auto) Industries, in the Chakan Industrial Area : Preference to the Knowledge Workers at Operative Level :

**Reasons :** a) Productivity

b) Competence

### c) Availability

**Knowledge Worker** here **means** who are required to knowledge, on the basis of their grasping due to educational investments (Diploma / Degree Engineers / Science Graduates) and apply the same to take care of operations of the advanced machineries like CNCs, automated lines and technology, involved in Computer Driven Manufacturing Technology Processes. In this type of knowledge workers, element of “knowledge” is more than the element of “labour” and their work is “knowledge based”.

**Knowledge** includes knowledge of the Process, Parameters : Input – Process – Output, Programming, Logic Controls, Process Controls, Tooling : set up, change etc. Knowledge to operate, inspect, correct and referring the machine manuals, drawings, ON Line – OFF Line maintenance, documentation, preparation for audits etc.

#### a) Productivity of Knowledge Worker:

It has been observed that, in the advanced technology, knowledge has been playing a very vital role. Conventional skills like grinding, turning, fitting, assembly, winding, cutting, welding are getting replaced as these jobs are taken away by CNCs, Computer Driven Manufacturing Technology Processes. In the era of automation, semi and low automation, push button industries, the process driven industries, knowledge of setting, correcting, the parameters – of input, process, output are adequate. Therefore, preference being given to the educated workforce that too in engineering and science field who can take care of the jobs by applying basic knowledge which can be acquired by them. The Productivity, Quality, Skill, Flexibility of learning new techniques are the advantages of the Knowledge Workers. Their competence to withstand in the global standards and techniques is certainly on higher side, hence, being preferred as they can take care of challenges of the modern production requirements.

#### b) Engagement of Traditional / Conventional Workers:

However, there are certain processes, jobs where the Traditional Workers are required to be engaged e.g. painting, powder coating, packing, varnishing etc. where labor ended work exists. They have certain merits and demerits which are elaborated more in “Statement of Problem”.

### **c) Availability of Knowledge Workers:**

Due to privatization of Education, in the year 1987 the percentage of Colleges in the field of Science (B.Sc.) and Technical Education (Diploma, Degree) has gone up. As per the AICTE Approval Process Hand Book (2013 – 14) Number of Diploma and Post Diploma Institutes have gone up to 630 Nos. in Maharashtra. This has resulted in to out flow of Technical Background candidates which can be a source to the industries.

Hence, the engagement of educated, adaptable man power is given preference, in the Computer Driven Manufacturing Technology Processes. The reasons are they are learners, like to grasp new techniques, quicker in grasping and delivering as per the new techniques and tools as they have capacity, desire to learn and follow system driven approach. E.g. SOPs, Flow Chart, Work Instructions, Process Parameters. Similarly, less supervision is required. Can go in detail and technical things e.g. programming.

Issues of Hiring Knowledge Workers, at operative level by the Engineering (Auto) Sector, in the Chakan Industrial Area :

Though, for the above advantageous, at operative level such work force is being preferred, there are sensitive issues and problems attached to it which are more particularly elaborated in “Statement of Problem”. These problems and issues have serious effects on production planning, targeted deliveries, man power and machine planning, discipline. Human Resource is a dynamic concept depending upon its wants, expectations, satisfaction level, perceptions. This work force is educated and it does have its own identity, self respect. Hence, Human Resource Management in respect of this particular segment calls for strategic, planned, thoughtful, analytical ways and practices which will maintain balance of convenience.

Management of Knowledge Workers are operative level in the engineering (auto) industries, in the Chakan Industrial Area.

Knowledge Workers have their merits and demerits. Therefore, hiring the knowledge workers at operative level needs a special attention with respect to the management of

them. Most of the industries have yet to realize the same and have been adopting the same old style of managing the same in a traditional manner. To utilize them in a optimum manner, innovative HR approach, style, practices, processes are required. Similarly, need to train the middle management is also felt.

### **1.5) Features of Auto Sector: Changing Trends:**

**Changing Demands of the Market :** In the recent context, the auto sector has become a sensitive sector as a demand of the vehicles has gone up. To meet the demands of the market, the technology, the capacity, the price, the fuel economy, the aesthetics, the comfort requirements different models with variety of features are coming up quickly.

**Competitive CQD:** The Cost, the Quality, the Delivery, the Price needs to be maintained competitive as there is a tough competition in the domestic and global market due to competent market players and choosy buyers.

**Targets:** Due to competition targets in auto sector are quite stiff. Business Plan depends upon the socio economic conditions like cost of fuel, problem of rising prices of essential commodities. Business gets directly affected and situations like boom and depression due to purchasing capacity, attitude, and atmosphere of the buyers need to be taken in to account. Hence, the targets in auto sector are competitive and dynamic. Planning, Monitoring are very much essential in all the areas of business operations

**Work Culture:** “Cycle Time” is the basis of work culture. Zero Inventory, Just in Time, CANBAN, SAP, KAIZENS, TS, TPM are the exercises to avoid rework, over heads to maintain competitive business environment.

**Life Cycle of a product :** Life cycle of a particular is short as the preference of the buyer to go for additional feature, hence, to align performance of the entire Organization need to be aligned with the changing requirements, hence, the adaptability plays a vital role.

To take care of the above factors, the Engineering (Auto) Industries, in the Chakan Industrial Area have tried to undergo the measures like Business Process Reengineering, Innovative - Manufacturing Processes, Production Techniques and lay outs, modernization, automation within their affordable financial limits.

It has resulted in to Change in Management Approach, Style, Trends, Structure, and Strategies. It has impact on Human Resource Planning and Development to take care of the environment and challenges due to stiff competition. Concept of hiring knowledge workers (Diploma / Degree/ Science Graduates) at operative level for the reasons

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## Chapter 2 : Historical Background

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In this topic, the researcher has discussed impact of economic reforms and Liberalization, Privatization and Globalization, on business environment, in India, with special reference to Chakan Industrial Area, Pune. Auto engineering industries, to compete with the global market aligned their business processes, manufacturing processes, competence requirements with the global business objectives.

## **2.1) Impact Of Economic Reforms**

To boost the National Economy, Govt of India, in the year 1991 – 1992 had started forming industry friendly policies and had developed in the succeeding year many encouraging economic reforms for the industries. This meritorious phase of economic reforms led to flurry of activities in the industrial sector in the entire Country, and Pune being known as a industrial place. Tremendous growth of industries – flourished, expanded. Domestic Market – expanded as the opportunity of export increased.

### **2.1.1) Liberalization, Privatization, Globalization : Impact of LPG :**

This new model of economic reforms is commonly known as LPG Model (Liberalization, Privatization and Globalization. Primary objective of this model was to make the fastest developing economy in the globe with capabilities that help it to match with the biggest economies of the world. In view of the same, the chain of reforms took place with regards to business, manufacturing and financial industries target at lifting the economy of the Country to a more proficient level. These economic reforms had influenced the overall economic growth of the Country in a significant manner.

**Liberalization :** Liberalization refers to the slackening of Government Regulations. The economic liberalization in India denotes the continuing financial reforms which began since July, 24<sup>th</sup> , 1991.

**Privatization :** Privatization refers to the participation of Private entities and entries in the business and services, and, transfer of ownership from the Public (Government) Sector to the Private Sector, as well.

**Globalization :** Globalization stands for consolidation of various economics of the World.

### 2.1.2) Salient Economic Reforms :

The following Statement of important Economic Reforms – initiatives taken by the Government of India since 1991 :

| Sr. No. | Year | Salient Features of Economic Reforms                                                                                                                                                       |
|---------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | 1991 | Liberalized – Industrial Licensing Policy. Allowed foreign investments up to 51% in high priority industries and reduced number of sectors reserved for the public sector (Privatization). |
| 2.      | 1991 | Encouragement for Export by allowing tradable import benefits against imports.                                                                                                             |
| 3.      | 1991 | Amendment of MRTP resulted into diversification, expansion.                                                                                                                                |
| 4.      | 1991 | The Auto Mobile policy opened up – auto sector to the foreign manufacturers.                                                                                                               |
| 5.      | 1991 | New Power Policy 1991 allowed private participation in power generation.                                                                                                                   |
| 6.      | 1992 | Kicked off the process of sale of IPCL shares.                                                                                                                                             |
| 7.      | 1992 | Amendment of SEBI Act – maintaining SEBI as a Statutory Body and new issue pricing was made market driven.                                                                                 |
| 8.      | 1992 | Cellular services were opened to private players.                                                                                                                                          |
| 9.      | 1994 | The National Highway Authority Act was amended. Private sector participation in road sector with toll collection (BOO and BOOT principles).                                                |
| 10.     | 2000 | The Insurance Regulations And Development Act was passed – privatization of Insurance Sector.                                                                                              |
| 11.     | 2001 | A year of mixed sentiments of economic reforms.                                                                                                                                            |
| 12.     | 2002 | Industry friendly labor law reforms proposed by the Govt. Trade Unions protested the same.                                                                                                 |

### 2.1.3) Impact of Economic Reforms on Business Environment :

Liberalization, Privatization and Globalization has changed in the scenario of Industrialization in India, 1991 onwards. It attracted the Foreign Investors and the Foreign Investors have come forward either with the joint ventures with the Indian Companies, or at their own established the business. With this business opportunities and consequently, employment opportunities are considerably increased.

As a result of industry friendly economic reforms of industrial economic policy, in the year 1991, in India, the process of LPG (Liberalization, Privatization and Globalization) geared up. It led to phenomenon growth of industries and commerce as :

1. There has been expansion of capacities of the industries.
2. The industries aggressively diversified their business and tried to capture the products, projects, services, for which there was and is a market potential in domestic as well as global market.
3. Tie-ups with the foreign partners for both – technical as well as techno commercial objectives.
4. Investments of foreign Companies and establishment of Multi National Companies in India.
5. Emerging of new sectors and avenues IT, BPO, Service, Telecom, Pharmaceutical, Aviation etc.
6. Privatization of public sector : power, public transport, insurance, banking.
7. Development of infra structure industry : road, bridges, dams, turnkey projects on Built Own Operate (BOO) and Build Own Operate and Transfer (BOOT) principles.
8. Rapid and massive industrial growth – in all the areas due to LPG.
9. Number of players for the same product due to amendment in MRTP Act : increase in competition.
10. Expansion of Auto Sector to take care of increasing demands of the Domestic as well as Global Market.
11. Process of privatization of education geared up.

#### **2.1.4) Changing Needs of Business Environment of the Engineering (Auto) industries :**

Due to global competition, “CQD”, Cost, Quality and Delivery became important for the business process. “Customer Satisfaction” becomes a focus point. To meet these requirements of Domestic and Inter National customers the industries have undergone the following changes :

- a) Changes in Technologies: Manufacturing facilities have undergone advanced changes. Conventional Machines have been replaced by the CNCs. Computerization, Modernization, automation, Special Purpose Machines have been given importance to have the maximum productivity with high precision quality. Introduction of Computer Driven Manufacturing Technology Processes.

- b) Changes in Management Attitude: Management looks forward to have standardization, systems, Quality Management Systems, Tools which are worldwide accepted are introduced. E.g. TS, TPM, TPS, ISO, Kaizen, 5 S which lead to over all organizational improvisation.
- c) Learning Organization ; Learning process takes place at all levels of the Organization to understand changes in the market and keep the organization updates in respect of all technical and business process to stand in the competition.
- d) Change in skill requirements : To adopt changes, the management has realized that the traditional type of man power will not be suitable for their business processes. Preference is being given to the Knowledge Workers as the “knowledge” has become essential than the conventional “Skills”.

#### **2.1.5) Impact of LPG on Engineering (Auto) Sector :**

To withstand with the competition in the domestic and global market the Auto Engineering Sector has been undergoing a paradigm shift from the traditional, conventional to the modern industrial environment and practices. There is a reengineering in terms of technology, resources, processes, work environment, production techniques, lay outs, competence requirements, skill and knowledge requirements.

#### **2.1.6) Development of Chakan Industrial Area :**

Pune has been known as an industrial place since 1946 when Kirloskars have established their first unit Kirloskar Oil Engines Ltd, at Kirkee. However, major industrialization in Pune took place 1960 -1965, onwards, in Pimpri, Chinchwad, Akurdi, Bhosari, Dapodi, Kasarwadi, Mundhwa, Hadapsar area. TELCO, Bajaj Auto, Bajaj Tempo, Bharat Forge, THERMAX, BUCKAU WOLF , Advani – Oerlikon , Garware Group, Finolex Group, Padmaji Paper Mills, Century Enka, SKF, KSB, Ruston, Alfa Laval, Atlas Copco, Kirloskar Cummins, Kirloskar Pneumatic, Kalyani Group, Indian Card Clothing, Philips, Elpro, HAL were some of the major industries. Most of these industries are engineering industries. Since they were old timers, they have in their set up, old layouts, techniques, conventional machines and skills.

### 2.6.1.1) Chakan Industrial Area : Impact of LPG :

Chakan is Pune District, at a distance of 40 Km. from Pune City. Geographically convenient for the business purpose as closer to Mumbai for logistic point of view. The Chakan Industrial area is rapidly growing area in the vicinity of Mahalunge, Nighoje, KharabWadi, NanhekarWadi, Ambethan, Talegaon Road, Nasik Road, Shikrapur Road. Major OEMs and ancillaries – auto engineering companies have been establishing since 2001 onwards. The statement below indicates the details.

Chakan Industrial Area is newly developed area. Development of Chakan took place 2001 onwards, when Bajaj Auto and Kalyani Wheels entered in this area. However, this area has been developed in an aggressive way as the giant auto engineering Companies like Bajaj Auto, Mahindra, General Motors, VolKsWagan, Mercedes Benz etc. started their manufacturing activity. The following OEMs in auto engineering sector, in Maharashtra are the main reasons for the development of Chakan Industrial Area as an Auto Cluster.

| <b>Sr. No.</b> | <b>Auto Mobile Company</b> | <b>Location</b>  | <b>Products</b>                                           |
|----------------|----------------------------|------------------|-----------------------------------------------------------|
| 1.             | Tata Motors                | Pune             | Cars, Light and Heavy Commercial Vehicles.                |
| 2.             | TACO                       | Pune             | Auto Ancillaries                                          |
| 3.             | Bajaj Auto Ltd             | Pune, Aurangabad | 2 Wheeler, 3 Wheeler vehicles                             |
| 4.             | Mahindra & Mahindra        | Pune, Nasik      | Cars, Light and Heavy Commercial Vehicles, 2 Wheeler.     |
| 5.             | General Motors             | Pune             | Cars                                                      |
| 6.             | Volks Wagon                | Pune             | Cars                                                      |
| 7.             | Mercedes Benz              | Pune             | Cars                                                      |
| 8.             | Piaggio                    | Baramati         | 2 Wheeler, 3 Wheeler, 4 Wheeler                           |
| 9              | FIAT                       | Ranjangaon, Pune | Cars.                                                     |
| 10.            | Premier Automobile Ltd     | Pune, Mumbai     | 3 Wheeler, 4 Wheeler, Light and Heavy Commercial Vehicles |
| 11.            | SKODA                      | Aurangabad       | Cars.                                                     |

Due to these OEMs (Original Equipment Manufacturers), Chakan industrial sector is dominated by their vendors, suppliers, sub contractors which are in the business of manufacturing and supplying all the types of auto parts and components – mechanical, electrical, electronic, molding, plastic, leather, powder coating, steel, fabrication, casting, packing, glass, hydraulic, pneumatic etc. components.

There are 326 engineering industries in Chakan Industrial Area. However, out of them 91% are in the business of manufacturing auto components. Therefore, Chakan Industrial Area is known as Auto Hub.

#### **2.1.7) Advantage to the Engineering Companies in Chakan Industrial Area :**

Comparatively, in Bhosari, Pimpri, Chinchwad industrial areas majority of the industries established before 1990 (between 1965 – 80). Hence, limitations for adopting new lay outs, technologies, techniques, skills. Engagement of the people at operative level is dominated by the old, conventional, traditional skills.

Whereas in **Chakan Industrial Area**, it was and is possible for the industries for establishing their manufacturing facilities as per the sequential lay outs, new and advanced technologies, techniques, CNC and automated Plant and Machinery, Processes, SPMs, for qualitative and quantitative production. Chakan Industrial Area is known as “Auto Hub” as majority of the industries, auto engineering industries. Similarly, these industries have scope and strategy to hire human resource as per the changing needs of the global competitive requirements.

### **2.2) Impact on competencies due to changing needs of business environment : trend to engage knowledge workers at operative level :**

#### **2.2.1) Changing Needs and Environment of the Engineering (Auto) industries in the Chakan Industrial Area.**

Due to global competition, “CQD”, Cost, Quality and Delivery became important for the business process. “Customer Satisfaction” becomes a focus point. To meet these requirements of Domestic and Inter National customers the industries have undergone the following changes :

- a) **Changes in Technologies:** Manufacturing facilities have undergone advanced changes. Conventional Machines have been replaced by the CNCs. Computerization, Modernization, automation, Special Purpose Machines have been given importance to have the maximum productivity with high precision quality. Preference to establish Computer Driven Manufacturing Technology Processes.
- b) **Changes in Management Attitude:** Management looks forward to have standardization, systems, Quality Management Systems, Tools which are worldwide accepted are introduced. E.g. TS, TPM, TPS, ISO, Kaizen, 5 S which lead to overall organizational improvisation.
- c) **Learning Organization ;** Learning process takes place at all levels of the Organization to understand changes in the market and keep the organization updated in respect of all technical and business process to stand in the competition.
- d) **Change in skill requirements :** To adopt changes, the management has realized that the traditional type of man power will not be suitable for their business processes. Preference is being given to the Knowledge Workers as the “knowledge” has become essential than the conventional “Skills”.

#### **2.2.2) Emergence of engagement of Knowledge Workers at Operative Level in by the Engineering(Auto) Industries, in the Chakan Industrial Area : Preference to the Knowledge Workers at Operative Level :**

- Reasons :**
- a) Productivity
  - b) Competence
  - c) Availability

**Knowledge Worker** here means who can acquire the required knowledge, on the basis of their grasping due to educational investments and apply the same to take care of operations of the advanced machineries like CNCs, automated lines and Computer Driven Manufacturing Technology processes. Preference is, therefore, given to Diploma Engineers, Degree Engineers, Science Graduates for the reasons discussed herein in this research by the researcher.

**Knowledge** includes knowledge of the Process, Parameters : Input – Process – Output, Programming, Logic Controls, Process Controls, Tooling : set up, change etc. Knowledge to operate, inspect, correct and referring the machine manuals, drawings, ON Line – OFF Line maintenance, documentation, preparation for audits etc.

**Productivity of Knowledge Worker :**

It has been observed that, in the advanced technology, knowledge has been playing a very vital role. Conventional skills like grinding, turning, fitting, assembly, winding, cutting, welding are getting replaced as these jobs are taken away by CNCs. In the era of automation, semi and low automation, push button industries, the process driven industries, knowledge of setting, correcting, the parameters – of input, process, output are adequate. Therefore, preference being given to the educated workforce that too in engineering and science field who can take care of the jobs by applying basic knowledge which can be acquired by them. The Productivity, Quality, Skill, Flexibility of learning new techniques are the advantages of the Knowledge Workers. Their competence to withstand in the global standards and techniques is certainly on higher side, hence, being preferred as they can take care of challenges of the modern production requirements.

**2.2.3) Engagement of Traditional / Conventional Workers :**

However, there are certain processes, jobs where the Traditional Workers are required to be engaged eg, painting, powder coating, packing, varnishing etc. where labour oriented work exists. They have certain merits and demerits which are elaborated more in “Statement of Problem”, covered in the Research Methodology topic.

**2.3) Impact Of Privatization Of Higher Education :**

It has been endeavor of the Govt of India to promote measures for extending higher education to the weaker section of the society.

In Maharashtra, in the year 1987, then Chief Minister Late Shri Vasantrao Dada Patil, permitted for privatization of Engineering Colleges with a purpose to make higher education accessible and affordable to the economically weaker section which will create employability.

11<sup>th</sup> Five Year Plan, in the era of Prime Minister, Man Mohan Singh, is popularly known as “Education Plan” which is described as a sound wave in the approach and strategies of the development of higher education”

Impact of “privatization of higher education: has been more particularly in Maharashtra resulting into tremendous increase in number of colleges, institutes in all the technical education, Diploma Engineering, Degree Engineering, Science, Commerce, Arts, Pharmaceutical, Medicine, Management Branches of education.

### **2.3.1) Availability of Knowledge Workers :**

Due to privatization of Education, in the year 1987 the percentage of Colleges in the field of Science (B.Sc.) and Technical Education (Diploma, Degree) has gone up. As per the AICTE Approval Process Hand Book (2013 – 14) Number of Diploma and Post Diploma Institutes have gone up to 630 Nos. in Maharashtra. This has resulted in to out flow of Technical Background candidates which can be a source to the industries.

Hence, the engagement of educated, adaptable man power is given preference, basically at the operative level. The reasons are they are learners, like to grasp new techniques, quicker in grasping and delivering as per the new techniques and tools as they have capacity, desire to learn and follow system driven approach. E.g. SOPs, Flow Chart, Work Instructions, Process Parameters. Similarly, less supervision is required. Can go in detail and technical things e.g. programming.

### **2.4) issues of knowledge workers :**

Though KWs are always preferable, there are certain issues in case of their engagement and management :

- a) Attrition : High attrition as ready to switch over to any opportunity..
- b) Demanding as regards the payment and facilities are concerned.
- c) Demanding as regards “growth” is concerned. Always want to be on the fast track.
- d) Integrity towards the organization is doubtful.

- e) Inconsistent.
- f) Difficult to retain.
- g) Not interested in monotonous jobs.
- h) Not interested in rough-and-tough jobs.

## **2.5) Issues of traditional workers :**

- a) Prefers Security.
- b) Prefers “defined and monotonous jobs”.
- c) Resistance to learn, adopt new things, skills.
- d) Tend to form Union.
- e) Always try to take shelter of law and Union.
- f) IR issues are more.
- g) Reluctant to grasp new concepts, techniques.

## **2.6) Management of knowledge workers :**

It is observed that the policies, style of handling the people in many organizations is based on traditional approach and within the legal frame work. These may be suitable for the Traditional Workers, however, seem to be inadequate for the knowledge workers.

Knowledge Workers have their merits and demerits. Therefore, hiring the knowledge workers at operative level needs a special attention with respect to the management of them. Most of the industries have yet to realize the same and have been adopting the same old style of managing the same in a traditional manner. To utilize them in a optimum manner, innovative HR approach, style, practices, processes are required. Similarly, need to train the middle management is also felt.

## **2.7) Impact on HR competencies and strategies :**

**2.7.1)** In view of the requirements of globalization to align with the changes in products, processes, competence HR Professional also needs a change in his / her focus illustrated as under :

#### Traditional vs career development focus

| HR Activity               | Traditional Focus                                                                          | Career Development Focus                                                                           |
|---------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Human Resource Planning   | Analyze jobs, skills, tasks-present and future. Projects needs. Uses statistical data.     | Adds information about individual interests, preferences and the like to data.                     |
| Training & Development    | Provides opportunities for the learning skills, information and attitudes related to jobs. | Provides career path, information, adds individual growth orientation.                             |
| Performance Appraisal     | Rating and / or reward.                                                                    | Add development plans and individual goal strategies.                                              |
| Recruitment and Placement | Matching organization's needs with qualified individuals.                                  | Matches individuals and jobs – based on number of variables including employee's career interests. |
| Compensation and Benefits | Rewards for time, productivity, talent and so on.                                          | Adds non-job related activities to be rewarded such as “Leadership” qualities.                     |

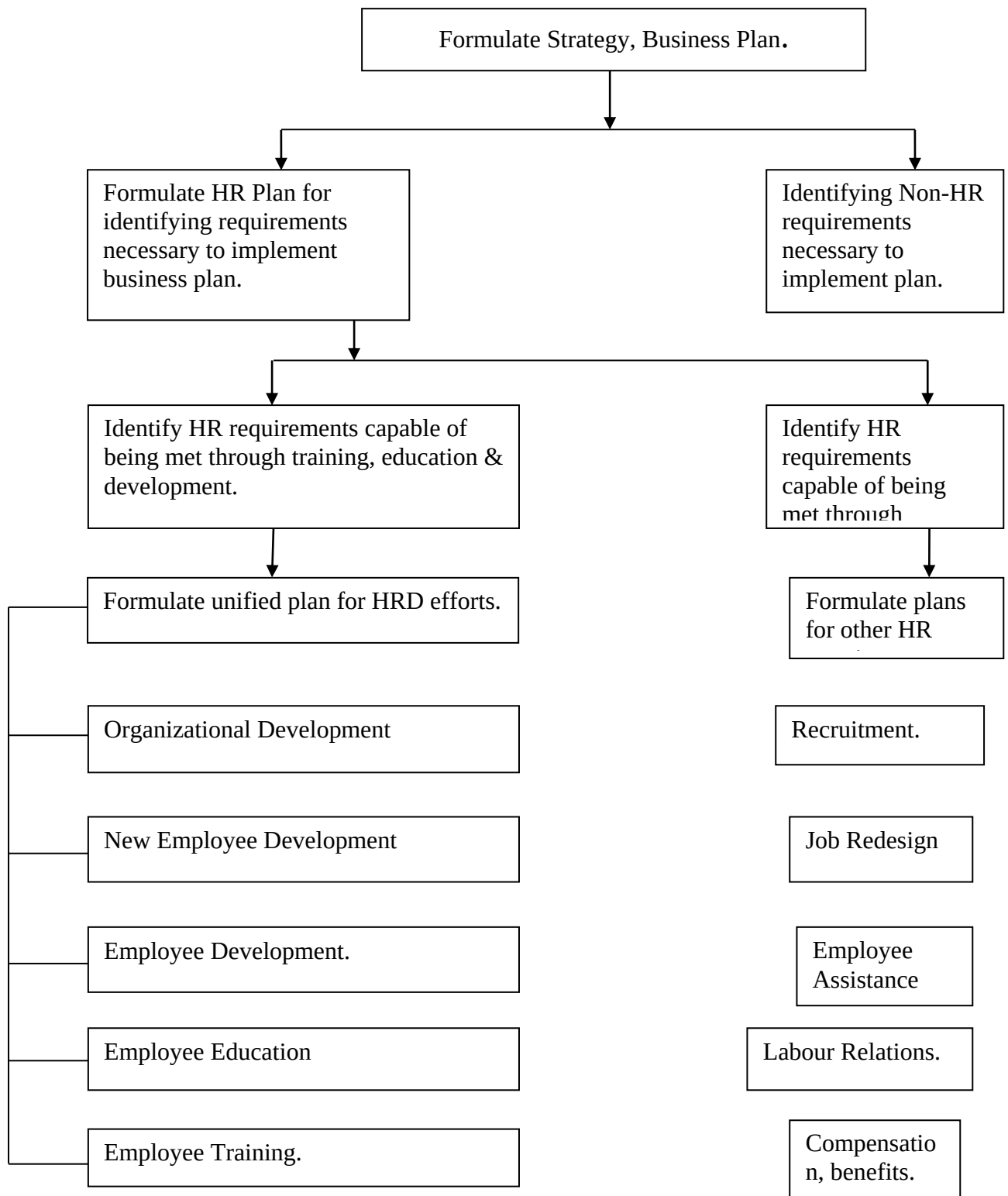
Source : adopted from Fred.l.otte and peggy.ghutchesan, “Helping Employees manage Careers (Upper Saddle River, NJ : Prentice Hall, 1992), p.10.  
Human Resource Management – by Gary Dessler, 2005.

#### 2.7.2) Key Challenges for HR Professionals :

1. Knowledge and information are the key sources of economy.
2. Workforce: Multi cultural, knowledgeable.
3. Mobility in career planning opportunities.
4. Recruitment Policy : full focus on various ways : contacts, trainers, earn and learn, apprentices, vocational schemes, tie-ups with the Institutes, Colleges, Polytechnic Colleges, No regional limits.
5. Global market: highly competitive, Customers: Assertive on demands.

#### 2.7.3) Strategic Plan:

HR Professional is required to work out his plan in a systematic and strategic way as under to take care of the above challenges:



SHRD Model : Simplified HRD Model.

Source : Human Resource Development : A Strategic Approach.

Copy Right : by Rothwell&Kazans, 1994, Amherst, MA : HRD Press. (P.51).

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## Chapter 3 : Review of Literature

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## Introduction :

In today's Computer Driven Manufacturing Technology Processes, conventional skills, individual skills are replaced by set of knowledge : to operate, set, correct parameters of the processes.

Programmer or Designer creates a programme, but, one who works on that to take care of operations of CNC, needs to have a set of knowledge of application of the programme. Hence, in the today's era of Computer Driven Manufacturing Technology Processes, CNC, automation this definition of knowledge workers include the worker not only who creates a programme, but, also whose job is to use the programme and take care of processes based on such programme. Here competence requirement is to have the required set of knowledge.

According to Japanese Auto Manufacturers, "All workers are Knowledge Workers in auto processes as the operational requirements call for certain set of knowledge." This view is discussed more in detail here under.

Every job calls for competence. Competence is a set of knowledge + skill. During the days of conventional technology (eg. Use of grinding machine, milling machine, boring machine, lathe, welding machine for the required operations), skill was preferred eg. Welding, grinding, cutting, molding, shearing, machining etc. However, after introduction of Computer Driven Manufacturing Technology Processes, CNC operations call for knowledge only. Knowledge has replaced the conventional skills. Hence, in the research the **Knowledge Workers are those who are engaged in Computer Driven Manufacturing Technology processes.**

In Auto engineering industries in Chakan, after economic reforms the industries preferred to go for automation and Computer Driven Manufacturing Technology Processes. Hence, there has been trend to engage Diploma / Degree Engineers or Science Graduates in such Computer Driven Manufacturing Technology Processes. The reason being they are in a position to quickly learn, understand the requirements of input – process – output, SOPs, Flow Chart, parameter and programme setting and

operate the CNC processes by applying knowledge required for the same. This knowledge is also changing as the technology changes, and, these knowledge workers are interested in learning and applying new techniques and technology. Here they use knowledge rather than skills. Heads than the Hands. Hence, the researcher here terms these Diploma / Degree Engineers / Science Graduates in such Computer Driven Technology Processes as the **Knowledge Workers**. **This research is pertaining to these Knowledge Workers** in Auto Industry in Chakan.

### **3) Literature Review :**

In the light of present study, the researcher has referred various journals, books, periodicals, web sites to collect the literature regarding knowledge workers, their characteristics, issues, strategies for their engagement and management.

This word was coined by Prof. Peter Drucker. According to him knowledge worker deals with the intellectuals, involved in creation of knowledge which predominantly includes the employees involved in IT programming, Design, Research & Development, Knowledge Processing Operations, and, generally dealing with the knowledge. However, this definition of knowledge worker gets extended as there has been sea change in technology, products, processes where not only creation of knowledge but also its application becomes important.

According to, Peter Drucker “the most important contribution of management was to increase the productivity of laborers by fifty times. In the 21st century, however, the most important assets of generations are knowledge workers, and their productivity. The most important thing management needs to do, therefore, is to improve the productivity of knowledge workers”. On entering the second decade of the 21<sup>st</sup> century, the roles of knowledge workers are increasingly important.

The current study covers :

- Definition and concept of Knowledge Workers.
- Competencies of Knowledge Workers.
- Characteristics of Knowledge Workers.
- HRM practices in light of Knowledge Workers.

### 3.1) Definition and The concept of the “knowledge worker”

The term “knowledge worker” was coined in the 1960s as post-industrial “new economy” began to replace industrial mass production. It is a conceptual reflection upon the complex and underlying developments which evolved in the most advanced economies (with particular respect to Japan and the USA).

**Peter F. Drucker** is the first whose early assertions with regards highly qualified intellectual labour have grown to meet the definition criteria that is in use today to describe knowledge workers. In his book published in 1999 [2], Drucker considered the productivity of intellectual labour as one of the key issues to be address by XXI. Century management and identified the following six points as of key importance.

1. Task-orientation: the basis for assessing performance is the task to be completed and therefore defining the task is of key importance.
2. Autonomy: labor in intellectual positions need to act autonomously, be self-led and take responsibility for the productivity of their performance.
3. Innovation: contribution to constant innovation is to be considered a task as well as responsibility of the intellectual worker; it is part of his job.
4. Learning and teaching: intellectual work requires continuous self-learning as well as an engagement to teach others and transfer knowledge.
5. Quality-orientation: assessing the productivity of intellectual labor is not or not predominantly a quantitative issue; quality here plays a decisive role.
6. Asset vs. cost: the productivity of intellectual labor requires that intellectual workers be regarded as an asset rather than a cost factor.

Drucker mentions that those who possess knowledge are to become new and unique actors of the economy: on the one hand side they become vessels of knowledge capital whereas on the other side they remain to be employees on a company’s payroll. This shift is to be viewed as a remarkable development with regards the capitalist that has predominantly been fuelled by financial capital – such a development calls for a reconsideration of the system itself. The change taking place concerning the content and meaning of the term “knowledge worker” is embedded in the process in course of which the structural features and dimensions of the post-

industrial “new economy” have emerged. These characteristics are well reflected in the terms “information intensive”, “network based”, “knowledge driven”, “learning oriented” which all imply new societal and economic qualities as well as may be applied to some new types of and phenomenon associated with organizations.

**According to Kichi Mochizuki**, a former executive of Japanese steel Company, Head of Pacific Institute, New York Research Group, (p43 “Intellectual Capital The Wealth Of Organizations” , under title “From Hands to Minds”, book published by : Doubleday, a division of Bantam Doubleday Dell Publishing Group, Inc, 1540 Broadway, New York, New York : 10036, ISBN : 0-385-48228-0, March 1997 ) :

“These days with computerized factories and digitally controlled machines, mathematics are very important for factory operations. When you talk about “skill”- the word skill is wrong. It implies manual dexterity to carve the wood or hit something with hammer. Now skill is mental rather than manual”. ...

“Automobile assembly workers who once had to heft a part and bolt it in place, now must know how to operate the robots that do the lifting. The intellectual component of their work has, by contrast, increased. They do their own trouble shooting and much more managerial work... only half as many supervisors patrol automobile assembly- plant floors, as did at the start of the 1990s. The number is expected to fall by half again before the decade ends”. ....

“Not surprisingly, manufacturers are hiring better educated workers to perform these knowledge – intensive jobs. Before 1947, Ford’s personnel department did not even bother to note how much education its employees had. Today, between a third and two fifths of carmakers’ new hires have at least some post-high school education...”

**According to Mr. M.S. Ranade** (p31, Management In Knowledge Society”, 2010, Ch. Knowledge As A Resource, Title : Redefining Human Resource, Book written by : M. S. Ranade, Published by : MIT School of Business Management, Pune : }...

“There was a time when you had to give a go and no-gauge to a Quality Inspector in the machine shop, and, he would give his verdict about acceptability of the produce.

A hammer-master was highly paid for his skills, manual strength, tenacity, tolerance to work in inclement heat etc. **This is obsolete now.**

The machines have inbuilt technology to take care of quality and robots to work in harrowing heat.

In the knowledge economy, the human resource is being redefined. There is almost no manual labor, more knowledge and some skill. But more of cognition, composure, communication skills, and, creativity are engaged.... We have come a long way....”.

Lona Davison, the former executive director of the Deloitte Center for the Edge and ex- editor – in – chief of The McKinsey Quarterly, in his article “TPower Of Pull : How Small Moves, Smartly Made, Set Big Things in Motion”, categorically mentions that : “ Perhaps the single greatest lesson from Japanese auto manufacturers is that all employees are ultimately knowledge workers and that the role of the firm is to both encourage and support problem-solving by all employees...The Companies recognized that front line assembly workers on the factory floor .. the antithesis of conventional view of “knowledge workers”, were in fact, essential to performance improvement for the broader firm. In encouraging and supporting problem-solving by these employees, the Japanese auto makers were able to give their work new meaning and unleashed much more passion on the factory floor... The lesson is clear we undermine our potential for performance improvement with labels that draw artificial boundaries through our workforce..”

“If institutions and, indeed, nations are going to mobilize their entire workforce-a desirable goal considering the increasing returns effects that characterize collaboration curves- we need to abandon this artificial distinction and look to redefine even jobs that appear highly routine to embrace and extend their creative aspects. As we begin to realize that scalable efficiency cannot see us thorough a shift to near-constant disruption, we will begin to see that performance improvement by everyone counts, not just performance improvement for “knowledge workers.” We will begin to redefine all jobs, especially those performed at the front line (or, in an image, that reveals our prevalent our management mindset, the “bottom” of the institutional pyramid), in ways that facilitate problem solving, experimentation,

tinkering. This will foster more widespread performance improvement. Everyone, even the most unskilled worker, will be viewed as a critical problem-solver and knowledge-worker contributing to performance improvement.”

### **3.2) Characteristics of post-industrial society:**

1. Productivity and growth originates from the creation of knowledge which through the processing of information has an impact on the overall economy.
2. The domineering area of economic activities shifts from the production of goods to the provision of services. (...) The more advanced the employment and production system of an economy is, the more it is focused on services.
3. The new economy establishes a preference for those professions that require advanced skills of information processing. The scope of intellectual, managerial and engineering occupations requiring college or university degrees will outgrow all other occupations and become the core of a social structure.

**3.2.1) Dimension of value creation.** This refers to the tasks to be completed within the framework of information technology processes as well as the actors performing these tasks. These actors are differentiated as below:

Top managers– strategic planning and decision making

R&D personnel– innovation and renewal of products and know-how

Engineers– adaptation, application and operationalisation of innovations

Integrators - integrating the work done by decision-makers, innovators, planners and implementers with view to the organizational resources available

Operators - execution of specific tasks with much autonomy and self-initiative.

Staff - under supervision human robots”– performing such complementary functions that are strongly pre-programmed, although not yet automated (perhaps cannot be automated).

**3.2.2) Relationship dimension.** This aspect refers to the types of needs and skills associated with establishing relationships for occupational purposes. Principally, this implies the position that one holds in a network of inter- and intra-organizational connectedness. These connections take place in real time, take the form of either personal interaction or through online channels of information communication. The types belonging to this dimension are:

Network builders– those who establish intra- or extra organizational relationships on their own initiative (they are considered an engine and source of dynamism for a network based company)

Network-linked employees– those who become (or may become) part of online networks but

Employees with no link to the network– those who perform specific well defined tasks which are communicated to them in the form of directions and instructions and without two ways interaction.

**3.2.3) Dimension of decision making.** This refers to the position that one holds in the decision making system as well as one's ability to contribute to the decisions made. The following types can be differentiated:

Decision-makers – those who practically make the decisions

Contributors – those who have a share in shaping the decisions made

Executors– those who operationalize and implement the decisions.

The model initiated by Castell lends itself for practical applications as well. It may serve as a useful frame of reference for managers to review how many different kinds of knowledge worker there are at their company or under their supervision. However, there is one aspect which seems to be missing from Castell's model as he himself is presumed to consider it a point of self-evidence: the escaping factor is “digital literacy” that is the individual's capacity to make efficient use of ICT applications in the course of his work. Once this level is known for the individual, the model becomes handy in identifying groups of knowledge workers in the organisation as well as to study the internal structure and stratification of these groups.

In previous researches researchers like F. Bylok, Castells, M.,-Goleman, D. Érzelmi, certain observations are coming out of the publications. These are high percentage of knowledge workers are happy with that rules are respected & deadlines are met in the organization. Knowledge workers said that the organization is very high on ethical standards. An organization wide Code of Conduct has been introduced in the 2000. All knowledge workers abide by the codes specified. Knowledge workers take their pledges every year and overall so compliance level in the organization has increased. Substantial number of knowledge workers in previous researches felt that that top management is always transparent about their decisions. Both managers and non-managers generate same opinion to this situation. Knowledge workers also trusted

top management decisions. A high percentage of knowledge workers are satisfied with the promotion decisions. Knowledge workers are satisfied with the manner in which their performance for the year was evaluated as detailed discussions are conducted between the employee and the supervisor at the time of performance evaluation. Few knowledge workers mentioned that performance evaluation process was very transparent and the knowledge workers were happy with the assessments performed. They also agreed that the performance evaluation systems are appropriate for the organization. Good number of knowledge workers felt that decisions regarding wages, bonuses, and other reward systems are highly appropriate. Knowledge workers have agreed that the individuals and teams were rewarded according to their performances. The knowledge workers mentioned that their rewards were directly linked to the performance that they delivered throughout the assessment cycle. They mentioned that the message from the organization was very clear that if the employee performs well, he/she gets good rewards and if he/she does not perform he/she will not be getting the rewards as compared to the rewards that will be received by the high performer. Substantial percentage of knowledge workers felt that the benefit systems are appropriate for the knowledge workers and knowledge workers make good use of benefit programs. Knowledge workers are motivated by benefits such as insurance & medic aid support. Knowledge workers felt that these benefits are highly appropriate to the demand they have taken full advantage of the same..Knowledge workers felt that that they want to work freely as they feel secure and trust is important.

### **3.3) The competencies of knowledge workers**

Competencies are such work related skills, know-how and personal characteristics which increase the probability that one can meet high expectation in a particular job in a sustainable manner. The aforementioned factor of “digital literacy” acts as a crucial competency for knowledge workers but it is not the only one that is relevant for effective and efficient performance. The basic competencies applicable to knowledge workers are in principal the same as those applying to jobs.

#### **3.3.1) Supervising the Work Processes and Measuring the Work Performance**

Knowledge workers use their brains to think and make decision. It is different to accurately judge the level of their work efforts and efficiency.. Thus, the measurement

of work result is another thorny problem. Firstly, the work product is the result of teamwork, instead of that of one individual's, so it is hard to measure individual contribution. Secondly, unlike in the case of laborers, quantified Process of work performance is difficult .

### **3.3.2) Self-actualization and Knowledge Workers**

Knowledge workers have a strong will to realize their own goals; they strive for being recognized by professional peers through their own efforts . From the analysis of costs and benefits, knowledge workers should pay cost of education and training during the process of acquiring knowledge and skills, and also opportunity cost of no income as well as costs of psychological struggles. Consequently they have expectations to achieve high earnings. This earning not only means wealth and social position, but also the compensation covering psycho- logical costs Therefore, they prefer well-paid work with challenges.

### **3.3.3) Knowledge Workers Possess Knowledge Capital**

The greatest wealth of knowledge workers is the knowledge which they own. There are two aspects mainly to be shown as follows: First, knowledge workers who are usually well educated , master certain professional knowledge and skills; and most of them have quite good personal qualities, such as the broad vision, strong thirst of knowledge and learning ability, broad knowledge level, etc. Organizations promote knowledge workers to turn their ideas, creativity, knowledge and experience into the source and motivation of the organizational development through the provision of resources and platform. Second, the knowledge workers possess knowledge characterized with the rapid development and change, so knowledge workers have been in the status of self-development and constantly knowledge updating in a long period, which is equivalent to continuously inject fresh blood for the development of organization. It determines the developing direction and trends of the company's future.

### **3.3.4) Career Growth and Development**

This factor is constantly on top three in all the studies mentioned above. Knowledge workers have high quality and technical skill, and to remain competitive they are pursuit non-stop with the growth of knowledge, individual, and professional achievement. Knowledge workers chose personal growth has the most important incentive factor.

### **3.3.5) Self expression and goal achievement**

Some researchers established knowledge workers' incentive utility function, and indicated that the correlation between job challenge and achievement is positive. Knowledge workers are flexible and adaptable when changes are necessary when changes to the existing scenarios are part and parcel of work culture. In order for an organization to grow it is very important that the positive changes are continuously looked for and implemented. Knowledge workers are of the view that changes in a very positive manner and must be flexible enough to adapt the changes as this would also lead to their self-development and growth. Knowledge workers have agreed that they are aware about the business objectives and priorities. Employees mentioned that the leadership team on periodic basis communicated the business objectives and priorities that have been thought of and decided by the management which helped them to prioritize their activities and work towards achieving the business objectives. Knowledge workers are interested in participating in defining goals. Employees mentioned that they participate in the process of defining specific goals. Further they felt that team specific goals are internally discussed between the team members and the employees mentioned they are given the liberty to discuss and define team specific goals and share the same with their superiors. But knowledge workers have the reservations further; they felt tasks assigned to them are not attainable and often allocated with such goals and targets which in normal scenario are not attainable in most of the cases. Further they dissatisfied with the fact that on periodic basis the level of expectations and the goals and the targets keep on rising which makes it more difficult and unattainable. Knowledge workers said that business decisions that are made are made based on the facts. The employees mentioned that the decisions are not made based on the perceptions or any assumptions. While making the business decisions historical data as well as the latest information available is collected analyzed discussed and only then the business decisions are taken. Knowledge workers believe in a set of shared values. They mentioned that the having set of shared values is one of the key factors for their individual growth and organization as a whole. Substantial number of knowledge workers mentioned that the employees have access to timely and accurate information about what's really happening in the organization. The employees said that the employees are communicated about the current activities that are going on / happening in the organization. This is either communicated through common meetings, announcement, newsletter etc. It was

informed that the management ensures that the employees are made aware of the current happening in the organization. Knowledge workers felt that the well-defined policies and procedures help them to provide the service to the customers want and need and they meet the client they get the details of the needs and wants of the customers. The KWs mentioned that if the organization has formally defined and documented policies and procedures, the employees will get the details if they can provide the solution to the customer's problem and also will be able to decide what solutions they can offer to the customer's problems. Hence well-defined policies and procedures will help the employees to provide service to the customers wants and needs. Knowledge workers disagreed about the fact that they compromise company policies or principles to reach operational goals. The employees mentioned that they never compromise on the company's policies or principles to reach to the operational goals assigned to them. Further they mentioned that they follow and perform only as per the guidelines given in the company's policies.

### **3.4) Characteristics of Knowledge Workers :**

Knowledge workers have high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution, or application of knowledge. Knowledge workers think for a living. They live by their wits – any heavy lifting on the job is intellectual, not physical. They solve problems, they understand and meet the needs of customers, they make decisions, and they collaborate and communicate with other knowledge workers in the course of doing their own work.” What becomes clear is that by applying their knowledge in new, complex situations, knowledge workers create new knowledge while developing on the job continuously. Knowledge work is certainly not new and not merely around since Peter Ducker's first description in. Just think of the first university in Bologna or clerics not to mention those knowledge workers who somehow set up pyramids in the African desert without any technical comfort. Knowledge workers will represent the biggest individual group regarding population and working potential in the most developed countries. Knowledge workers will constitute the leading class and represent one third of Indian working potential by the end of the century. Depending on the definition of knowledge work, the intensity of knowledge work conducted, in other words the usual amount of knowledge work in a given job. “Pure” knowledge work is rather

theoretical and it is assume that in case of knowledge workers, a certain amount of research work will still to be done.

Drucker described that doing both knowledge work and manual work applying either knowledge of highest order or knowledge only being a small part of an otherwise manual .The term “knowledge worker” has been coined to describe those workers who are participating most effectively in the knowledge-based economy. However, if the definition of the knowledge economy is challenging, so is that of the knowledge worker. It can be knowledge workers who are working in knowledge-based sectors or workers who have specific skills and competencies. At the heart of all the suggested definitions lies the idea that knowledge workers are participating in the utilization and creation of knowledge. Different definitions of high-skilled or knowledge workers use a combination or reclassification of the different occupational measures available.

According to Reich (1993, Workers in these categories are professionals, upper-middle managers and above, and others who create, modify, and synthesize knowledge. Such workers account for about 20% of the Indian workers .There are different ways to classify science and technology workers. Science and technology personnel comprise those who are either highly educated or employed in occupations requiring at least a first university degree. By combining qualification and occupation, the definition identifies both education and skills needed for different types of jobs. According to Lavoie and Roy (1999), the main feature of a knowledge-based economy is the increasing need to rely on highly-skilled workers whose skills are not exclusively related to science and technology but also to the control, management and co-ordination of tasks. To define knowledge workers, they reformulate occupational categories based on the use and production of knowledge by workers and reclassify economic activities according to tasks performed by workers from the more conventional industrial activist .The main five domains are knowledge, management, data, services and goods. Knowledge occupations, under this definition, account Knowledge workers are defined according to their occupation and tasks for the purpose of this chapter. Specifically, knowledge workers are those employed in occupations considered to be white-collar, high-skilled and perform a set of tasks that revolve around creating and processing information. The Technical details provide further details on the definition and measurement of knowledge workers using the International .Expressing something about knowledge worker does not mean pure knowledge work as is done by these employees only .It is essential to have

organization perception about knowledge workers regarding functional specialization and communication structure should not be applied for the knowledge worker. Leading knowledge workers includes the awareness that knowledge workers as humans are living systems and therefore come with own needs and desires that has to be addressed by organizational environment under the light of corporation goals and tasks. Motivating knowledge workers in this context means to ensure that this two set of goals are linked so that performance is assured. Here again higher purpose of management needs the knowledge workers.. This needs might include social needs as well that ideally could be addressed by the organization. Leading knowledge workers also means to give them orientation to the questions that should characterize their work. Communication is key to do so. Here parameter regarding knowledge worker productivity is important. For the knowledge worker, task is important and has to find out in order to concentrate on the task and to drop anything else. It is important to deal with complexity, to be successful regarding market, society and nature by making decisions and communicating those. Decisions are required "... about goals, resources, relationships, conflicts, strategies, processes, structures as well as decisions themselves by asking: how are decisions made?" .Here I see connections to removing the pathologies of hierarchy as decisions certainly will be needed in future, too. Perhaps the well-known top-down might be reconsidered. I propose giving knowledge a greater voice.

### **Work Content**

According to Drucker, individual who works primarily with information or one who develops and uses knowledge in the workplace as the knowledge worker. on the properties of work content, and considered knowledge worker as the staff who engages in knowledge work. Based on this definition, the staff that directly takes part in knowledge work and follows this work as a profession can be called knowledge worker, such as a scientist, a teacher, and an engineer. He emphasized on the profession, to distinguish from an amateur, who does not take up knowledge work as a career. This view highlights the nature of work; but understanding of the work content is not complete and neither in sufficient depth. The meaning from this view is somewhat imbalanced.

## **Work Output**

According to J. Davies the knowledge worker is coming with the increment of knowledge capital and bringing high added value. He believed that knowledge worker is similar to the occupational brainworker, who makes creative contribution, brings a strong value-added growth of knowledge capital and monetary capital. From this view, one can easily distinguish two extremes of, say, scientists from porters; but there could be gray area between brainworkers and labors, especially in today's computing age when many workers are using a computer to do their job. These grey areas could not be explained accurately here.

## **Individual Characteristics**

Accenture (2009) defined knowledge workers as the staff who complete tasks with intellectual input, creativity, authority, including the professional, the paraprofessional with depth skills, and the senior manager. This type of workers always work in fields such as R & D, engineering design, marketing, legal service and management consulting. Knowledge workers have high degree of human capital and pursue independence, creativity, personalization, and diverse work contents. They create value by using knowledge and information. They keep on learning and creating to adapt to the complex and dynamic changes. Zhou believed that knowledge workers accept systematic learning of theory and professional skills, and build up an effective knowledge structure. Knowledge workers can leverage modern sciences to achieve productivity—education was introduced in this definition. The definitions from this dimension have their advantages of being operational, that the dimension is commonly used in empirical researches. There are two shortcomings: first, there exist dozens of characteristics for knowledge workers; second, different scholars emphasized on different characteristics. Therefore, it is difficult to reach a consensus of the definition. We believe that the above schools of thoughts can be synthesized, and a definition of knowledge worker can be like the following: they are workers who produce high value-added products and services with knowledge and ability, and keep on updating their knowledge and improving their abilities to adapt to the complex tasks and diverse work environments.

**According to Japanese Auto Manufacturers all workers are ultimately knowledge workers and that the role of the firm is to both encourage and support**

problem-solving by all employees. The companies recognized that front line assembly workers on the factory floor – the antithesis of a conventional view of “knowledge workers” – were in fact essential to performance improvement for the broader firm. In encouraging and supporting problem-solving by these employees, the Japanese auto makers were able to give their work new meaning and unleashed much more passion on the factory floor. The lesson is clear “we undermine our potential for performance improvement with labels that draw artificial boundaries through our workforce.

### **Knowledge Workers Are More Independent**

Compared with other types of employees, knowledge workers enjoy the rights and power to be in control of their work. In addition, they are held fully responsible for their work. “Independence” also means that knowledge workers prefer to be self-governing and self-control rather than being affixed to machines as line workers pointed out that knowledge workers’ independence is characterized by the act of empowerment. Empowerment has risks, because choosing the wrong person for the job can jeopardize the performance of the company.

### **Loyalty and attrition of Knowledge Workers:**

Knowledge workers’ high turnover rate brings a challenge to the traditional employment relation. Of Industrial economy when mass production was the defining feature, tools, machines, and materials belonged to capital. The skilled employees cannot function without physical capital, such as machines, raw materials and physical plant. Of knowledge economy, the knowledge employees are prominent in the most important knowledge which is deeply ingrained in their mind. Because of this they are much more powerful to select opportunities, far more than the traditional workers.

### **Knowledge workers and the new role of leaders and managers**

Organizations promote knowledge workers for their innovation. Knowledge workers possess dynamic and adaptable for change, so knowledge workers have been in interested in becoming tomorrow’s managers and leaders.

## **Leadership & management**

It is important to clearly distinguish between management and leadership or managers and leaders respectively. Knowledge workers, organize and coordinate whereas leaders inspire and motivate.. Traditional managers are operation persons with authority to instruct a group of knowledge workers and who feel responsible for the attainability of organizational goals and task completion.

## **Motivation and knowledge workers:**

Knowledge management philosophy help every company take better care of its employees. With an effective knowledge management solution, companies can better motivate their employees, better reward them and align their skills with corporate needs. Effective knowledge-management philosophy deliver training, track employees, improves skills and competencies, remove barriers to productivity, provide current company information, manage benefits, help supervisors staff their departments, and simplify expense reimbursement. Knowledge management can help companies save significant sums of money by enabling them to improve employee management. Author gives following points to confirm association between motivational aspects and knowledge workers.

## **Development and training issues of Knowledge workers:**

Proper deployment helps keep knowledge workers on track. It can take many forms, including multimedia, online handbooks and manuals, and so on. Skill alignment ensures that the right knowledge workers are working on the right projects at the right time: Knowledge management enables companies to find experts that are available for a particular job. Companies can simplify paper-based systems, reduce HR costs, provide corporate information to employees, and more.

Bigger companies can benefit most from better staffing management: Using knowledge management, those companies can keep track of headcount and reorganize more quickly.. Performance reviews are more efficient when moved from manual processes to knowledge-management system: As are result, reviews are completed on time, and supervisors can better manage their budgeting processes. Expense reimbursement is best done on an internet: Companies can significantly reduce the

cost and turn around time for reimbursing employees for out-of –pocket expenses, improving morale and productivity.

### **Blurring of the Boundary with Leadership and Defying Administrative Authority**

Knowledge workers see their relationships with the administration as an interaction with no fixed authority .Knowledge is replacing administrative authority to be the only judgment standard of merits. Knowledge workers can affect their superiors, peers, and subordinates with professional knowledge and skills. So they see the boundary among classes in the traditional bureaucratic enterprise becoming blurry, and the administrative authority no longer has absolute control. There are two reasons that it is highly complex in the area of characteristics of knowledge workers: firstly, different researchers had different criteria for classification, which lead to the overlapping contents of different characteristics; secondly, neglected the interrelationship and causality among the characteristics causing the ambiguity in identifying truly distinct characteristics.

In IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 19, Issue 10, Ver. IV (Oct. 2014), PP 01-07 e-ISSN: 2279-0837, p-ISSN: 2279-0845 ,author Ravindra Kumar Sharma Assistant Professor, Department of Economics, Guru Ghasidas Vishwavidyalayaa Central University, Bilaspur, India in research article with title Industrial Development of India in Pre and Post Reform Period .Author states that economic development is the primary objective of the majority of world nations. This truth is accepted almost without any controversy. As a consequence of rapid growth in Indian economy, the industrial development has become a matter of serious concern for the planners and policy makers. Industrialization plays a vital role in the development of developing countries because they can solve their problems of general poverty, unemployment, backwardness, low production, low productivity and low standard of living etc. It is equally important for developed countries as it helps them not only to maintain their existing growth but also to enjoy still higher standards of living to avoid cyclic fluctuations. Therefore, rapid industrial growth has been a major objective of planning in India. In 1951 .

Economic growth, for a variety of reasons, lack of industrial demand, especially for investment goods, was widely accepted to be the principal reason for the relative stagnation since the 1960s. However, there was also an argument that control on output, investment and trade popularly called the permit licenceraaj were stifling private initiative and wasting meager public resources. Reportedly, controls led to widespread inefficiency in resource use, as reflected in poor total factor productivity growth, or rise in incremental capital output ratios in the 1970s. The gloom was perhaps accentuated by the oil price and agriculture supply shocks in the late 1970s, together with political uncertainty which started prevailing when Indian democracy entered the coalition era at the national level for the first time in 1977. The disappointing performance of the industrial sectors, therefore, forced policymakers to revise their policy tools. In the late 1970s, they started to implement some reforms such as “reducing the barriers to entry and expansion, simplifying procedures, and providing easier access to better technology and intermediate material imports”. There were some additional reforms during 1980s,

However, from 1980 onwards, after the domestic political uncertainty ended, industrial policy witnessed greater pragmatism with a gradual loosening of controls, and a greater willingness to import technology and foreign private capital to modernize the manufacturing sector. Greater realism in policy making also included stepping up of public investment in infrastructure and energy production, rural development for diffusion of green revolution technology, and for a direct attack on poverty. As the second oil shock was successfully met by increasing domestic oil production and import substitution in fertilizers in a short time, the second half of the 1980s witnessed considerable de-licensing and relaxation of import controls to upgrade the industrial technology as reflected in Rajiv Gandhi’s political slogan of taking the country to the 21st century. To achieve these, there was a greater reliance on the private corporate sector with fiscal incentives provided for stock market based financing of industrial investment, as government faced a growing resource constraint to meet the ambitious planned investment target. In the 1980s, many branches of manufacturing like automotive industry, cement, cotton spinning, food processing, and polyester filament yarn, witnessed modernization and expansion of scales of production. Industrial export growth also improved in the second half of the 1980s as import restrictions moved from quotas to tariffs (as a first phase of trade reforms)

although at very high levels, and a steady depreciation of the currency in nominal terms. The turnaround in industrial output growth in this decade has been variedly attributed to liberalization, improvement in public investment and public sector performance. The Indian Government had undertaken policy reforms since 1980, but the most radical reforms have occurred since 1991, after the severe economic crisis in fiscal year 1990-91. The rupee was depreciated in order to expand exports. At the same time, many capital goods added to the list of products where imports do not need to be cleared by the government authorities. Moreover, import-licensing restrictions for a wide range of industrial inputs either eased or lifted while the maximum rate of import duties lowered. The canalization system was liberalized too. Finally, foreign investment was liberalized. As a result, foreign direct investment up to 51 per cent equity participation in high priority industries was automatically authorized. Industrial licensing was liberalized or abolished. The author further writes that the industrial development of India in pre reform and post reform period, and investigate the impact of globalization on industrial sector in India. This analysis is based on secondary data of Index of Industrial Production (IIP).

The author thirdly mentions that the post reform period up to 2000-01 was marked by considerable fluctuations and thus showed a total lack of consistency in industrial growth performance. Table 2 indicates trends in growth rates of overall industrial production and its three major components viz. Mining, Manufacturing and Electricity. After a sharp fall to 0.6 per cent in 1991-92, the industrial growth rate exhibited a rising trend from 1992-93 registering an overall growth of 2.3 per cent during 1992-93, 6.0 per cent in 1993-94, 9.1 per cent in 1994-95 and further to 13.0 per cent in 1995-96. After reaching a peak in 1995-96, industrial growth slowed down considerably in 1996-97 (6.1 per cent) and registered a marginal improvement (6.7 per cent) in 1997-98. The downward trend continued in the next year too, with industrial growth falling to 4.1 per cent in 1998-99. The slowdown of industrial growth in three consecutive years was mainly due to the poor performance of electricity generation, mining, and decline in agriculture production in 1997-98. It also affected rural incomes which directly resulted in lower demand for certain industrial product, capital markets remained depressed for the past couple of years, drying up source of investment funds for industry, export growth had been sluggish in 1996-97, low demand for exports adversely affected industrial production and several industries had been subject to competitive pressure from imports. After a turnaround in 1999-2000,

industrial growth slowed down during 2000-01. Overall, industrial growth during 2000-01 at 5.0 per cent was lower than 6.7 per cent during the corresponding period in 1999-2000. The average rates of growth of Indian Industry in the post reform period (1991-92 to 2000-01) were 6.0 per cent, the growth of manufacturing sector was 6.3 per cent, mining 3.3 per cent, and electricity was 6.6 per cent. The average annual growth rate of industrial production which was 7.8 per cent in the pre-reform decade (1981-82 to 1990-91) fell to 6.0 per cent during the period 1991-92 to 2000-01. The main causes of unsatisfactory industrial performance in post reform period up to 2000-01 were exposure to external competition, slowdown in investment, infrastructure constraints, and difficulties in obtaining funds for expansion, sluggish growth in exports, anomalies in tariff structure and contraction in consumer demand.

**Exposure to External Competition:** According to the Planning Commission, the most important reason for lower growth rate during the Eighth Five Year Plan period as compared to the Seventh Five Year Plan period seems to be that “the industrial sector, which had been almost totally protected from both industrial as well as external competition during the previous four decades, was suddenly exposed to foreign competition through a significant liberalization of imports and drastic reduction in import duties. The industry was hardly prepared for it and the slowdown was only to be expected.”

**Slowdown in Investment:** An important reason for the slowdown of industrial growth in 1990s was the slow-down of investment. It is a known fact that capital formation in the public and private sectors provides a stimulus for industrial growth in the form of both the direct demand or purchases that such expenditures involves, and the indirect demand resulting from income generation by investments. However, consequent upon the adoption of the „micro-economic adjustment“ program of the IMF in 1991, the Government of India was forced to cut down public expenditure drastically. In physical terms, the decline in public investment is perhaps best captured in the precipitous fall in the growth of electricity generation capacity from 8-10 per cent in the 1980s to 4-6 per cent in the 1990s. Since there is a strong complementarity between public investment and private investment, a reduction in the rate of growth of real public investment had a depressing effect on private investment as well.

**The Infrastructure Constraints:** Perhaps the most important reason for unsatisfactory performance of the industrial sector has been the deteriorating state of infrastructure. Industrial production has suffered not only on account of inadequate availability of infrastructure like power and transportation bottlenecks, inadequate

handling facilities at ports etc., but also due to poor quality of infrastructure like frequent and unscheduled power breakdowns, poor road conditions, unduly long handling time at ports etc. All these factors added to the real costs of manufacture and thus adversely affected the competitiveness of domestic industry.

### **Manufacturing Sector:**

Author states that the main Indian growth was slower than in China was the lackluster performance of India's manufacturing sector. Kochhar et.al (2006) make the same point by examining the performance of manufacturing across two points in time – 1981 and 2002. They find that the share of manufacturing in GDP in India was higher in 1981 although not strongly significant than what would be predicted by a cross-country regression of the sectoral share on income and country size. Repeating the regression for 2002, the authors find the coefficient of the India dummy to be smaller than in 1981. However, in a regression of the change in the share of manufacturing (in value-added), on initial GDP and GDP growth rate, the India indicator is negative prompting the authors to conclude that “a pattern of a relative slowing in manufacturing growth is suggested by the data, ironically when reforms were removing the shackles in manufacturing”. A similar paradox comes through in TFP estimates. TFP growth rates in manufacturing are sensitive to a variety of measurement issues; however, estimates by different authors agree that TFP grew slower in the 1990s compared to the 1980s .

The thesis with the title Drucker's knowledge-worker productivity theory: a practitioner's approach to integrating organizational work processes baldridge's criteria were adapted to study in determining knowledge-worker productivity. This author investigates knowledge-intensive organizations operating in the Tweed/Northern Rivers areas of New South Wales, Australia. It might be argued that the cultural, economic, political and business environments of this region could cause potential response bias. Thus, further crossvalidation studies within other contexts would strengthen the generalization of this study.

Author describes that Knowledge workers are employees working with intangible resources. This could also be interpreted that knowledge workers should know more about their jobs than anybody else in the organization. Although there are other definitions of knowledge workers, these two definitions are what this research is based on. Author concludes in the thesis that This study set out to investigate how a practitioner's approach to integrating work processes with Drucker's six major factors

determining knowledge-worker productivity should be done. It also showed that the methodology employed provided positive results. It is suggested that more studies using this technique should be conducted to provide the quantitative data to strengthen the methodology. It is also state that Knowledge-intensive organizations need to review their level of readiness and alignment issues on a regular basis when integrating their work processes with Drucker's six major factors determining knowledge-worker productivity. Author of thesis state that knowledgeintensive organizations could now use this methodology to investigate and resolve readiness and alignment issues when moving in the direction of Drucker's knowledge worker productivity theory.

Rogoski, R. R. "Knowledge Workers Top Company Assets." **Triangle Business Journal** 14, no. 19 (. By Bettina Lankard Brown describes that Knowledge workers use their intellect to convert their ideas into products, services, or processes(Miller 1998). They "own" their knowledge.They can "sell it, trade it, or give it away and still own it". Their main value to an organization is their ability together and analyze information and make decisions that will benefitthe company. They are able to work collaboratively with and learnfrom each other; they are willing to take risks, expecting to learnfrom their mistakes rather than be criticized for themKnowledge workers are continually learning, aware that knowledgehas a limited shelf life. In this information revolution,"brains have become more valuable than brawn .Secondly author state that The globalization of work and continuing advances in technology are changing the nature of the work force. Blue-collar workers are being replaced by information specialists called "knowledge workers" workers who are "equipped to maintain and expand our technological leadership role in the next century" .Author mentions that workers who can think, work with ideas, and make decisions. Also known as "gold-collar" workers, knowledge workers are sometimes identified by their professional specialty, e.g., lawyer, doctor, programmer, information system designer, information specialist librarians, teacher, and scientist. Other writers describe knowledge workers by their characteristics of knowledge workers who can analyze, synthesize, and evaluate information and use that information to solve problems of variable content. A third way of describing knowledge workers is by their skills and abilities— knowledge workers who are highly educated, creative, computer literate, and have portable skills that make it possible for them to move anywhere their intelligence, talent, and services are needed.

### **3.5) HRM practices :**

In Journal of the Indian Academy of Applied Psychology July 2006, Vol. 32, No. 3, 171-178. M.G. Shahnawaz and Rakesh C. Juyal. American concept, author state that In title human Resource Management Practices and Organizational Commitment in Different Organizations. Human resource Management (HRM) involves all management decision and practices that directly affects or influence the knowledge workers, or human resources, who work for the organization. Human resources are significant strategic levers and the sources of sustained competitive advantage. Therefore, HRM practices should be central to the organizational strategy. Lado and Wilson suggested that HRM practices can contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific, produce complex social relationships. Author further states that HRM refers to the overall philosophy about the organization and how knowledge workers should be managed and is not merely limited to certain specific functions. HRM focuses on congruence and commitment instead of compliance and control. In the present day turbulent reality, there is a need to develop industry specific HRM policy and practices to remain competitive and to develop committed workforce. Author secondly states that Human Resource Management (HRM) involves all management decision and practices that directly affects the knowledge workers, or human resources, who work for the organization. The present study explored and compared various HRM practices in two different organizations—consultancy/research based organization and fashion industry. The present study also aimed at assessing how much of commitment in the two industries can be attributed to HRM practices. 45 participants each were randomly selected from the two organizations. HRM practices were measured by Geringer, Frayne and Milliman scale, while organizational commitment was measured by Meyer and Allen scale. Data were analyzed by t-test and multiple regressions. HRM practices were found significantly different in two organizations and mean scores on various HRM practices were found more in the fashion organization. Regression result showed that various HRM practices were significantly predicting organizational commitment in two organizations and also

when they were combined. Performance appraisal and 'attitudes towards HRM department' were the significant predictors of organizational commitment in the both the organizations.

. Building on the In Journal of the Indian Academy of Applied Psychology July 2006, Vol. 1732, No. 3, 99-121. M.G. Shahnawaz and Rakesh C. Juyal in title firm resources and sustained advantage Author state that understanding sources of sustained competitive advantage has become a major area of research in strategic management assumptions that strategic resources are heterogeneously distributed across firms and that these differences are stable over time, this article examines the link between firm resources and sustained competitive advantage. Four empirical indicators of the potential of firm resources to generate sustained competitive advantage-value, rareness, limitability, and substitutability-are discussed. The model is applied by analyzing the potential of several firm resources for generating sustained competitive advantages. The article concludes by examining implications of this firm resource model of sustained competitive advantage for other business disciplines.

In research paper with title Guest, D.E. Human resource management and performance: a review and research agenda The International Journal of Human Resource Management, 8, 263-276. Author state that Two core aspects of SHRM are: the importance given to the integration of HRM into the business and corporate strategy, and the devolvment of HRM to line managers instead of personnel specialists. Brewster and Larsen (1992: 411–12) define integration as 'the degree to which the HRM issues are considered as part of the formulation of the business strategy' and devolvment as 'the degree to which HRM practices involve and give responsibility to line managers rather than personnel specialists'. Research in the field (see Lengnick-Hall and Lengnick-Hall, 1988; Purcell, 1989; Schuler, 1992; Storey, 1992; Budhwar and Sparrow, 1997; Truss et al., 1997; Budhwar, 2000a; 2000b) highlights a number of benefits of integration of HRM into the corporate strategy. These include: providing a broader range of solutions for solving complex organisational problems; assuring the successful implementation of corporate strategy; contributing a vital ingredient in achieving and maintaining effective organisational performance; ensuring that all human, technical and financial resources are given equal and due consideration in setting goals and assessing implementation capabilities; limiting the subordination and neglect of HR issues to strategic

considerations; providing long-term focus to HRM; and helping a firm to achieve competitive advantage.

In similar vein, researchers (Budhwar and Sparrow 1997; 2002; Hope-Hailey et al., 1997; Truss et al., 1997; Sisson and Storey, 2000) have highlighted the benefits of devolvement of HRM to line managers. These include: highlighting certain issues that are too complex for top management to comprehend alone; developing more motivated employees and more effective control; local managers responding more quickly to local problems and conditions; resolving most routine problems at the 'grassroots level'; affording more time for personnel specialists to perform strategic functions; helping to systematically prescribe and monitor the styles of line managers; improving organisational effectiveness; preparing future managers by allowing them to practise decision-making skills; and assisting in reducing costs by redirecting traditionally central bureaucratic personnel functions.

Despite the highlighted benefits of the devolution of HRM to the line management, it is still not widely practised in organisations. On the basis of earlier studies in the UK and their own in-depth investigations into the topic, McGovern et al. (1997: 14) suggest that devolution of responsibility for HRM to line managers is constrained by short-term pressures on businesses (such as minimising costs), the low educational and technical skill base of supervisors and a lack of training and competence among line managers and supervisors.

An important issue for top decision-makers is how to evaluate the extent to which both strategic integration and devolvement are practised in their organisations. The level of integration of HRM into the corporate strategy can be evaluated by a number of criteria: these include representation of specialist knowledge workers managers on the board; the presence of a written knowledge workers management strategy (in the form of mission statement, guideline or rolling plans, emphasising the importance and priorities of human resources in all parts of the business); consultation with knowledge workers management specialists from the outset in the development of corporate strategy; translation of the knowledge workers management strategy into a clear set of work programmes; the growing proactive nature of knowledge workers management departments through the creation of rolling strategic plans (emphasising the importance of human resources in all parts of the business); through mission statements; by aligning HR policies with business needs through business planning processes; by use of participative management processes and committee meetings;

and via HR audits. The level of devolvment of HRM to line managers in an organisation can be evaluated on the basis of measures such as: the extent to which primary responsibility for decision-making regarding HRM (regarding pay and benefits, recruitment and selection, training and development, industrial relations, health and safety, and workforce expansion and reduction) lies with line managers; the change in the responsibility of line managers for HRM functions; the percentage of line managers trained in knowledge workers management in an organisation; the feedback given to managers/line managers regarding HR related strategies; through consultations and discussions; the extent to which line managers are involved in decision- making; by giving the line managers ownership of HRM; and by ensuring that they have realised / accepted it by getting their acknowledgement (for more details see Budhwar and Sparrow, 1997; 2002; Budhwar, 2000a). Secondly author describes about This model further shows the influence of internal characteristics (which mainly consists of factors such as organisational culture and the nature of the business) and external characteristics (which consist of the nature and state of economy in which the organisation is existing and critical success factors, i.e. the opportunities and threats provided by the industry) on the strategic business needs of an organisation. This model initially attracted criticism for being over-prescriptive and too hypothetical in nature. It needs a lot of time to gain an understanding of the way strategic business needs are actually defined. The melding of business needs with HR activities is also very challenging, mainly because linkages between human resource activities and business needs tend to be the exception, even during non-turbulent times.

In title Human Resource Champions.next agenda for adding value and delivering results.

Author: Dave Ulrich immagazine Harvard Business School Press, Boston, Massachusetts, USA

Year: 1997 ISBN: 0-87584-719-6 Pages: 254, author states that HR departments are not designed to provide corporate therapy or as social or health-and-happiness retreats. HR professionals must create the practices that make employees more competitive, not more comfortable. HR activities are based on theory and research. HR professionals must master both theory and practice. The impact of HR practices on business results can and must be measured. HR professionals must learn how to

translate their work into financial performance. HR practices must create value by increasing the intellectual capital within the firm. HR professionals must add value, not reduce costs.. The HR function does not own compliance-managers do. HR practices do not exist to make employees happy but to help them become committed. HR professionals must help managers commit employees and administer policies.. HR practices have evolved over time. HR professionals must see their current work as part of an evolutionary chain and explain their work with less jargon and more authority. At times, HR practices should force vigorous debates. HR professionals should be confrontational and challenging as well as supportive. 8. HR work is as important to line managers as are finance, strategy, and other business domains. HR professionals should join with managers in championing HR issues. Author describes about HR as change Champion. As change champions, HR professionals make sure that isolated and independent organization actions are integrated and sustained through disciplined change processes. HR professionals make an organization's internal capacity for change match or lead the external pace of change. As change champions, HR professionals help make change happen at institutional (changing patterns), initiative (making things happen), and individual (enabling personal change) levels. To make change happen at these three levels, HR professionals play two critical roles in the change process. First, they initiate change by building a case for why change matters, overcoming resistance to change, engaging key stakeholders in the process of change, and articulating the decisions to start change. Second, they sustain change by institutionalizing change through ensuring organizational resources, designing organization structures, facilitating systemic communications, and orchestrating continual learning. As change champions, HR professionals partner to create organizations that are agile, flexible, responsive, and able to make transformation happen in ways that create sustainable value. Secondly author describes Hr as Innovator and Integrator. Effective HR professionals know the historical research on HR so that they can innovative and integrate HR practices into unified solutions to solve future business problems. They must know latest insights on key HR practice areas related to human capital (talent sourcing, talent development), performance accountability (appraisal, rewards), organization design (teamwork organization development), and communication. They must also be able to turn these unique HR practice areas into integrated solutions, generally around an organization's leadership brand. These innovative and integrated HR practices then result in high impact on

business results by ensuring that HR practices maintain their focus over the long run and do not become seduced by HR “flavor the month” or by another firm’s “best practices.” Thirdly author states the role of hr as technology Proponent. In recent years, technology has changed the way in which HR knowledge workers think and do their administrative and strategic work. At a basic level, HR professionals need to use technology to more efficiently deliver HR administrative systems such as benefits, payroll processing, healthcare costs, and other administrative services. In addition, HR professionals need to use technology to help knowledge workers stay connected with each other. This means that technology plays an increasingly important role in improving communications, do administrative work more efficiently, and connecting inside employees to outside customers. An emerging technology trend is using technology as a relationship building tool through social media. Leveraging social media enables the business to position itself for future growth. HR professionals who understand technology will create improved organizational identity outside the company and improve social relationships inside the company. As technology exponents HR professionals have to access, advocate, analyze, and align technology for information, efficiency, and relationships. We then identified the impact of these six domains on both the perception of the effectiveness of the HR professional and the performance of the business where the HR professional works. In research paper with title Human Resources (HR) as a Strategic Business Partner: Value Creation and Risk Reduction Capacity in magazine International Journal of Human Resource Studies ISSN 2162-3058 2014, Vol. 4, No. 1 authors Fotios V. Mitsakis Dept. of Human Resource Management, University of Strathclyde Glasgow G1 1XU, Scotland HR as a Strategic Business Partner For strategic HR to emerge, it is essential for specific characteristics to exist, but also to be well integrated so to create an “internal fit”. All are important in their own right, but they are also interrelated. If one or more is absent or weak, then this could significantly undermine the development of strategic HR, because the links with other characteristics would also be weakened (McCracken & Wallace, 2000a, 2000b). Meeting the strategic criteria of the numerous strategic HR models, HR professionals would be able to move closer of being accepted as equal strategic business partners within their organizations. HR’s credibility will also be enhanced by helping clients to meet their business and performance needs, and ultimately through the achievement of the organizational strategic business goals and objectives (Gilley et al., 2002). Developing strategic

business partnerships is also absolutely critical to the success of strategically integrated HR programs. In order to be successful, HR executives need to develop collaborative client relationships as a way of enhancing their image and credibility. Furthermore, they have to become knowledgeable about the concept of demand and the various demand states of their clients. Creating a strategically integrated HR program and strategy will enhance the “good work” process provided by HR departments, without going largely unnoticed as before. Author describes that HR as an Integrated Value-Driven Business Function .The competitive forces firms face today, and will continue to face in the future, demand organizational excellence through which HR departments could make a real contribution to the business through their value-added and risk reduction capacity. Unfortunately, many firms still follow a “transactional” and administrative role for their HR practices, and eventually their HR departments are viewed as necessary, but not of great value. Strategic HR differs significantly from the traditional one. The main responsibility for managing human resources in a traditional way rests with specialists in a division (large companies) or team. In the strategic approach, the main responsibility for knowledge workers management rests with any individual who is in direct contact with them or a LM; moreover, strategic HR leads, inspires and understands others, while its traditional approach just responds to needs (Ivancevich, 2007). Quite similarly, as suggested by Gibb, and from a strategic HR value proposition perspective, organizations are always trying to generate valued outcomes, which differentiate among them based on the strategic focus they follow. It demands that we impose the responsibility for their productivity on the individual knowledge workers themselves. Knowledge Workers *have* to manage themselves. They have to have autonomy. Continuing innovation has to be part of the work, the task and the responsibility of knowledge workers. ▪ Knowledge work requires continuous learning on the part of the knowledge worker, but equally continuous teaching on the part of the knowledge worker. Productivity of the knowledge worker is not—at least not primarily a matter of the *quantity* of output. *Quality* is at least as important. ▪ Finally, knowledge-worker productivity requires that the knowledge worker is both seen and treated as an “asset” rather than a “cost.” It requires that knowledge workers want to work for the organization in preference to all other opportunities. Due to radical changes occurred the last decade, HR concentrates on getting things done through knowledge workers, simply by designing an entirely new role and agenda that result in enriching the organization’s value to multiple

stakeholders. This HR shift highly matters to employees, who realize that their skills and competencies to perform their jobs, and their commitment or ability to focus their attention, derive in part from how HR practices affect them. Customers, who desire to maintain long term and increasingly complex relationships with a company, recognize that an organization's HR practices can assure a steady flow of products and services, while investors who realize that intangibles determine a large source of a company's wealth, and increasingly look at HR as a source of a firm's market value. HR will be able to help organizations meet competitive challenges such as globalization, profitability through growth, technology, intellectual capital and nonstop change, only by developing a strategic architecture that aligns with and supports company's overall vision and mission (Sparrow, 2008) and can be reached and evidenced through the following three ways of value creation, value improvement and leverage, and value protection and preservation (Sparrow et al, 2008).

Author describes Value Proposition through Effective Recruitment and Selection. The unique way in which HR departments add value to the organization is the effective recruitment and selection of those employees demonstrating the appropriate competencies so to better fit within the organizational context in order to be able to build organizational capability for leadership argued that recruitment is an area where there is a high amount of potential risk, as if it is done quickly and without care, then the wrong sort of employees can enter the organization, and the effect of this upon organizations can be very disastrous. Contrariwise, the benefits of hiring the appropriate knowledge workers for any job vacancies should result to low turnover, low absenteeism, increased individual and organizational efficiency, and the enforcement of tacit knowledge within the organization. Lastly author describes that Value Proposition through Employees' Development. Furthermore, employees' further development on acquiring intercultural skills is considered important, as modern workplaces are increasingly becoming multicultural and globalized. Many HR managers associate these skills with significant business benefits, such as effective and efficient team administration and working, the development of new or existing relationships with clients, creativity, improved communication, and lower organizational conflicts. The Resource-based view approach indicates HRD function as a very important business operation focusing on building and maintaining organizational competitive advantage through its continuous human capital developmental activities, by matching new knowledge with the environment's opportunities and challenges. Lastly author states that value

Proposition through Employees' Motivation as HR can also help employees in three vital areas; ability, motivation and opportunity. HR departments provide opportunities for all employees to receive relevant training; they provide motivational rewards and allow their employees to contribute to decision making. The HR Manager, like all managers, is expected to play a critical role in improving the skills of his/her workforce, and eventually firm's profitability. In that event, appraisal systems, if they carried effectively, they could have an excellent impact upon motivation. Through successful career planning, HR departments can help their employees to unleash their full potential and to become organizational leaders. Many studies have shown that effective knowledge workers management was linked to a high increase (90%) in shareholder value. Furthermore, HR professionals who design reward systems, such as "payment by results" or "performance-related pay", they should encourage their employees being more productive so to enable organizations being more flexible. In this regard, investments in HR initiatives would enable employees to further advance their skills, whilst appraisals or PRP would encourage them to meet targets, acting as a motivator which eventually adds value to the organization. Especially in mergers, HR strategies are used to reassure employees and to provide job security. Providing a secure working environment, coupled with effective performance management, can result to a high-valued workforce. It can easily identify a very clear positive relationship between what we call a high performance HR system and various measures of firm's performance. The positive correlation between cumulative human resources functions and business performance. We just have to emphasize on employees' performance in every aspect of the system, trying to be consistent and fully aligned with the strategy of the organization. Depending on the focus of business' strategy (innovation, cost reduction etc.) and the type of employee role behaviors, there is an appropriate set of HR practices. For creating value-driven HR within organizations, managers need to recognize it as an equal strategic business partner with great impact on stakeholders' interests. HR professionals have to develop more powerful HR agendas, designed for delivering HR value, and then to develop their professionals, making them capable of delivering these agendas To that end, HR executives need to be aware of the confluence of economic, social, and technological forces that drive industry competition, so to be able to create value through their HR deliverables . Further down, HR policies and practices should aim at effectively managing and utilizing knowledge workers; implementing performance appraisals

and reward employees according to their performance; provide developmental opportunities for all organizational members so to enhance their innovation, creativity and flexibility, and eventually to increase business competitiveness; applying changes to the extent they lead to improved staffing, training and communication channels for the common good of the company and its employees. A real contribution to performance, in its multidimensional meaning, will only happen once we approach HR from a more holistic and balanced perspective, including part of the organizational climate and culture, aimed at bringing about the alignment between individual values, corporate values and societal values. There is thus an important role for an astutely formed HR strategy, for a blend of knowledge workers management practices and investments which will help the organization to develop innovative and agile behavior, while not neglecting the stable harvesting of its existing operations. In this regard, organizations have to continuously train and develop their employees, by building their skills, knowledge and capabilities for making them capable of reaching competitive advantage through a well-trained, qualified and competitive workforce. For the economy as a whole, employees' higher skills, competencies, and capabilities can lead to more prosperous economies and more profitable companies as well. Accordingly, MacDuffie stated that "innovative human resource practices are likely to contribute to improved economic performance only when three conditions are met: when employees possess knowledge and skills that managers lack; when employees are motivated to apply these skills and knowledge through discretionary effort; and when the firm's business or production strategy can only be achieved when employees contribute such discretionary effort". This will be a unique blending for each organization, which is difficult to grasp by outsiders – competitors and thus contributes to sustained competitive advantage. Author concludes that HR system encompasses many different functions, all of which can deliver value in different ways for organizations. Real progress can only be achieved by looking at the broader picture of developments in the field of strategic management, the speed of change within firms and what this implies for managing knowledge workers and stakeholders. In that event, all HR activities job analysis, job descriptions, selection, T&D, training evaluation, performance appraisal, rewards etc. must be considered and should be integrated to risk. Different labels have been used describe this research, including high-performance work systems, high-commitment work systems, high-involvement work systems and high-performance human resource management.<sup>1</sup> Their common

thread is that achieving and sustaining high levels of performance requires a positive workplace environment and practices that develop and leverage employees' knowledge and ability to create value. While the specific practices need to be tailored to fit different industries and occupations, they generally include selection, training, mentoring, incentives, knowledge-sharing, partnership-based labor-management relations and other shared decision making mechanisms.<sup>2</sup> These practices are most effective when they are implemented together and in concert with new capital or technological investments. Researchers have documented the impact of high-performance work practices on efficiency outcomes such as worker productivity and equipment reliability;<sup>4</sup> on quality outcomes such as manufacturing quality,<sup>5</sup> customer service, and patient mortality;<sup>6</sup> on financial performance and profitability;<sup>7</sup> and on a broad array of other performance outcomes.<sup>8</sup> Although some studies have found mixed results regarding performance differences associated with these work practices,<sup>9</sup> many other studies have found that these work practices explain significant performance differences among auto assembly and parts plants, steel mills and finishing lines,<sup>10</sup> call centers,<sup>11</sup> airlines,<sup>12</sup> banks,<sup>13</sup> health care clinics and hospitals,<sup>14</sup> and high technology firms.<sup>15</sup> The magnitude of the effects is substantial, with performance premiums ranging between 15 percent and 30 percent. Several controls, such as 'size', 'capital intensity', 'industry' and 'union intensity', may influence the adoption of business strategies and HRM policies, and have an impact on HRM outputs and organizational performance. This means that organizations do not operate in a vacuum, but controls may influence the adoption of business strategies and HRM policies, and may have a positive or negative impact on HRM outputs and organizational performance. In summary, the causal pathway indicated by the operational model in Figure 1, refers to an 'indirect linkage' through HRM outcomes, between HRM policies and organizational performance, and to a 'direct linkage', between HRM policies and organizational performance. However, it is not required these linkages to be simultaneously present. It is very possible even in the absence of a direct linkage, some policies to significantly contribute to business performance through the intervening process. Furthermore, business strategies influence HRM policies, and the whole process may be 'moderated' by organizational level controls. Author concludes that although past research has demonstrated that there exists a relationship between HRM policies and organizational performance, it has neglected to investigate the mediating mechanisms, usually called the "black box", through

which HRM policies are hypothesized to affect organizational performance. The testing of which HRM policies to be used in a study in new contexts is of much importance . Although little is known about the so-called “black box” that lies between the two end points of the HRM-performance relationship (Wright & Gardner, 2003), i.e. HRM as input and performance as output, this study treats the black box as a mediating stage in the HRM-performance relationship, considering as well that HRM policies are also influenced by contingencies such as business strategies. The operational model in this study advocates that HRM policies directly influence HRM outcomes such as collective skills, attitudes, and behaviors, and thus, indirectly through HRM outcomes improve organizational performance. Furthermore, it argues that HRM policies are significantly, positively and directly related to organizational performance. In addition, it assumes that HRM policies are influenced by business strategies. Thus, the findings of this study support that the relationship between HRM policies and organizational performance is partially mediated through HRM outcomes and HRM policies are moderated by business strategies. Realizing that business strategies and HRM policies are not mutually independent, organizations should develop HRM policies with respect to the business strategies they follow. For achieving this, companies should have HRM departments and representation of these departments at the board level. Organizational performance depends heavily on HRM outcomes such as skills, attitudes and behavior. Thus, the emphasis of the development of HRM policies and business strategies should be directed in improving these HRM outcomes. Participation, involvement, compensation, incentives, communication, promotion, training and development, performance appraisal, work design, and selection may constitute in a descending order the important aspects of the HRM strategy. Quality, innovation, and cost may constitute in a descending order the important aspects of the business strategy. Satisfaction, motivation, competence, cooperation with management, cooperation among employees, commitment, retention, and presence may constitute in a descending order the important aspects of the HRM outcomes. Knowledge workers themselves almost always have thought through these questions and can answer them. Still, it then usually takes time and hard work to restructure their jobs so that they can actually make the contribution they are already being paid for. However, asking the questions and taking action on the answers usually doubles or triples knowledge-worker productivity, and quite fast. Knowledge worker’s responsibility for their own contribution. It is the knowledge

worker's decision what he or she should be held accountable for in terms of quality and quantity with respect to time and with respect to cost. Knowledge workers have to have autonomy and that entails responsibility. ▪ Continuous innovation has to be built into the knowledge worker's job. ▪ Continuous learning and continuous teaching have to be built into the job. Large extent a matter of defining the task. It requires the difficult, risk-taking, and always controversial definition as to what "results" are for a given enterprise and a given activity. We therefore actually *know* how to do it. Nevertheless, the question is a completely new one for most organizations and also for most knowledge workers. To answer it requires controversy, requires dissent. No matter how important the manual part of their work—and it may take as much time as it did in the case of the AT&T installers—the focus has to be on making the technologist knowledgeable, responsible, and productive as a knowledge worker

In research paper with title Human Resources (HR) as a Strategic Business Partner: Value Creation and Risk Reduction Capacity in magazine International Journal of Human Resource Studies ISSN 2162-3058 2014, Vol. 4, No. 1 authors Fotios V. Mitsakis Dept. of Human Resource Management, University of Strathclyde Glasgow authors James K. Harter states that The potential for longitudinal research in the area of employee engagement and satisfaction rests on the usefulness of instruments for managers and employees. Useful instruments are those that provide information that managers can act on to improve their management practices. Future research should emphasize longitudinal designs that study changes in employee satisfaction engagement, the causes of such changes, and the resulting usefulness to the business. The best opportunity for such research within businesses may rest on the application of efficient and intuitively actionable measures of the constructs of interest. Author lastly concludes that employee satisfaction and engagement are related to meaningful business outcomes at a magnitude that is important to many organizations and that these correlations generalize across companies. An efficient composite of items measuring issues at the heart of the workplace—issues that are important to employees and that managers can influence has substantial implications for a further understanding of the true nature of overall satisfaction at the business-unit level. The effect sizes for the employee engagement composite measure of antecedents to satisfaction were of similar magnitude to the effect sizes for the more broadly defined overall satisfaction measure, even after correction for measurement error in the independent variables.

In research paper with title Human resource management in Indian context in magazine International Journal of Research in Applied, Natural and Social Sciences ISSN: 2321-8851; ISSN(P): Vol. 2, Issue 2, Feb 2014, 135-142 authors M. Raviibabau & Ashghar Eimani describes seven critical areas of hrm .These areas are

Workforce Demographics and Diversity

- Recruitment
- Employee Engagement and Talent Retention
- Employee Motivation
- Globalization of Business
- Economic and Technological Changes
- Managing Change
- Developing Leadership
- Conflict Management
- Fostering Excellence

Authors conclude that India has witnessed a revolution in the field of Human Resource; it has gone from being just a support function to being a strategic partner in the growth of businesses. It has transformed itself being merely Personnel Management – maintain records and ensure statutory compliances, while doing the bare minimum to keep employee satisfaction on an even keel to being an integrated part of the corporate machinery. The HR function of 21st century India has made a transition from being ‘behind-the scenes’ support appendage to becoming the critical differentiator in business. Rapid globalization has made companies realize knowledge workers are the key to growth, the only strategic resource that any enterprise truly needs. This has led to companies routinely using their innovative HR practices as their USP (Unique Selling Proposition) to keep up with the times in the wake of a rapidly changing labor landscape. Companies now recognize that a ‘Highly engaged employee’ the key to success, across business sectors. HR managers should know how to handle employee-employer and employee-employee conflicts without hurting their feelings. Although it is almost impossible to avoid conflicts among knowledge workers still handling them tactfully can help HR managers to resolve the issues. They should be able to listen to each party, decide and communicate to them in a convincing manner in order to avoid future conflicts. Lastly author writes that

Bringing change in organizational processes and procedures, implementing it and then managing it is one of the biggest concerns of HR managers. Business environment is so volatile. Technology keeps changing every now and then. Upgrading the existing technology and training knowledge workers for them is a real headache for HR department. The success rate of technology change depends how well HRD can handle the change and manage knowledge workers issues in the process.

In research paper with title In research paper with [A Study of Perception of Managers of Tyre Industry in](#) magazine International Research Journal of Business and management – ISSN: 2321-8851; ISSN 2322-083X Feb 2014, 135-142 authors Viresh Mathur VP, Corporate HR Balkrishna Industries Ltd. Mumbai, India **Nair Manju** Principal, International School of Informatics & Management Jaipur, India. Summarized about tire industry that the Indian Tire industry like all other labor intensive industries, has come a long way traversing path treaded with turbulent macro and micro environmental factors ranging from changing Governments and their policies, technological complexities, constant raw materials cost fluctuations-having direct impact on operating results, management styles and priorities and resultant unsettled human resource practices. Not to underplay the radical change in the quality, design and formats of product itself and the end user expectations and consciousness. The current turnover of the Indian Tire Industry is over 30,000 Cores which is expected to further rise by 15-20% in the next 5 years, due to the resurgence of the economy and the growth of automobile sector. Today all tire companies are in an expansion mode. Apart from domestic demands, they are aiming for increased exports. All companies also have a “China Policy” both collaborative and competitive. It is surprising that over 95% turnover of the Indian Tire Industry is attributable to just around 10 large players. Remaining turnover is shared by small players who are almost triple in strength. This factor places immense importance on the way Industrial Relations are handled by these large companies.

Author concludes that The HR function has to play a crucial role in the transformation and the change adaptation process which is the foremost need in the post liberalization era. Going by the inclusive development philosophy of HR – HR has to include Industrial Relations Management as its one of the most important responsibility. The process of consultative dialogue and discussions with workers is critical. Workers have to be involved in matters relating to their working and their bound to come out with unique and innovative responses. The young work force in

India is marked by high aspirations and flexibility. There is ample opportunity to practice and shape Industrial Relations pro-actively. Organizations need not just increase the communication but essentially establish a constant dialogue and conversation with the Workers. It calls for willingness to emphatically understand the others point of view and act on it. This has to be the enlightened practice of industrial democracy. As more companies operate internationally, the impact on various business functions becomes more pronounced. This is particularly true in case of Human Resources Management and Industrial relations functions. Companies have to work for a new industrial relations culture – from reactive to proactive, from passive to participative, from ad-hoc to permanent and from legalistic to collaborative.

In research paper with title Human Resource Management in 21st Century: Issues & Challenges & Possible Solutions to Attain Competitiveness, International Journal of Academic Research in Business and Social Sciences September 2012, Vol. 2, No. 9 ISSN: 2222-6990 – Muhammad HASHIM Lecturer Government College of Management Sciences Peshawar, MS Research scholar, Gandhara University, Peshawar, Pakistan Fazal HAMEED Officer Grade-II, National Bank of Pakistan, Peshawar, Pakistan Pesha Officer Grade-II, National Bank of Pakistan, Pesha authors recommends that most of the organizations are competing globally for their best reputation, by keeping in view the above issues and challenges the HR managers are responsible to train all the young workers, to provide them best rewards as a result they will show their commitment and loyalty. Secondly, technology has changed each and everything with great extent, the methods of production, the process of recruitment, the training techniques, new equipment and technology should be introduced and purchase by the organization and training should be provided to young and educated workers. Keeping in mind by HR manager the issue of Globalization, to cope this issue the concept of Globalize Human Resource Management (GHRM) should be implemented to prepare the skill knowledge workers or manager worldwide. This way the trend of globalization can be minimized with some extent. Author secondly states that “Best Practices” is a set of HR practices if implemented well, can improve the performance of business altogether. “Contingency” as a best “fit” approach is used as business strategy which will improve the performance of business. “Bundles” generate bulk of HR practices that will elevate the effectiveness and efficiency of business. Human resource manager should develop such a HR system which consistent with other organization elements such as organization strategies, goals and organization style,

and organization planning. One of the great debate also going on work force diversity, the HR manager responsible to make such a broad strategies which help to adjust employees in global organization, HR must develop the ability to compete in the international market. Organization culture is also another important element which must be consider by the HR manager, the culture must be like to shape their behavior and beliefs to observe to what is imperative. To provide more and more talent knowledge workers into the organization the HR manager must re-decide and re-arrange the staffing functions, for recruitment selection, training and transfer, promotion, dismissals, placement, demotion and layoffs of the employees separate strategies should be developed and implemented. Thirdly, authors state that Today's organizations are facing the dynamic environment which requires organizations to adopt changes and work for optimize profit (Robbins 2005). Organizations come across too many challenges or uncertainties about human resource of 21st century including globalization, advent of the latest technology use, more and more innovations, economic and political instability and ethical and ecological challenges. mentions that "technology is advancing so quickly that it is forcing organizations to change their strategies".

Therefore, in this way organizations organize their HR in accordance with the change in their products styles. All the factors related to dynamic changes are about the change in HR, so HR needs to grip all this dynamic changes that ensure that they have employed right HR with the right knowledge, abilities and skills that are required for a particular job to be done. Knowledge workers and organizations need changing environment for their stability and core values.

Authors describes certain challenges before HR managers for future these are like Demographic shift as due to the dynamic environment, there is a challenge of demographic shift. Demographic categories include gender, race, nationality, age, religion and physical disability. The percentage of female employees increases to 48% by 2008 with an increase in their turnout ratio. With the growth of urbanization, opportunities of jobs for females also got increased. In America, five out of every six new workers is female. The workforce is aging with 10,000 "baby boomers" turning 55 every days and many organizations employed part retirement age either for financial reasons or due to importance of their work. In this era, organizations hire employees from different countries so there is unique environment of organization

because they have different languages and cultures. Organizations have their own culture which makes employees feel free and communicate with each other and also with the top management. Second challenge is Work arrangements is another reason for change in workforce. Due to the latest technology including high speed internet and mobile communication, there is great variety that how and where employees do work. Now a number of employees work in outskirts. For example: software engineers get their projects through online linkage and complete their work at home instead of going to offices. Work preferences are also another amazing factor for the diversity in workforce. The young and unmarried workers are willing to work 60 hours per week for the sake of their career while married knowledge workers manage both the work and family both and need flexible work arrangement and prefer lenient job.

Above mentioned are some of the challenges about diversity in the work arrangements and demographic shift which put pressure on the organizations to create a cohesive team with vastly different skills and knowledge to support organizational strategies. Knowledge- based economy as there is need to diversify the HRM strategies due to the knowledge-based economy and to compete with the today's competitors and achieve competitive advantage. The trend is shifted from industry-based economy to knowledge based economy for providing value to the customers as well as to the employees at the same time. In industry-based economy, manager focuses on the efficiency of work only but now in knowledge-based economy, the manager's focus is on both the effectiveness and efficiency. In this Era, there is demand of expertise, innovation, entrepreneurial skills and need of diverse workforce. Enhancement in creativity & innovation as the well-known organizations focus on the skills of workforce. By identifying changes, they create new and innovative product. Gaining maximum market share as due to diversity, there is need to focus on the market place and market knowledge to know the customers' needs and wants and to manufacture products to gain maximum market share. Through drawing experiences, team work and team skills have become more valuable for quick response to the opportunities within new market place. Employee-employer relationship In the 21st century, there is also a change in the relationship between employee and employer. Organization work without centralization and operate in the flexible environment. Employees work under friendly environment. In the global competitive environment, employees are loyal to organizations and work with full interest. They easily

communicate with the top management about new strategies and trends of global market. Through exchange of ideas, they come to end with new innovative thing which are really helpful for achieving organizational goal.

Lastly authors conclude that The first foremost work by the HR is to developed sound organizational structure with strong interpersonal skill to employees, and also to train employees by introducing them the concept of globalize human resource management to perform better in the global organization context. All these issues and challenges like, work force diversity, leadership development. Change management, organizational effectiveness, Globalization, E- Commerce, succession planning and compensation etc, Can be best management by HR manager when they will work with HR practices, such as rigid recruitment and selection policy, division of jobs, empowerment, encouraging diversity in the workplace, training and development of the work force, fostering innovation, proper assigning of duties and responsibilities, managing knowledge and other functions as are shown. Nutshell when HR works enthusiastically by keeping all the practices in mind, competitive advantages can thus be accomplished, the value of human resource can be improved, organization efficiency can be enhanced, and the organization will sustain to survive.

Authors, lastly describes about human capital management as Human capital management is the approach that perceives employee staffing and employees as asset or human capital. 21st century organizations support human capital management by providing employees rewards while clearly highlighting consistent performance expected from them. Organizations support continuously to their employees for being productive for achieving the goals of the company. And Counseling as counseling is the interaction between two individuals. According to Patterson “counseling is the process involving interpersonal relationships between two persons the counselor helping the other person called client for supporting in difficult work. In 21st century counseling practice is the useful option for organizations for training their employees. Authors conclude that the emergence of HRM in 21stcentury has got the priority for developing positive employment relations. It will successfully improve productivity and performance of HR and will also play role in successful interpersonal relationships. Competitive advantage is achieved by organizations when they truly work onHRM practices. These practices include recruitment, selection and encouraging suitable employees for endorsing diversity of workplace form an aging knowledge and innovation whilst putting more focus on employee development and

engagement. By focusing HR factors that influence on human resource in 21st century, solutions can be provided. Through the attentive and thoughtful approach being used in management of HR, competitive advantage can be attained and organizational productivity can be enhanced resultantly. The importance of HR has become too obvious because of complex and uncertain environment. Therefore, organizations need to bring more furtherance in HR department due to globalization, technological advancements, and competition etc. Now firms are operating and expanding their business across the globe, and firms are facing diverse cultures, values, and behaviors of knowledge workers, which they bring with themselves in the workplace. Managing the diverse relations, behaviors, cultures, and values has become a severe challenge for firms and they need to take prudent decisions to sort-out such problems. In the fickle world of business, firms must focus on the up skilling of their employees to cope with complexity and to be “IN” in the race. It is said that employees are the “ASSETS” of firms, and firms fail without workforce, so firms should not solely rely on technologies but they also need an effective workforce to run their business successfully. Today employees are very productive than before because they understand the firm’s demand and the changing trends of business world, so employees know that they will have to be responsive and multi-skilled if they want to continue their jobs.

In research paper with title “Talent Management: Empirical Research Results” in magazine International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online) Vol. 2, Issue 1, pp: (289-295), - September 2014, author Diksha Garg, 2Kavita Rani research Scholar, Kurukshetra University, Haryana, India states that The current concept and practices of Talent Management were developed in a response to a paper published in 1998 by McKinsey & Company titled the ‘The War on Talent’ (McKinsey & Company, 2001). The research conducted by McKinsey highlighted the importance of talent in a competitive business environment. Although, it is important to note that the notion of human capital management had been around since the 70’s (Schein, 1977). The business scenario is changing rapidly. Success in achieving business objectives requires talented resources that are capable of thinking and doing things differently. Identifying and acquiring talent has become difficult; it is more difficult to retain them because talents are very mobile. Talent is perceived as a natural ability or aptitude which is closely related with a capacity for achieving success. Talent is a fluid notion and is defined differently by different organizations.

However, the basic features of talent in the work place relate to skills, knowledge, cognitive ability and potential for development. The need to develop and promote talent has become an important feature in the contemporary business environment. Talent has become a precious commodity and how organizations manage talent has potential to greatly impact on their performance. This is due to the challenges imposed on business as a result of: The recent economic downturn where keeping ahead of competitors to survive and flourish has become imperative. Competition between employers has increased dramatically from the regional to the global levels as a result of the globalization process. Increased flexibility and opportunity in the labor market for potential employees. Evidence has shown that there is a shortage of managerial talent leading to increased competition for the best knowledge workers managers. In the role of business partner, HR leaders work closely with senior management to attract, hire, develop and retain talent. Yet the skills shortage presents both socio-economic and cultural challenges as talent crosses borders. Thus, in view of workforce trends such as shifting demographics, global supply chains, the aging workforce and increasing global mobility, forward-looking organizations must rethink their approach to talent management to best harness talent. By doing so, they will be positively positioned to succeed in a highly competitive marketplace.

Author describes the process of talent management with various steps .specifically these are eight steps which are mentioned below.

Step: 1 Workforce planning **the** key of talent management begins with talent searching and recognizing individuals for their unique strengths. Planning consist of the process of knowing how to select appropriate individuals as employees based on their skills, knowledge, pragmatism, maturity and making sure that they are smoothly fitted into their assigned roles as well as the overall system. Planning further refer to using the available assets for the effective implementation of the production plan.

Step: 2 Recruiting

The recruitment and selection activities are the major functions of the HR department as they create the competitive strength of the company. The company has to decide the position to be filled through manpower planning, carrying job analysis, developing the job description, and job specification, followed by the finalizing the man specification. Through an integrated process of recruiting, assessment, evaluation, and hiring the business brings knowledge workers into the organization.

Step: 3 On boarding

The organization must train and enable employees to become productive and integrated into the company more quickly. A carefully designed placement system improves employee morale, which in turn reduces employee turnover and absenteeism.

#### Step: 4 Performance Management

Performance management is the means through which managers ensure that employees' activities and output are congruent with the organizational goal. It is central to gaining competitive advantage, and comprises three phases- defining performance, measuring performance, and taking a feedback on the performance.

#### Step 5: Training and Performance Support

Training is an HRD mechanism that improves the knowledge, skills and the performance of the employee. Most of the organizations identify specific training needs prior to training its knowledge workers. Once the training needs are identified, development of the training objectives should be carried out. Trained and developed talents have a greater probability of staying and growing in a company.

#### Step 6: Succession Planning

Investment in human capital requires careful planning. Under the talent management umbrella, succession planning and leadership development are important organizational business strategies to develop and retain talent. As the organization evolves and changes, there is a continuous need to move knowledge workers into new positions. Succession planning, a very important function, enables managers and individuals to identify the right candidates for a position. This function also must be aligned with the business plan to understand and meet requirements for key positions 3-5 years out. While this is often a process reserved for managers and executives, it is more commonly applied across the organization.

#### Step 7: Compensation and Benefits:

Compensation management is a strategic issue and includes all forms of pay and rewards given to employees. A sound and effective compensation system is the key driver of motivation, employee retention, and enhanced quality of work life. Many organizations try to tie the compensation plan directly to performance management so that compensation, incentives, and benefits align with business goals and business execution.

#### Step 8: Critical Skills Gap Analysis:

This is a process we identify as an important, often overlooked function in many industries and organizations. While often done on a project basis, it can be "business-critical." For example, today industries like the Federal Government, Utilities, Telecommunications, and Energy are facing large populations which are retiring. How do you identify the roles, individuals, and competencies which are leaving? What should you do to fill these gaps? We call this "critical talent management" and many organizations are going through this now.

Author further describes advantages of talent management:

Talent management is beneficial to both the organization and the employees.

Organization benefits -

1. Increase productivity and capability.
2. A better linkage between individual's efforts and organizational goals.
3. Commitment of valued employees
4. Reduced turnover
5. Increased bench strength and a better fit between knowledge workers's jobs and skills.

Employee benefits -

1. High motivation and commitment.
2. Career development.
3. Increasing knowledge about and contribution company goals.
4. Sustained motivation and job satisfaction

Lastly, author made specific comment about the future scope for implementation of talent management that The world economic Forum and Boston consulting Group study indicates that I the years, 2020 and 2030, India will face a shortage of right skills talents in sectors such as IT and leisure, and a more pronounced gap in manufacturing and engineering construction. The study unambiguously points out, 'The talent shock is coming'. It will arrive in years, not decades, regardless of the current economic crisis. It is time for all involved stakeholders to ally forces and prepare for an era of extreme labor scarcity, significant talent mobility, and a truly global workforce. Even today, there are shortages in many areas of technology, teaching/ research, and in industry. So that, anticipated workforce changes and cost-effective ways to access talent are key to the next generation of talent management. Predictive workforce monitoring will lead to effective strategic talent decision-

making. Factors such as flexible talent sourcing, customized and personalized rewards, distributed and influential leadership, and unified and compassionate workplace cultures will be important for successful talent management. Companies will increasingly utilize different types of employment relationships, and nonstandard employment models will continue to evolve. Free agency employment relationships—contracting for the best talent on a as-needed basis—will become more common. To benefit from the knowledge, skills and corporate memory of mature workers, phased retirement will become prevalent. Keeping workers engaged—particularly the next generations—may call for HR to redesign the workweek, benefits packages and reward programs. Scenario planning and talent-match databases will become essential planning tools. In closing, to sustain outstanding business results in a global economy, organizations will rethink and reinvent their approaches to talent management. Effective talent management calls for strong participatory leadership, organizational buy-in, employee engagement and workplace scorecards with talent management metrics. Companies that master talent management will be well-positioned for long-term growth in workforce performance for years to come.

In research article on Talent Management with title empirical Research Results in magazine International Journal of Research in Business Management Vol. 2, Issue 7, Jul 2014, 23-36), - September 2014, authors M. DHANABHAKYAM<sup>1</sup> & K. KOKILAMBAL<sup>2</sup> authors state that there is lack of clarity on the term “talent management” which makes researchers and practitioners left to define the term to suit to it to their requirements. Talent Management according to Lewis and Heckman’s (2006) comprises of three different conceptions which are as follows a) a collection of typical human resource department practices, b) the flow of human resources throughout the organization, and thirdly c) sourcing, developing and rewarding employee talent. There have been many practices adopted by different industries in order to manage the talent available with them such as team building, training, identifying talent, talent development, constant feedback etc. Talent management starts with recruitment process, alignment of the workforce to the organization, develop the knowledge workers and get constant feedback to help in performance of an individual or an organization. The practices adopted generally differ from industry to industry in many cases and certain practices are more suitable for certain industries over others. At the same time there are some practices which are prevalent in most of the industries. This paper aims to bring out talent management practices which are

adopted in four major industries Banking, Healthcare, Manufacturing and IT industry. And also practices which are more common among different industries. This research aims to map the existing talent management practices and its benefits to an individual or an organization. Secondly authors mentions about Talent Management in Healthcare Industry as The modern healthcare industry comprises of all products and services that are involved in the diagnosis, treatment and prevention of physical and mental impairments in human beings. In the United States, according to a 1997 Census of the Healthcare Industry, there existed more than 500,000 healthcare facilities, employed around 12 million knowledge workers and contributed more than US \$ 1.3 trillion to the country's economy (Profile of the Healthcare Industry, 2005). In 2012, the National Health Service in the United Kingdom employed around 146,000 doctors and 370,000 nurses and dealt with over 1 million patients every 36 years (NHS Confederation, 2014) The size of the Indian healthcare industry in 2009 was estimated to be a whopping US \$ 50 billion and was projected to grow at 23% per annum (Cygnus consulting & Business Research, 2010). Given that the potential for growth of the healthcare industry is huge, it is imperative that its talent management practices be studied for improved talent retention. Effective talent management in this sector can vastly improve healthcare models. Availability of health workers is an indicator of a nation's capacity to meet its citizens' health needs. Skill categories and training levels are important highlighting workforce training as a core talent management practice. In developing countries, salary incentives, housing and job rotation opportunities have been identified as good talent retainers A British study indicated that healthcare employees expected their employers to provide infrastructure, good HR practices and support (Hyde et.al, 2009). A Dutch study that focused exclusively on attracting and retaining female medical practitioners investigated family friendly arrangements such as flexible working hours and found that the effect of such practices on working hours is dependent on proper support for career goals. Author concludes that the different talent management practices that are being practiced in few industries and the common practices that are practiced across different industries. From the literature review on talent management few insights can be had such as there is scarcity for talent, all organizations are seeking the same kind of talent very aggressively hence retention becomes a crucial issue. Talent management has to start from the interview process to check if the employee is a right fit to the organization till employee separation where the employee parts the

organization. It also has to be noted that talent management practices will differ across different levels and industries and hence proper care has to be taken to ensure that the right approach is taken for better results. With the increasing competition, dearth of talent, globalization and ever growing need to manage talent the scope for study of talent management practice gains importance.

In research article on Talent Management with title empirical Research Results in magazine IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 12.Ver.II (Dec. 2014), PP 39-43 authors Mr. Shyamasundar Tripathy state that each organization focused on finding, developing and keeping highly talented knowledge workers in their teams and organizations excel above the competition. Effective leaders know that a key competitive differentiator today is in innovative, critical thinking, prudent risk-taking, and ambitious talent. The constant ebb and flow of the current economic tide makes it is increasingly important for leaders to identify retain and advance top talent to ensure they have the right knowledge workers, at the right time in the right positions. In other words, that there is alignment between leadership, business strategy, talent development and succession planning. Here are six strategies you can employ to gain a talent advantage. Secondly ,author state that When companies complain that they can't find enough good knowledge workers, the cause, in our view, is most likely to be deep-rooted and centered on a misalignment between the strategic goals of the business and the efforts of the company's talent acquisition professionals. Long term business plans must be flexible – they need to change when the circumstances that gave rise to them change. If there is a fundamental change in direction or focus, everything else must be reviewed and where necessary adapted or even redesigned to reflect the change. Too often, the talent acquisition plan gets overlooked, or cannot flex quickly enough, and the result is the business begins to fall behind competitors in the 'war for talent. Designing the talent acquisition strategy is a critical first step in allowing leaders in the HR function to get that crucial alignment. These are the key, seven steps we followed and can be used as a template for your own efforts. Lastly author concludes that thoughtful organizations and leaders build strategy around acquiring talent to meet both current and future business needs. Before adding staff or simply filling a vacant position, it is important to have clear sense of the —gaps|| as they relate to the skill sets needed to meet current and future performance requirements. Otherwise, you are simply adding knowledge workers that may or may

not contribute to the organization's success. Once a gap analysis has been conducted and managers have a good sense of their staffing needs including the availability of talent, they are in a position to execute on a plan to acquire the needed skills and talent. Often organizations will use more than one method (e.g. recruiting, sourcing, training & development). Whether acquiring outside talent or developing talent from within the organization, ideally, managers should be building a network or —hot file|| of candidates to draw from when the need arises. Recruiting and sourcing can certainly be outsourced to staffing & recruitment agencies, allowing businesses to focus more time on core competencies. With that said, good managers assume accountability for actively growing and developing their own knowledge workers – regardless of whether they use outside services to recruit or source candidates. The new talent paradigm requires the dynamic integration of HR and diversity strategy to optimize and unleash the creativity and innovation of a diverse and talented workforce..A clear business case for integrated HR/diversity efforts has not been articulated. While experts understand the need new talent paradigm calls for an active link between HR and diversity in articulating the need of business.

In research article on Talent Management with title empirical Research Results in magazine International Refereed Research Journal Vol.–IV, Issue–1, January 2013 E-ISSN 2229-4686 ISSN 2231-4172 authors Mr. Shyamasundar Tripathy state that Today, professionals in the human resource area are vital elements in the success of any organization. Their jobs require a new level sophistication that is unprecedented in human resource management, not surprisingly; their status in the organization has also been elevated as the name has changed. Companies today recognize the importance of knowledge workers in meeting their goals. For instance, at Standard Chartered Bank and Sony Music Entertainment, knowledge workers are “viewed as how each employee is important toward the organization achieving its strategic goals.” In return, these knowledge workers have needs to be met. Consequently, when major decisions affecting the organization and its knowledge workers are made by the company's executives, HR typically is present to represent the knowledge workers-side of the business. Many colleges and universities are also helping to prepare HRM professionals by offering concentrations and majors in the discipline. Additionally, there exists an accreditation process for HRM professionals. The society for Human Resource Management offers opportunities for individuals to distinguish themselves in the field by achieving a level of proficiency that has been predetermined by the

Human Resource Certification Institute as necessary for successful handling of human resource management affairs. Michie and Sheehan-Quinn (2001) surveyed over 200 manufacturing firms in the UK to investigate the relationship between corporate performance and the use of flexible work practices, human resource systems and industrial relations. They found that 'low-road' practices - including short-term contracts, lack of employer commitment to job security, low levels of training and unsophisticated human resource practices were negatively correlated with corporate performance. In contrast, they established a positive correlation between good corporate performance and 'high-road' work practices - 'high-commitment' organizations or 'transformed' workplaces. They also found that HR practices are more likely to make a contribution to competitive success when introduced as a comprehensive package, or 'bundle' of practices .Kelliher and Riley highlight evidence to support the view that the impact of HRM is greatest when it involves a set of coherent policies and practices, also consider that HR initiatives should be implemented as part of an integrated package. They instance functional flexibility, which leads to an intensification of work, but in the cases they studied this was less of an issue when supported by higher levels of remuneration. Since mid-1990s progress has been made in conceptualizing the problem and measuring results. Huang (2000) looked at 315 firms in Taiwan and related their human resource practices to their organizational performance. Huang's study shows a significant relationship between performance and the effectiveness of their HR functions, including planning, staffing, appraisal, compensation, training and development. Lastly, author comments upon The theme of our research is to establish the nature and importance of human resource management (HRM) and how it emerged, to provide some evidence of its context, to discuss its potential and future development. Human recourse requires more attention and careful management than any other resource of an organization. In the 1980's and early 1990's the term HRM came into academic horizons and gradually used by the practitioners and researchers worldwide. The last two decades have seen a marked change in HRM particularly in those activities, which involve acquiring, developing, motivating and utilizing human resources actively in the business. The major purpose of HRM is to increase and improve the productive contribution of personnel to the organization in more ethical, social, and administratively responsible way. This purpose emerged from commonly called industrial relations, personnel administration, industrial psychology and personal management. HRM is not just another personnel

management fad. Research shows that its aim is to create a whole organizational culture that binds workers to the company's objectives with full professional commitment, integration, and quality work. The 21st century will bring with it enormous opportunities but also enormous pressure, if the companies will not improve the productivity of the knowledge workers and treat them "human being" which are the vital objects of all the economic activities leading towards industrial development. Now there is worldwide consensus on human resource being one of the major means of increasing efficiency, productivity and prosperity of the firm. The present scenario of HRM did not suddenly appear. A review of this evolution shows how the effort of early pioneer led today's more sophisticated and more proactive method of utilization 6Ms i.e. man, money, material, machine, method and market. Indeed, the human resources planning have been a function of management since the origin of modern organization . The major four stages of growth and evolution of the HRM function are:: Here the main purpose is seen as maintaining harmony and avoiding disruption through strikes etc., and exists generally where organizations are operating in near monopoly situations with assured growth - the interactions between Human Resource and operating managers being assured under normal situations at this stage of reactive Human Resource Management (HRM). Lastly,author concludes that As the time moves on steadily and relentlessly, in the new millennium, we need to review the challenges for the HR function and its responsibilities in organizations to cope with the new trends. In the start of the century it is very convenient to know how far and in what direction we are progressing, but also give the Distance to our destination, and are often excellent anchors to take time off to re-examine the future course of action for the organization and resource management. Realistically, it is now been said that we have moved to the era of not just change, but an accelerated rate of change. As compared to the past, the 21st century corporations are getting to be globally market driven ones which 'invest anywhere and share every where'in their conceptualization. At a practical level, we must anticipate and prepare for the likely HR challenges in general that exists, or may be expected in the coming future - the main purpose and theme of this article. They are consequent to the vastly increased competition for many and likely in future, due to rapid development of technology, especially, the impact of IT, and internal necessities, and/or resulting from above stated causes. With technology up gradations, much greater use of it and forthcoming e-commerce etc. new breed of 'knowledge workers' in 'learning organizations' will

make the differentiation. This intellectual capital will demand much nurturing from the enterprise, in order to give back in the shape of superior results.

### **3.6) Conclusion:**

From the views expressed in various papers, journals, books, periodicals, discussed in the literature review, the researcher would like to conclude that :

1. In view of advanced changing technologies, computer driven manufacturing processes, conventional skills are getting obsolete barring few operational requirements.
2. “Manual” element is getting replaced by “knowledge” element.
3. Definition of “knowledge worker”, defined previously, is changing as the competence call for “knowledge” not only for creation of knowledge but application of knowledge also. Hence, one who creates a programme and one operates a programme need to be taken within purview of definition of “knowledge worker”.
4. In the era of advance technology, in Computer Driven Manufacturing Processes, knowledge based workers are and will be preferred.
5. For effective engagement and management of knowledge based workers, HR policies need to be reviewed for innovation.

## **Chapter 4**

# **Research Methodology**

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This topic covers the problem statement, need and significance, objectives, hypothesis, scope of the study and research methods used for the same.

#### **4.1) Problem statement:**

With the introduction of LPG, there has been business process reengineering in every sector to compete in the global market. Auto Engineering Industries, in Chakan, Pune have also undergone the same. They adopted advance technology, techniques, plant & machinery to cope with the CQD (Cost, Quality, Delivery) expectations of the domestic and global market. As a result, conventional technology, machines and skills get replaced by Computer Driven Manufacturing Technology Processes such as CNCs, automation, semi-automation, modernization. “Competence” required to operate such CNCs also changed. Consequently, the conventional “skills” are replaced by “knowledge”. Requirement of knowledge to deal with the Computer Driven Manufacturing Technology Processes, learn new techniques, programmes, global trends and concepts like SOPs, Flow Charts, Standards, Input – Process – Output parameters, calls for adaptability, flexibility in learning, applying advanced techniques. Therefore, in view of this, trend to engage “Knowledge” base workers at operative level in auto engineering industries in Chakan, Pune gets well accepted. Reasons for the same are :

- a) Availability of Diploma / Degree Engineers and Science Graduates due to impact of privatization of Higher Education.
- b) Competence requirement at operational level : Knowledge is preferred than the conventional skills due to advance technology leading to trend of hiring knowledge workers at operative level, in auto engineering industries.
- c) Diploma /Degree Engineers / Science Graduates are flexible in adopting, grasping, learning, implementing new techniques, concepts, systems, practices, changing requirements of global customers, global environment, multi skilling approach.
- d) Due to their exposure they contribute in documentation, presentation, dealing with the customers, auditors, visitors in a smarter way.
- e) Interest in self-development rather than unionization.

- f) Attitude of Traditional (Conventional) workers to resist change, oppose multi skilling working style, tempting towards union and union based activities.

However, there are issues while engaging and managing these “Knowledge Workers”:

- a) Hiring and retention issues.
- b) Lack of interest in rough – and – tough labor oriented jobs.
- c) Inconsistency and short association.
- d) Demanding in respect of pay package, growth, autonomy, freedom, learning opportunities, status.
- e) Not interested in monotonous jobs.

There are advantages of these Knowledge Workers. Similarly, there are certain issues also while engaging and managing them. Thinking of supervisory, managerial staff and Departmental Heads, and, sometimes at the Top Management is still traditional while managing them. It is leading to serious issues. The research is to identify issues and problems and come out with the probable suggestions.

Despite the recent attention to achieving maximum knowledge, there is no standard interpretation of what that means or what it takes to get it. The researcher has made an attempt to find out the factors influencing the various HR strategies related with knowledge workers by formulating self-administered questionnaire.

This chapter covers all the research methods used in the study, the primary data and secondary data sources are mentioned. The sample, sample size, and sample procedure is explained in the present topic. The statistical tools used and their significance in the present study are discussed in the detail in the various sections of the topic. The present chapter covers the variables used in the study to observe the opinion of managers about various aspects of Knowledge workers and related management issues. Data presentation in form of tools of presentations like tables is given. The graphical presentations of data and interpretations regarding various parameters and their significance to managers are mentioned using Pie charts and column graphs.

Researcher further valued the allied factors related knowledge workers . As, knowledge workers management strives to optimize results and alignment of all subsystems to achieve the overall results of the organization, any focus of knowledge

workers management within the organization (whether on department, process, employees, etc. should ultimately affect overall organizational knowledge workers management as well. Achieving the overall goal requires several ongoing activities, including identification and prioritization of desired results, establishing means to measure progress toward those results, setting standards for assessing how well results were achieved, tracking and measuring progress toward results, exchanging ongoing feedback among those participants working to achieve results, periodically managing progress, reinforcing activities that achieve results and intervening to improve progress where needed. Note that results themselves are also measures. Researcher would like to find various reasons associated with knowledge workers and related effectiveness.

#### **4.2) Need and significance of the study:**

The need and significance of the study are categorically divided into following elements

##### **a) Relevance -**

Knowledge workers management process is used to create and utilize an able and motivated workforce, to accomplish the basic organizational goals and establishing and maintain sound organizational structure and desirable working relationships among all the members of the organization. Further, Organizational growth secures the integration of individual or groups within the organization by co-ordination of the individual and group goals with those of the organization and creates facilities and opportunities for individual or group development so as to match it with the growth of the organization. The researcher has identified the role played by the organization in managing knowledge workers and desires to know how the KWS is actually used by the organizations in various sectors because the major purpose of running KWS system is to attain an effective utilization of human resources in the achievement of organizational goals.

**b) Applicability –**

Knowledge workers management related issues have a significant role to play in enhancing organizational effectiveness, by ensuring that all knowledge workers to understand their expected contribution to business objectives and are equipped with the skills and support to achieve this. The process drives engagement by ensuring effective communication throughout the organization and the linking of objectives, as well as enhancing the line manager relationship by encouraging line managers to build positive relationships with knowledge workers based on trust and empowerment.

Central to the successful introduction and application of knowledge workers management is clarity over what is meant by knowledge workers and an understanding of where the organization needs to be in its workers culture – including a focus on how knowledge workers can play their part, and benefit, in the process. Line managers play a key role in the implementation of strategies related with knowledge workers hence its success will depend largely on their ability to use this tool effectively.

**c) Methods -**

Sound research methods are used to do the present study. Organizational growth which has seen the transitions in employee behavior so, researcher has used scientific methods of gathering primary as well as secondary data to measure the knowledge workers issues and problems is a systematic way to assess an individual knowledge worker's and productivity in relation to certain pre-established criteria and organizational objectives.

**d) Originality & Novelty –**

The researcher is of the view that this study is novel in the following respect –

- So far, no research has been done on this subject in the field of Organizational Growths, almost all the segments of the industries in and around Pune. Therefore, the work is original and first of its kind in the field of Organizational growths.
- The study concerns itself with various industries in and around Pune, which is unique in itself as it is developed city consisting of lower middle class people

and surrounded by various segments of the industries.

- The study has concentrated upon auto engineering industries. The role of managers in said industries is considered for the study .Further the interrelationship between organization e and role played by knowledge workers management system is taken into consideration for the study

**e) Literature Available –**

The books on Human Resource management, reports on HR conferences provide number of insights. The research papers add new dimensions to the present study. Attending and referring proceedings of International conferences have helped the researcher in addressing number of unfold issues on knowledge workers management.

**f) Managerial Implications –**

The research will help the organizations in improving the present system to deal with knowledge workers. Pune is grown city from the industrialization point of view; the research will further help the employees in enhancing their awareness regarding changing knowledge workers management trends in HR. Therefore, it is important to study the organizational growth and related components in various industries mentioned in the scope of the study. The study is significant in the present scenario as knowledge workers management.

### **4.3) Objectives of the Study**

Following are the objectives of the study:

1. To study problems and issues related to knowledge workers engaged in the Computer Driven Manufacturing Technology Processes, in Auto Engineering Industries, in Chakan Industrial Area, Pune.
2. To study the existing approach and style of the management of knowledge workers (Diploma / Degree Engineers / Science Graduates) in the industries under research.
3. To study the training requirements in handling knowledge workers (Diploma / Degree Engineers /Science Graduates) , in the industries under research.

4. To compare the requirements of knowledge workers (Diploma / Degree Engineers / Science Graduates) and the traditional workers, in the industries under study.
5. To suggest innovative HR strategies to the Management /Operational Heads, CEOs, HR Professionals for strategic and effective HRM planning and practices in respect of management of Knowledge Workers (Diploma / Science Graduates) engaged in Computer Driven Manufacturing Technology Processes, in the industries under study.

#### **4.4) Hypotheses of Study**

Knowledge workers Management is an integral part of most of the organization and is the most significant and indispensable tool for an organization. It provides information, which helps taking decision for the development of an employee and also creates knowledge workers-driven culture in the organization.

The following Hypothesis are framed for their verification and validity in the light of the research being carried out. In view of the problem, aim and objectives, on the basis of experience and judgment the following Hypothesis is framed :

- 1) The traditional approach and strategies in tackling issues and problems of the knowledge workers engaged in Computer Driven Manufacturing Technology Processes, in the auto engineering industries in Chakan Industrial Area, Pune are aimed at fulfillment of legal requirements.
- 2) Innovative HR strategies for engagement and management of knowledge workers is an imperative need of auto engineering industries, in Chakan, Pune.
- 3) In view of typical problems and issues of Knowledge Workers, proper training to the supervisory staff needs to be imparted.

#### **4.5) Scope of the study –**

The scope of the study is mentioned in terms of area under consideration, the time span

- 1) Geographical scope- The study covers Pune District specifically in

Chakan industrial area which covers : the industries within the geographical limits of : Tehsil Khed, known as Chakan Industrial Area covering Mahalunge, Chakan, Ambethan, Kharabwadi, Nighoje, Talegaon Road, Sadumbre, Khalumbre, Talwade, Shikrapur Road, Nasik Road, Moshi, NanekarWadi.

- 2) The time period for this study –The knowledge workers management initiatives during 2009-2014 is taken for the study.
- 3) Respondents from the 30 auto engineering industries in, Chakan Industrial Area, Pune District engaging both knowledge workers and traditional workers in Computer Driven Manufacturing Technology Processes, with : strength more than 350 Nos., similar product / process / skill requirements are considered for the study as sample cases.
- 4) Managerial and Supervisory Staff from HR, Production, Maintenance, Tool Room, Quality Assurance, Materials, Stores are considered for study.

#### **4.6 Research methods used in the study:-**

After setting the objectives of the topic, researcher has prepared a questionnaire for the managers. Various parameters are formulated which will present the data related to the process of knowledge workers management and various aspects associated with knowledge workers management issues. The researcher handed over the questionnaire to the managerial and supervisory staff who are engaging and managing the knowledge workers. The questionnaire includes the various parameters such as preference, merits, issues, HRM practices in respect of knowledge workers, organizational effectiveness, hiring and retention issues, motivational issues, career planning and dimensions related with organization culture. The variables taken for the study are defined in respective sections.

The following steps outline the methodology for this study –

- 1) Selecting a set of variables for analysis, which represent the literature on knowledge workers issues.

- 2) Response Statement is prepared of the data collected. Master sheet of the data is helpful for analyzing the frequencies of each variable and then finding out meaningful correlations (Spearman's rho coefficient) between the variables. (Refer : Appendices).
- 3) Determine the most significant relations in the data and perform additional explorations as needed to explain the relations.
- 4) Finding out meaningful conclusions from the data analyzed.

The Study has to utilize both primary and secondary data taken for the study.

#### **4.6.1) Primary data:** (Through Questionnaires, Interviews & Discussion and Observations)

The primary data for this purpose is to be collected on the basis of field survey. One self-administered questionnaire has been prepared for this purpose, and to be filled by respondents. Open discussions with selected respondents, relevant literatures of Organization and Observation method also will be included. One questionnaire will be specifically prepared for the Top management authorities, personnel HR, responsible for carrying out the Organizational growth in Company/ Organization for expressing his/her opinion regarding the various factors developed by the researcher.

#### **4.6.2) Secondary data:**

In order to conduct the research, the relevant and concerned book, reports, literatures from internet and various libraries will be referred. Further, important contributions in the subject matter, from various journals, magazines, periodicals, reports, bulletins, survey material, newspapers published in India & abroad, web sites are also used for study. The same will be acknowledged at various relevant points in the thesis and listing will be made at Bibliography, at the end.

#### **4.6.3) Research tool used for data collection:**

In first phase of the study, observational analysis is made regarding process of knowledge workers management in some of the industries in Pune. In second phase, the research design is carried out to analyze the problem.

**4.6.4) Questionnaire Method** – The formal instrument in form of self-administered questionnaire, using Likert scale, is designed and developed for the research study. The details are discussed in Point No.4.7.7 . (Refer Appendices to see the Questionnaire).

#### **4.7) Data Presentation and Analysis –**

**4.7.1) Tables and Graphs** – Tables and graphs are visual representations. They are used in the study to organize information to show patterns and relationships between different variables related with opinion of the managers from respective industries. Pie charts are used to show percentages. Column charts are used to show comparisons between different groups and variables.

**4.7.2) Validity and Reliability Testing of the data** - One widely accepted classification of validity consists of three major forms: Content, criterion-related, and Construct.

**4.7.3) Content Validity** - In order to test the content validity researchers has shown the questionnaire to the two professors of HRM .Further, the questionnaire is then circulated to 90 managers to understand the doubts what respondents ask while giving the response. Understanding about the questionnaires by the employees is important because then only the proper response about the questionnaires will be expected. If the questionnaire adequately covers the topics that have been defined as the relevant dimension, it can be concluded that the instrument has good content validity. Determination of content validity is judgmental and can be approached in several ways.

**4.7.4) Construct Validity** - While doing the pilot study, 90 respondents are chosen. To test construct validity, questionnaires are circulated and their interviews are taken to know opinion of the managers of the various organizations. Largely both instruments give results, which are co-related.

#### **4.7.5) Reliability analysis of the data:**

Reliability of measure indicates the extent to which it is without bias and hence ensures consistent measurement across time and across the various items in the

instrument. Thus, reliability of a measure is an indication of the stability and consistency with which the instrument measures the concept and helps to assess the goodness of measure.

SPSS (16.0) has the reliability analysis procedure. This reliability procedure is executed on the data to assess its reliability.

In reliability analysis, the analyze menu is considered. The descriptive statistics menu is further considered and the polar to polar plot is plotted for different variables. Reliability analysis is carried out where the Cronbach's alpha was tested. Ideally, the Cronbach's alpha should be in between 0.5 and 1. In our case, it comes out to be 0.866. Therefore, the data is reliable. Following tables shows the SPSS output of reliability analysis.

#### 4.7.6) Reliability

**Scale: ALL VARIABLES**

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 200 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 200 | 100.0 |

**Reliability Statistics**

|                  |            |
|------------------|------------|
| Cronbach's Alpha | N of Items |
| .866             | 79         |

a. Listwise deletion based on all variables in the procedure.

#### **4.8) Designing of Research Instrument – Questionnaire.**

- **Self – Administered Questionnaire, using Likert scale, based on reference of research papers and Pilot Study is designed and developed.**

##### **Designing Aspects :**

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Questionnaires provide a relatively cheap, quick and efficient way of obtaining large amounts of information from a large sample of people. Data can be collected relatively quickly because the researcher would not need to be present when the questionnaires were completed. This is useful for large populations when interviews would impractical. Questionnaires can be an effective means of measuring the behavior, attitudes, preferences, opinions and intentions of relatively large numbers of subjects more cheaply and quickly than other methods. Researcher has used the self administered questionnaire for gathering the data from the managers handling the knowledge workers.

While designing the Research Instrument (Questionnaire) the researcher has kept in mind the following thoughts and steps :

1. about the objectives of the research.
2. plan for interview.
3. regarding introduction to the questionnaire.
4. regarding formatting.
5. regarding questions from “respondent angle”.
6. about order and flow of questions.
7. about data processing,
8. about the ease in interview inter actions.

**Researcher also ensured that :**

1. Questions without bias.
2. Simple, specific and possible questions.
3. No use of jargon or shorthand, use of common words avoiding literary.
4. Questions without ambiguity, avoiding negativity in them.
5. Avoided hypothetical questions.
6. Questionnaire and interview can be enjoyed by the respondents.

A good research instrument, based on Likert Scale : 1 : Strongly Disagree.... 5: Strongly Agree... is designed, based on the following reference paper, so that the results will explain what researcher wants to find out. Researcher has Started by writing down what researcher are trying to do in a few clear sentences, and design the research instrument around this.

**Reference papers :**

Researcher has referred the following research papers while designing the questionnaire :

- Research Topic : Industrial Relations Climate, Attendance Behaviour and the role of Trade Unions – By Steephenn Derry', Dorrick Iverson, and Peter Erwin.

British Journal Of Industrial Relations : Volume 37, Issue : 4, Pages : 533-558.

Dec : 1990, On Line : 16 Dec 2002, DOI : 10.1111/1467-8543,001 41

Use of Likert Scale : 1 : Strongly Disagree.... 5: Strongly Agree.

2. Research Topic : Pay Satisfaction : Its multi-dimensional nature & measurement – By Herbert G. Heneman, Donald P. Schwab.

International Journal Of Psychology, Volume : 20, Issue 2, 1985.  
Published by : Routledge & Francis Group,  
University of Wisconsin, USA.

Use of Likert Scale.

Questionnaire was to survey pay satisfaction of population of around 6500 nurses.

### **Development through Pilot Study :**

Pilot study is undertaken by the researcher to test the research instrument to test the validity, adequacy of the questions. After pilot study, final questionnaire is prepared adding few more questions.

Pilot Questionnaire and final Questionnaire are attached separately (Appendices)/

### **Coding used for knowing opinion of the managers of the various organizations–**

Likert Scale consists of the numbers from 1 to 5 is used.

1 stands for strongly disagree, 2 stands for disagree, 3 stands for neutral response, 4 stands for agree and 5 stands for strongly agree.

The research tool used for the study i.e. questionnaire has main four purposes. Firstly to collect the relevant data, secondly to, make the data comparable, thirdly to minimize the bias and lastly to motivate the respondents for proper responses. The research instrument helps in classifying the data based on the details of the respondents

Researcher has taken various engineering industries for the study. 30 auto engineering industries from Chakan Industrial Area, are selected for the research as a sampling unit. From each company, Managerial Staff from various operations like HR, Production, Quality Assurance, Tool Room, Maintenance, Stores, Materials is considered as respondents.

### **4.7.8) Observation Method**

Researcher has used the observation method in order to compare various aspects of engagement and management of knowledge workers. Researcher has made remarks on his own on these parameters related with each segment of the industry.

#### **4.9) Population, Population Definition, Selection Criterion for Defining Population, Sample, and sample size estimation:**

##### **A) Population:**

A research population is also known as a well-defined collection of knowledge workers or objects known to have similar characteristics. A research population is generally a large collection of managerial and supervisory staff engaging and managing knowledge workers and traditional workers are the objects that are the focus of a scientific query. To understand the opinion of population researches are done. However, due to the large sizes of populations, it is difficult to test every individual in the population because it is too expensive and time-consuming. All such managerial and supervisory staff who engage and manage knowledge workers and traditional workers within a certain population usually have a common binding characteristic.

##### **Population Definition :**

Research is with respect to the location : Chakan Industrial Area. Therefore, the population is defined from the industries in Chakan Industrial Area. The details of these industries are specified in Chapter Five : Company Profile.

- Source of information : Office of the Dy. Director, Industrial Safety, Pune Satara Road, Pune.

**Criterion for defining Population :**

- ❖ Managerial and supervisory Staff who engage and manage Knowledge Workers and Traditional Workers in auto engineering industries categorized in the following criterion :
  - Industries from the Chakan Industrial Area which covers : the industries within the geographical limits of : Tehsil Khed, known as Chakan Industrial Area covering Mahalunge, Chakan, Ambethan, Kharabwadi, Nighoje, Talegaon Road, Sadumbre, Khalumbre, Talwade, Shikrapur Road, Nasik Road, Moshi, NanekarWadi.
  - Industries engaging both - knowledge workers (Diploma / Science Graduates) and traditional workers are engaged at operative level.
  - The industries having minimum strength 350 employees (direct and indirect).
  - The industries who have advanced, modern techniques of production.
  - The industries having similar a) product range b) process flow c) skill and competence requirements.
  - Managerial and supervisory staff engaging and managing knowledge workers and traditional workers.

| Sr. No. | Particulars                                                                    | Nos.     |
|---------|--------------------------------------------------------------------------------|----------|
| 1       | No. of Companies under study                                                   | 30 Nos.  |
| 2       | No. of managerial and supervisory staff in these Companies : <b>Population</b> | 2688 Nos |
| 3       | No. of managerial and supervisory staff to whom the questionnaire are floated  | 1140 Nos |
| 4       | No. of respondents responded : <b>Sample</b>                                   | 900 Nos  |

**Statement of Company-wise Population, Questionnaire Floated, Respondents.**

| Sr.No. | Name of the Company                                     | Population of Managerial and Supervisory Staff (Nos.) | Sample of Managerial and supervisory Staff selected in each company (Questionnaire floated) (Nos.) | Respondents Managerial and supervisory Staff who have given the Response received (Nos.) |
|--------|---------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1      | SANSERA ENGINEERING PVT. LTD                            | 45                                                    | 19                                                                                                 | 15                                                                                       |
| 2      | ADVIK HI- TECH PVT. LTD.                                | 40                                                    | 17                                                                                                 | 13                                                                                       |
| 3      | LUCAS-TVS CHAKAN PLANT                                  | 56                                                    | 24                                                                                                 | 19                                                                                       |
| 4      | KEIHIN FIE PVT. LTD.                                    | 86                                                    | 36                                                                                                 | 29                                                                                       |
| 5      | ENDURANCE TECHNOLOGIES PRIVATE LIMITED.                 | 131                                                   | 55                                                                                                 | 43                                                                                       |
| 6      | MAGNETIMARELLIMOTHEERSON SHOCK ABSORBERS INDIA PVT. LTD | 48                                                    | 20                                                                                                 | 16                                                                                       |
| 7      | EXCEL AUTO INDUSTRIES                                   | 53                                                    | 22                                                                                                 | 18                                                                                       |
| 8      | BRAKES INDIA LIMITED                                    | 106                                                   | 45                                                                                                 | 35                                                                                       |
| 9      | RINDER INDIA PVT. LTD.                                  | 56                                                    | 24                                                                                                 | 18                                                                                       |
| 10     | SIGMA ELECTRIC MANUFACTURING CORPORATION PVT LTD        | 104                                                   | 44                                                                                                 | 39                                                                                       |
| 11     | MINDARIKA PVT. LTD.                                     | 81                                                    | 34                                                                                                 | 27                                                                                       |
| 12     | TENNECO AUTOMOTIVE INDIA PRIVATE LIMITED                | 72                                                    | 30                                                                                                 | 24                                                                                       |
| 13     | AUTOCOMP CORPORATION PANSE PVT. LTD.                    | 56                                                    | 24                                                                                                 | 19                                                                                       |

|    |                                              |      |      |     |
|----|----------------------------------------------|------|------|-----|
| 14 | MAHINDRA NAVISTAR ENGINES PVT LTD.           | 290  | 125  | 96  |
| 15 | MINDA INDUSTRIES LIMITED - LIGHTING DIVISION | 88   | 37   | 29  |
| 16 | PHILIPS ELECTRONICS INDIA LTD.               | 64   | 27   | 21  |
| 17 | SUPRAJIT ENGINEERING LIMITED                 | 89   | 38   | 30  |
| 18 | THAI SUMMIT NEEL AUTO PRIVATE LIMITED        | 74   | 31   | 25  |
| 19 | MINDA INDUSTRIES LIMITED                     | 78   | 33   | 26  |
| 20 | JBM MA AUTOMOTIVE PVT LTD                    | 58   | 25   | 19  |
| 21 | MINDA VALEO SECURITY SYSTEMS PVT LTD         | 82   | 35   | 28  |
| 22 | MERCEDES BENZ INDIA PVT LTD                  | 265  | 114  | 88  |
| 23 | LUMAX INDUSTRIES LTD                         | 65   | 28   | 22  |
| 24 | VOLKSWAGON INDIA PVT. LTD                    | 225  | 95   | 75  |
| 25 | FLASH ELECTRONICS INDIA PVT LTD              | 74   | 31   | 26  |
| 26 | BADVE AUTOCOMP PVT LTD                       | 59   | 25   | 19  |
| 27 | LEAR AUTOMOTIVE PVT. LTD.                    | 60   | 25   | 20  |
| 28 | VARROC ENGINEERING PVT LTD                   | 82   | 35   | 27  |
| 29 | MAHINDRA FORGINGS LTD                        | 53   | 22   | 18  |
| 30 | S N CASTING PVT LTD                          | 48   | 20   | 16  |
|    | <b>Total</b>                                 | 2688 | 1140 | 900 |

### Sample Size Calculation :

Types of sampling 1) Random Sampling 2) Systematic Sampling 3) Purposive Sampling 4) Stratified Sampling 5) Multistage Sampling

Stratified Sampling : The word stratification simply means division in to strata or separate groups, a group is called stratum. In my case the Stratum decided as CEO's, Plant Heads, Managerial and supervisory staff from Production, Operations, Q.A., Maintenance, Utility, Purchase, VRD, Stores, HR, IR Departments.

As per Ref Book research Methodology by Mr. A.B. Rao (page No.107 ) the sample size can be calculated by formula Sample size = {Responded No.(R) / Total Nos.(N)} X total No.of Managers responded . And in my study more particularly described as per following calculations.

| Sr.No. | Respondent category                                                           | Total No. of Managers under study in 30 companies =( N ) | Total responded Managers as per designation ( R ) | No.of Respondent company | Total Q. Floated | Sample size = {Responded No.(R) / Total Nos.(N)} X total No.of Managers responded |
|--------|-------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------|--------------------------|------------------|-----------------------------------------------------------------------------------|
|        |                                                                               | 2688                                                     |                                                   |                          |                  |                                                                                   |
| 1      | CEO                                                                           | 30                                                       | 30                                                | 30                       | 30               | 10                                                                                |
| 2      | PM                                                                            | 221                                                      | 50                                                | 30                       | 60               | 17                                                                                |
| 3      | Section HOD Production                                                        | 383                                                      | 114                                               | 30                       | 150              | 38                                                                                |
| 4      | Managers QA                                                                   | 213                                                      | 48                                                | 30                       | 60               | 16                                                                                |
|        | ManagerToom Room                                                              | 30                                                       | 30                                                | 30                       | 30               | 10                                                                                |
|        | ManagerMaint.                                                                 | 281                                                      | 75                                                | 30                       | 90               | 25                                                                                |
| 5      | Supervisor                                                                    |                                                          |                                                   |                          |                  |                                                                                   |
|        | Production                                                                    | 381                                                      | 113                                               | 30                       | 150              | 38                                                                                |
|        | QA                                                                            | 261                                                      | 84                                                | 30                       | 120              | 28                                                                                |
|        | Tool Room                                                                     | 30                                                       | 30                                                | 30                       | 30               | 10                                                                                |
|        | Maint                                                                         | 214                                                      | 61                                                | 30                       | 60               | 20                                                                                |
| 6      | Managers                                                                      |                                                          |                                                   |                          |                  |                                                                                   |
|        | Store/VRD/purchase                                                            | 300                                                      | 84                                                | 30                       | 120              | 28                                                                                |
| 7      | HR                                                                            |                                                          |                                                   |                          |                  |                                                                                   |
|        | HR Head                                                                       | 30                                                       | 30                                                | 30                       | 30               | 10                                                                                |
|        | IR head                                                                       | 30                                                       | 30                                                | 30                       | 30               | 10                                                                                |
|        | HR Executive/officer                                                          | 142                                                      | 60                                                | 30                       | 90               | 20                                                                                |
|        | IR officers                                                                   | 142                                                      | 61                                                | 30                       | 90               | 20                                                                                |
|        |                                                                               | 2688                                                     | 900                                               |                          | 1140             | 301                                                                               |
|        | As per above calculations The Final Sample Size is sum of all categories =301 |                                                          |                                                   |                          |                  |                                                                                   |

**4.10) Conceptual Clarity about the variables used in research instrument :**

| <b>Sr No.</b> | <b>particular</b>                                                                                                                                                                                        |                                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                                                                                          | After 1991, introduction of LPG changed the perfection towards the attributes of products, bench marking of the processes and need of the technology for the customers.                                      |
| 2             | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced.                                                             | To compete in the global market in respect of quality, speed, cost, precision advanced technology is the necessity.                                                                                          |
| 3             | Most of the conventional machines, processes are replaced by CNCs.                                                                                                                                       | Advanced technology needed replaces the conventional machines and process by CNCs.                                                                                                                           |
| 4             | Global standards, concepts, practices, systems play significant role.                                                                                                                                    | In the global market, to take care of the customers, implementation of global standards, concepts, systems becomes important in business scenario.                                                           |
| 5             | With the technology advancement, “competence” requirement at operative level is changed.                                                                                                                 | Competency requirement at all the levels, especially at operative level undergoes change.                                                                                                                    |
| 6             | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                                                                                           | In advance technology scenario, “knowledge” prevails over the “conventional skill”.                                                                                                                          |
| 7             | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. | In industry, though there are sophisticated operations due to technology advancement, certain processes still involve rough and tough, hard work involving labor element more.                               |
| 8             | (Diploma/Degree Engineers/Science Graduates (KWs) are preferred for operating CNCs, automatic and semi automatic lines.                                                                                  | Competency requirement at operative level is changed and to cope up with the same, there is a trend to engage Diploma/Degree Engineers, Science Graduates (KWs) at operative level in auto motive processes. |
| 9             | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs.                                                                                                    | Engagement of ITI/equivalent/less educated (TWs) is effectively utilized in the conventional, rough and tough processes due to manual and conventional skill requirements.                                   |

|    |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                                                                             | KWs easily, willingly and quickly grasp changing trends in technology, techniques, standards, systems, concepts.                                                                                                                                                                                                                                                                                                                                    |
| 11 | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                                                                            | Willingness towards change exists in KWs.                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12 | Less supervision is required while managing the KWs.                                                                                                                                                                                                         | KWs prefer to work independently with due care and caution, hence, supervision is only at certain steps.                                                                                                                                                                                                                                                                                                                                            |
| 13 | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face interaction with the auditors, customers, visitors. | Attitude and aptitude of KWs is to learn the new concepts, standards, systems which gets gelled with the global requirements. KWs are learners, quick graspers, competent to present independently and smartly before customers, visitors, auditors. They take initiatives in practicing activities like Suggestion Scheme, Kaizen, ISO, TPS, TPM, 5S, Continuous Improvements, SOPs, Work Instructions, Flow Chart, Report Generation, Audits etc. |
| 14 | Performance of KW is all-round and quick.                                                                                                                                                                                                                    | All round performance is necessity of today's industrial world even at operative level, which can be delivered by KWs.                                                                                                                                                                                                                                                                                                                              |
| 15 | KWs are not found suitable in rough – and – tough jobs and processes.                                                                                                                                                                                        | There are rough – tough processes also. KWs are not willing to accept such processes involving labor and rough – tough, hard nature.                                                                                                                                                                                                                                                                                                                |
| 16 | KWs do not like monotony in the jobs whereas TWs prefer the same.                                                                                                                                                                                            | In today's multi skilling requirements environment, TWs still prefers monotony for "security" sake whereas KWs prefers multi tasking jobs.                                                                                                                                                                                                                                                                                                          |
| 17 | TWs are suitable in the processes involving "skill" rather than "knowledge".                                                                                                                                                                                 | TWs are preferred in the jobs involving "skill" and not "knowledge" due to their attitudinal and knowledge limitations.                                                                                                                                                                                                                                                                                                                             |
| 18 | TWs are rigid whereas KWs are flexible in multi skilling operations.                                                                                                                                                                                         | TWs always stick up to their defined job and resist multi skilling operations whereas KWs prefers multi skilling operations.                                                                                                                                                                                                                                                                                                                        |
| 19 | TWs are reluctant for learning new jobs, techniques, concepts, standards.                                                                                                                                                                                    | TWs are hesitating to learn new jobs, techniques, concepts, standards.                                                                                                                                                                                                                                                                                                                                                                              |
| 20 | TWs always resist for "change" with the help of law and Union.                                                                                                                                                                                               | To resist the "change" is traditional approach which is always adopted by the TWs.                                                                                                                                                                                                                                                                                                                                                                  |
| 21 | TWs are interested in "security", hence, inclined to form Union.                                                                                                                                                                                             | Union formation takes place normally with a view to protect the job. TWs have fear of loss of job and hence inclined                                                                                                                                                                                                                                                                                                                                |

|    |                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                                                                              | towards union activities.                                                                                                                                                                                                                                                                                                                       |
| 22 | IR issues are mostly created by the TWs.                                                                                                                                     | TWs have tendency to accept “change” which normally results into IR issues.                                                                                                                                                                                                                                                                     |
| 23 | TWs prefer their development through wage settlement.                                                                                                                        | TWs are always inclined towards the collective bargaining for their growth.                                                                                                                                                                                                                                                                     |
| 24 | KWs are interested in self-development based on their performance.                                                                                                           | KWs believe in the growth based on performance and merits. Their approach is individualistic “self – development” oriented.                                                                                                                                                                                                                     |
| 25 | KWs are least interested in forming Union.                                                                                                                                   | KWs are interested and confident to make their career at their own. They have no limitations for their career as they are flexible to any opportunity within and outside the organization, because of their educational background. As they are not interested in a particular organization, job, they are not inclined for formation of union. |
| 26 | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. | There are ample opportunities and avenues are available for KWs due to their education background and flexible attitude. Hence, rather fighting for the terms of employment, they prefer to quit and join some where else. They are therefore not caring much about legal course of actions like termination, warning, dismissal, court matter. |
| 27 | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up.                                                                      | KWs due to their education back ground and self – development approach are flexible for any job opportunity and are not limiting themselves to a particular job, field.                                                                                                                                                                         |
| 28 | KWs are found to be demanding about self-respect, self career, self growth, work environment, treatment, pay-package, Status issues.                                         | KWs always need a good – environment, treatment, pay package, status. They are careful about their self-respect, career plan, economic growth.                                                                                                                                                                                                  |
| 29 | There are retaining issues as regards the KWs are concerned as attrition level is quite high.                                                                                | Attrition level in KWs is observed to be high. Retaining KWs is a challenge.                                                                                                                                                                                                                                                                    |
| 30 | There is no attrition issue as regards the TWs.                                                                                                                              | Attrition in TWs is very low.                                                                                                                                                                                                                                                                                                                   |
| 31 | Association and consistency in TWs is quite good.                                                                                                                            | Consistency in TWs is quite good as their tendency is to stick up with the job and Organization.                                                                                                                                                                                                                                                |
| 32 | HR processes, policies, practices designed and implemented are based on traditional and legal approach.                                                                      | In most of the Organizations, it is found that the HR processes, policies, procedures and practices are in traditional and legal frame work.                                                                                                                                                                                                    |
| 33 | Traditional and legal approach                                                                                                                                               | For managing the KWs the traditional and                                                                                                                                                                                                                                                                                                        |

|    |                                                                                                                               |                                                                                                                                                                                                                                                   |
|----|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | for managing the operators requires change.                                                                                   | legal approach needs to be changed.                                                                                                                                                                                                               |
| 34 | In respect of TWs, these policies can be suitable .                                                                           | Policies with legal and traditional frame work may be suitable for TWs.                                                                                                                                                                           |
| 35 | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.                         | HR policies, practices, systems, processes need to be reviewed for innovation in view of engagement and management of KWs.                                                                                                                        |
| 36 | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. | A strong, systematic succession planning is required in case of KWs.                                                                                                                                                                              |
| 37 | There is a need to impart proper training to the supervisory and managerial staff for handling KWs.                           | Supervisory and managerial staff needs to be trained for handling KWs.                                                                                                                                                                            |
| 38 | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs.  | Job market for KWs is wide. All the sectors : Service, IT, BPO, Telecom, Insurance, Banking, Government sector are attracting KWs. KWs are also flexible to take up jobs in such sectors where in they get more pay, glamour, comfort, challenge. |
| 39 | KWs are ready to switch over to any kind of job, if the opportunity is good.                                                  | KWs have wide scope, hence, are ready to switch over to attractive opportunities.                                                                                                                                                                 |
| 40 | There are limitations for the TWs as regards the job opportunities are concerned.                                             | Scope for TWs is limited.                                                                                                                                                                                                                         |
| 41 | TWs are interested to protect their existing job.                                                                             | Intention of TWs is to protect their existing job for survival.                                                                                                                                                                                   |
| 42 | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                        | For survival, TWs are prepared to fight to protect the job whereas KWs do not prefer the same.                                                                                                                                                    |
| 43 | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                           | Legal matters in case of TWs are found to be more. In case of KWs, such things are negligible.                                                                                                                                                    |
| 44 | Observed that KWs believe in their individual performance for the economic growth.                                            | KWs believe in performance based increments and benefits.                                                                                                                                                                                         |
| 45 | TWs believe in collective bargaining for their economic growth.                                                               | TWs always prefer their increments and benefits through collective bargaining process.                                                                                                                                                            |
| 46 | There is a trend to engage KWs at operative level especially in the advance technology area.                                  | Considering knowledge based requirements in advance technology, automation, CNC operations – KWs are preferred.                                                                                                                                   |
| 47 | User Heads are finding ease to deal with the KWs.                                                                             | There is ease to manage KWs.                                                                                                                                                                                                                      |

|    |                                                                                                                                                                                      |                                                                                                                                                                                                                           |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 48 | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                                                                           | In most of the organization still there is a style to engage and manage KWs in a traditional.                                                                                                                             |
| 49 | HR policies especially attaining and maintaining KWs must be innovative.                                                                                                             | It is a challenge before every management to attain and retain KWs. Hence, calls for innovative policies, ideas.                                                                                                          |
| 50 | KWs want to be on the fast track.                                                                                                                                                    | KWs are demanding in respect of their growth, career.                                                                                                                                                                     |
| 51 | Existing strategies for hiring KWs are adequate.                                                                                                                                     | Adequate, structured, planned strategies need to be designed for hiring KWs.                                                                                                                                              |
| 52 | Strategies for hiring KWs needs drive and innovation.                                                                                                                                | There should be drive and innovation for hiring KWs.                                                                                                                                                                      |
| 53 | There need to be constant on going initiatives to motivate and retain KWs.                                                                                                           | For retaining KWs, there need to be innovative motivational initiatives.                                                                                                                                                  |
| 54 | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        | Issues and problems in respect of KWs needs to be properly reviewed for correction.                                                                                                                                       |
| 55 | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. | In advance technology, KWs seem to be more productive and resourceful. Proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning will deliver the best results. |
| 56 | There is a lack of attention in designing the policies.                                                                                                                              | A proper attention is not being given while designing the HR policies keeping in mind KWs requirements.                                                                                                                   |
| 57 | There is a lack of drive in implementation of policies.                                                                                                                              | A proper drive is essential while implementing the policies and dealing with KWs.                                                                                                                                         |
| 58 | Policies are there but not implemented with a proper and natural style.                                                                                                              | Mere policies are not of use, but style for implementation is also important. Implementation needs to be thoughtful and natural way.                                                                                      |
| 59 | Competencies of HR and other Managers are required to be aligned with the global requirements.                                                                                       | Competencies of HR and other managerial staff are changed in the global environment.                                                                                                                                      |
| 60 | KWs also include female employees                                                                                                                                                    | There is cope to engage Female employees as KWs.                                                                                                                                                                          |
| 61 | Gender ratio in KWs helps to maintain proper decorum                                                                                                                                 | Engagement of female KWs is advantageous as it helps to create decent environment.                                                                                                                                        |
| 62 | Gender ratio is observed to create better results and HR climate.                                                                                                                    | Gender ratio prove to be successful in achieving better results and HR climate.                                                                                                                                           |
| 63 | HR strategies need to consider the requisite requirements of                                                                                                                         | While designing the HR strategies, requisites of female KWs need to be taken                                                                                                                                              |

|    |                                                                                                            |                                                                                                                                                                             |
|----|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | female KWs.                                                                                                | into consideration.                                                                                                                                                         |
| 64 | There should be caring, fair and responsible attitude while dealing with female KWs.                       | Approach while dealing with female employees needs to be fair, caring.                                                                                                      |
| 65 | Gender ratio helps to minimize issues related to discipline                                                | Discipline related issues get minimized due to gender ratio.                                                                                                                |
| 66 | Employment of KWs saves energy of the supervisory staff.                                                   | KWs save time and energy of the supervisory staff.                                                                                                                          |
| 67 | KWs have better thinking and can add value to the processes.                                               | KWs try to add value as they have better thinking process.                                                                                                                  |
| 68 | Employment of KWs creates work load and work pressure especially in HR Department in the following areas : | Attrition in case of KWs is high. Hence, these HR activities need to be done continuously. These need to be “On going”. It results into constant increase in the work load. |
|    | a) Recruitment                                                                                             |                                                                                                                                                                             |
|    | b) Joining formalities                                                                                     |                                                                                                                                                                             |
|    | c) Documentation : personal file etc.                                                                      |                                                                                                                                                                             |
|    | d) Induction                                                                                               |                                                                                                                                                                             |
|    | e) On Job Training (OJT)                                                                                   |                                                                                                                                                                             |
|    | f) Succession Planning                                                                                     |                                                                                                                                                                             |
|    | g) Performance Management / Skill Development                                                              |                                                                                                                                                                             |
|    | h) Competency Mapping                                                                                      |                                                                                                                                                                             |
|    | i) Training                                                                                                |                                                                                                                                                                             |
|    | j) Career Planning                                                                                         |                                                                                                                                                                             |
|    | k) Reward & Recognition                                                                                    |                                                                                                                                                                             |
|    | l) Welfare activities                                                                                      |                                                                                                                                                                             |
|    | m) Benefits administration                                                                                 |                                                                                                                                                                             |
|    | n) Compensation Management                                                                                 |                                                                                                                                                                             |
|    | o) Time Office activities                                                                                  |                                                                                                                                                                             |
|    | p) Statutory compliances                                                                                   |                                                                                                                                                                             |
|    | q) Full and final settlement activities                                                                    |                                                                                                                                                                             |
| 69 | The present HR strategies seem to be traditional.                                                          | HR strategies need be innovative.                                                                                                                                           |
| 70 | All the above HR activities need structured and systematic guide line.                                     | HR processes, strategies, policies, systems need to be planned systematically for effective handling of KWs.                                                                |
| 71 | Employment of female KWs proved to be useful.                                                              | Female KWs prove to be advantageous.                                                                                                                                        |
| 72 | Organization gets good supervisory staff from the potential KWs.                                           | There is a scope to identify potential KWs and groom them for higher positions.                                                                                             |
| 73 | KWs can off load work load of supervisory staff                                                            | Some of the work load of supervisory staff can be taken care of by KWs e.g. report preparation, presentations, use of                                                       |

|    |                                                                                                                                                 |                                                                                                                                                                                                 |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                                                 | computers.                                                                                                                                                                                      |
| 74 | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law     | In most of the Organization have HR strategies, policies, code of conduct within legal and traditional fame work.                                                                               |
| 75 | TWs always try to take shelter of law and union.                                                                                                | TWs are always inclined to take shelter of law and Union.                                                                                                                                       |
| 76 | Management prefers the legal base rather than the logical base.                                                                                 | Management opts for legal base while designing these policies. Logical thinking needs to be there.                                                                                              |
| 77 | There is a need to create logical, rational policies without deviating the legal provisions.                                                    | Logical, rational policies without deviating the legal provisions need to be designed.                                                                                                          |
| 78 | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives. | Competencies of HR as well other functional Managerial staff needs to be aligned with the global requirements.                                                                                  |
| 79 | Competencies of HR Managers and other Managers must be reviewed for the changed requirements.                                                   | Competencies of HR Managers / other functional Managers need to be reviewed for required qualities.                                                                                             |
| 80 | In today's context "Hiring and Retention of KWs" is the KRA of HR Department.                                                                   | KWs are the requirement in today's context, at operative level. However, considering the merits and demerits of KWs, Hiring and Retention has become the key functional area for HR Department. |
| 81 | Hiring activity for KWs calls for constant on - going efforts                                                                                   | Effort level to hire KWs needs to be continuous and on - going.                                                                                                                                 |
| 82 | A systematic Training Calendar covering on-going training programmes for KWs is the requirement.                                                | Training is an effective tool for effective engagement of KWs. It should consider all the required inputs which will add value to their individual, departmental, organization objectives.      |
| 83 | Training helps to create a culture of Learning Organization.                                                                                    | Training if given due importance, will certainly create a culture of Learning Organization.                                                                                                     |
| 84 | Training for KWs is a waste of time.                                                                                                            | Training Is an investment and no waste of time as it is based on identified needs. It adds value to individual, department, organization.                                                       |

Researcher has taken various engineering industries for the study. 30 industries are selected for the research.. From each company, Managerial and supervisory Staff from various operations like HR, Production, Quality Assurance, Tool Room, Maintenance, Stores, Materials is considered as respondents.

#### **Coding used for knowing opinion of the managers of the various organizations–**

Scale consists of the numbers from 1 to 5. 1 stands for strongly disagree, 2 stands for disagree, 3 stands for neutral response, 4 stands for agree and 5 stands for strongly agree.

#### **4.11) Pilot Testing of questionnaire –**

Before actual data collection, researcher has decided to check the reliability of the research instrument i.e. questionnaire on few respondents i.e. 90 which is 10% of the total sample size. Thus, pilot study is carried out on the following questionnaire and after pilot study grouping has been done. The result of the pilot study is as follows –

| <b>Sr. No.</b> | <b>Particular</b>                                                                                                                            | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 1              | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                              | 0        | 0        | 4        | 35       | 51       | 90           |
| 2              | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced. | 0        | 2        | 4        | 41       | 43       | 90           |
| 3              | Most of the conventional machines, processes are replaced by CNCs.                                                                           | 2        | 8        | 6        | 39       | 35       | 90           |
| 4              | Global standards, concepts, practices, systems play significant role.                                                                        | 2        | 4        | 2        | 38       | 44       | 90           |
| 5              | With the technology advancement, “competence” requirement at operative level is changed.                                                     | 0        | 3        | 2        | 43       | 42       | 90           |
| 6              | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                               | 0        | 8        | 0        | 39       | 43       | 90           |

|    |                                                                                                                                                                                                                                                               |   |    |   |    |    |    |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|---|----|----|----|
| 7  | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices.                                                      | 0 | 0  | 0 | 38 | 52 | 90 |
| 8  | (Diploma/Degree Engineers/Science Graduates (KWs) are preferred for operating CNCs, automatic and semi automatic lines.                                                                                                                                       | 0 | 2  | 2 | 35 | 51 | 90 |
| 9  | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs.                                                                                                                                                         | 0 | 0  | 3 | 48 | 39 | 90 |
| 10 | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                                                                              | 2 | 5  | 3 | 45 | 35 | 90 |
| 11 | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                                                                             | 0 | 4  | 5 | 42 | 39 | 90 |
| 12 | Less supervision is required while managing the KWs.                                                                                                                                                                                                          | 8 | 12 | 2 | 41 | 27 | 90 |
| 13 | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. | 0 | 0  | 3 | 43 | 44 | 90 |
| 14 | Performance of KW is all-round and quick.                                                                                                                                                                                                                     | 6 | 2  | 3 | 47 | 32 | 90 |
| 15 | KWs are not found suitable in rough – and – tough jobs and processes.                                                                                                                                                                                         | 0 | 0  | 1 | 39 | 50 | 90 |
| 16 | KWs do not like monotony in the jobs whereas TWs prefer the same.                                                                                                                                                                                             | 6 | 5  | 2 | 45 | 32 | 90 |
| 17 | TWs are suitable in the processes involving “skill” rather than “knowledge”.                                                                                                                                                                                  | 0 | 2  | 4 | 43 | 41 | 90 |

|    |                                                                                                                                                                              |   |   |   |    |    |    |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|----|----|
| 18 | TWs are rigid whereas KWs are flexible in multi skilling operations.                                                                                                         | 4 | 8 | 0 | 32 | 46 | 90 |
| 19 | TWs are reluctant for learning new jobs, techniques, concepts, standards.                                                                                                    | 5 | 8 | 0 | 41 | 36 | 90 |
| 20 | TWs always resist for “change” with the help of law and Union.                                                                                                               | 5 | 3 | 2 | 33 | 47 | 90 |
| 21 | TWs are interested in “security”, hence, inclined to form Union.                                                                                                             | 0 | 2 | 0 | 39 | 49 | 90 |
| 22 | IR issues are mostly created by the TWs.                                                                                                                                     | 4 | 4 | 0 | 37 | 45 | 90 |
| 23 | TWs prefer their development through wage settlement.                                                                                                                        | 0 | 0 | 0 | 42 | 48 | 90 |
| 24 | KWs are interested in self-development based on their performance.                                                                                                           | 3 | 4 | 2 | 39 | 42 | 90 |
| 25 | KWs are least interested in forming Union.                                                                                                                                   | 4 | 6 | 0 | 33 | 47 | 90 |
| 26 | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. | 1 | 3 | 6 | 34 | 46 | 90 |
| 27 | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up.                                                                      | 0 | 0 | 0 | 45 | 45 | 90 |
| 28 | KWs are found to be demanding about self-respect, self-career, self-growth, work environment, treatment, pay-package, Status issues.                                         | 0 | 4 | 0 | 36 | 50 | 90 |
| 29 | There are retaining issues as regards the KWs are concerned as attrition level is quite high.                                                                                | 0 | 0 | 0 | 41 | 49 | 90 |
| 30 | There is no attrition issue as regards the TWs.                                                                                                                              | 0 | 0 | 0 | 35 | 55 | 90 |
| 31 | Association and consistency in TWs is quite good.                                                                                                                            | 0 | 0 | 0 | 35 | 55 | 90 |
| 32 | HR processes, policies, practices designed and implemented are based on traditional and                                                                                      | 2 | 5 | 5 | 41 | 37 | 90 |

|    |                                                                                                                               |   |   |   |    |    |    |
|----|-------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|----|----|
|    | legal approach.                                                                                                               |   |   |   |    |    |    |
| 33 | Traditional and legal approach for managing the operators requires change.                                                    | 0 | 3 | 2 | 43 | 42 | 90 |
| 34 | In respect of TWs, these policies can be suitable .                                                                           | 4 | 4 | 0 | 41 | 41 | 90 |
| 35 | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.                         | 2 | 4 | 2 | 38 | 44 | 90 |
| 36 | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. | 0 | 0 | 0 | 41 | 49 | 90 |
| 37 | There is a need to impart proper training to the supervisory and managerial staff for handling KWs.                           | 0 | 2 | 2 | 41 | 45 | 90 |
| 38 | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs.  | 0 | 0 | 5 | 32 | 53 | 90 |
| 39 | KWs are ready to switch over to any kind of job, if the opportunity is good.                                                  | 0 | 0 | 6 | 33 | 51 | 90 |
| 40 | There are limitations for the TWs as regards the job opportunities are concerned.                                             | 0 | 3 | 3 | 40 | 44 | 90 |
| 41 | TWs are interested to protect their existing job.                                                                             | 0 | 2 | 2 | 41 | 45 | 90 |
| 42 | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                        | 0 | 0 | 1 | 48 | 41 | 90 |
| 43 | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                           | 0 | 2 | 2 | 38 | 48 | 90 |
| 44 | Observed that KWs believe in their individual performance for the economic growth.                                            | 2 | 5 | 2 | 45 | 36 | 90 |

|    |                                                                                                                                                                                      |    |    |   |    |    |    |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|---|----|----|----|
| 45 | TWs believe in collective bargaining for their economic growth.                                                                                                                      | 0  | 0  | 0 | 48 | 42 | 90 |
| 46 | There is a trend to engage KWs at operative level especially in the advance technology area.                                                                                         | 2  | 2  | 0 | 45 | 41 | 90 |
| 47 | User Heads are finding ease to deal with the KWs.                                                                                                                                    | 2  | 7  | 1 | 37 | 43 | 90 |
| 48 | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                                                                           | 3  | 5  | 2 | 41 | 39 | 90 |
| 49 | HR policies especially attaining and maintaining KWs must be innovative.                                                                                                             | 0  | 0  | 0 | 49 | 41 | 90 |
| 50 | KWs want to be on the fast track.                                                                                                                                                    | 0  | 0  | 0 | 42 | 48 | 90 |
| 51 | Existing strategies for hiring KWs are adequate.                                                                                                                                     | 45 | 41 | 0 | 4  | 0  | 90 |
| 52 | Strategies for hiring KWs needs drive and innovation.                                                                                                                                | 0  | 0  | 0 | 44 | 46 | 90 |
| 53 | There need to be constant on going initiatives to motivate and retain KWs.                                                                                                           | 0  | 5  | 4 | 44 | 37 | 90 |
| 54 | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        | 6  | 6  | 0 | 33 | 45 | 90 |
| 55 | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. | 3  | 5  | 0 | 33 | 49 | 90 |
| 56 | There is a lack of attention in designing the policies.                                                                                                                              | 0  | 0  | 3 | 44 | 43 | 90 |
| 57 | There is a lack of drive in implementation of policies.                                                                                                                              | 0  | 0  | 0 | 45 | 45 | 90 |
| 58 | Policies are there but not implemented with a proper and natural style.                                                                                                              | 6  | 3  | 3 | 36 | 42 | 90 |

|    |                                                                                                            |   |   |   |    |    |    |
|----|------------------------------------------------------------------------------------------------------------|---|---|---|----|----|----|
| 59 | Competencies of HR and other Managers are required to be aligned with the global requirements.             | 3 | 3 | 4 | 44 | 36 | 90 |
| 60 | KWs also include female employees                                                                          | 0 | 0 | 0 | 41 | 49 | 90 |
| 61 | Gender ratio in KWs helps to maintain proper decorum                                                       | 0 | 0 | 0 | 46 | 44 | 90 |
| 62 | Gender ration is observed to create better results and HR climate.                                         | 0 | 0 | 2 | 46 | 42 | 90 |
| 63 | HR strategies need to consider the requisite requirements of female KWs.                                   | 0 | 0 | 0 | 45 | 45 | 90 |
| 64 | There should be caring, fair and responsible attitude while dealing with female KWs.                       | 0 | 0 | 0 | 48 | 42 | 90 |
| 65 | Gender ratio helps to minimize issues related to discipline                                                | 3 | 4 | 2 | 41 | 40 | 90 |
| 66 | Employment of KWs saves energy of the supervisory staff.                                                   | 5 | 6 | 3 | 33 | 43 | 90 |
| 67 | KWs have better thinking and can add value to the processes.                                               | 5 | 6 | 3 | 35 | 41 | 90 |
| 68 | Employment of KWs creates work load and work pressure especially in HR Department in the following areas : |   |   |   |    |    |    |
|    | a) Recruitment                                                                                             | 0 | 5 | 0 | 42 | 43 | 90 |
|    | b) Joining formalities                                                                                     | 0 | 4 | 0 | 44 | 42 | 90 |
|    | c) Documentation : personal file etc.                                                                      | 0 | 0 | 0 | 45 | 45 | 90 |
|    | d) Induction                                                                                               | 0 | 0 | 2 | 43 | 45 | 90 |
|    | e) On Job Training (OJT)                                                                                   | 0 | 0 | 3 | 43 | 44 | 90 |
|    | f) Succession Planning                                                                                     | 0 | 0 | 3 | 45 | 42 | 90 |
|    | g) Performance Management / Skill Development                                                              | 0 | 2 | 2 | 46 | 40 | 90 |
|    | h) Competency Mapping                                                                                      | 0 | 2 | 3 | 44 | 41 | 90 |
|    | i) Training                                                                                                | 0 | 4 | 2 | 44 | 40 | 90 |

|    |                                                                                                                                             |   |   |   |    |    |    |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|----|----|
|    | j) Career Planning                                                                                                                          | 3 | 5 | 2 | 44 | 36 | 90 |
|    | k) Reward & Recognition                                                                                                                     | 2 | 3 | 2 | 43 | 40 | 90 |
|    | l) Welfare activities                                                                                                                       | 0 | 0 | 2 | 43 | 45 | 90 |
|    | m) Benefits administration                                                                                                                  | 0 | 1 | 1 | 41 | 47 | 90 |
|    | n) Compensation Management                                                                                                                  | 0 | 2 | 0 | 46 | 42 | 90 |
|    | o) Time Office activities                                                                                                                   | 1 | 4 | 3 | 37 | 45 | 90 |
|    | p) Statutory compliances                                                                                                                    | 2 | 2 | 2 | 43 | 41 | 90 |
|    | q) Full and final settlement activities                                                                                                     | 1 | 3 | 1 | 43 | 42 | 90 |
| 69 | The present HR strategies seem to be traditional.                                                                                           | 2 | 0 | 0 | 42 | 46 | 90 |
| 70 | All the above HR activities need structured and systematic guide line.                                                                      | 0 | 0 | 0 | 41 | 49 | 90 |
| 71 | Employment of female KWs proved to be useful.                                                                                               | 0 | 0 | 2 | 48 | 40 | 90 |
| 72 | Organization gets good supervisory staff from the potential KWs.                                                                            | 2 | 2 | 2 | 42 | 42 | 90 |
| 73 | KWs can off load work load of supervisory staff                                                                                             | 0 | 3 | 2 | 41 | 44 | 90 |
| 74 | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law | 0 | 0 | 0 | 45 | 45 | 90 |
| 75 | TWs always try to take shelter of law and union.                                                                                            | 0 | 3 | 4 | 44 | 39 | 90 |
| 76 | Management prefers the legal base rather than the logical base.                                                                             | 1 | 1 | 3 | 42 | 43 | 90 |
| 77 | There is a need to create logical, rational policies without deviating the legal provisions.                                                | 0 | 2 | 1 | 42 | 45 | 90 |
| 78 | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business         | 0 | 3 | 0 | 44 | 43 | 90 |

|    |                                                                                               |   |   |   |    |    |    |
|----|-----------------------------------------------------------------------------------------------|---|---|---|----|----|----|
|    | objectives.                                                                                   |   |   |   |    |    |    |
| 79 | Competencies of HR Managers and other Managers must be reviewed for the changed requirements. | 0 | 2 | 2 | 41 | 45 | 90 |

**Variables for Identification of the data** – Identification of the data consists of names, addresses, phone, ward and place of the interview.

**Variables for Classification of the data** – Classification of the data in the research instrument consist of education, experience, gender, management hierarchy of the employees of the various organizations.

**Variables for Subject Data** – Subject data gives the emphasis upon the different objectives for which the survey is conducted. In this research, various parameters are set for testing the opinion of the respondents in terms of the opinion of the managers of the various organizational issues about knowledge workers. These parameters are mentioned in respective sessions.

#### **4.12) Data Processing, Analysis and Interpretation**

The main purpose of applying research methods for this study is to determine what variables have the most impact on the process of the knowledge workersmanagement issues in form of management, measurement and monitoring further variables related with knowledge workers of the bargaining employees in form of their attitude towards knowledge workers management is taken for the study.

The data collected from the representative sample respondents were edited properly and processed through excel with appropriate software along with the tabulation plan to analyze and interpret accordingly through an intellectual exercise and appropriate statistical tools.

Microsoft Excel 2003 and SPSS v16 were used in the statistical analysis of the variables.

**Statistical package used - The SPSS environmental –**

SPSS for windows provides a powerful statistical analysis and data management system in a graphical environment, using descriptive menus and simple dialogue boxes to do most of the work for you. Most tasks can be accomplished simply by pointing and clicking the mouse.

In addition to the simple pointing – and – click interface for statistical analysis, SPSS has eight different types of windows:

**Data Editor** - The data editor is a versatile spreadsheet – like system for defining, entering and displaying data. This window opens when you start an SPSS session and displays the content of the data file.

**Viewer and Draft Viewer** - The viewer makes it easy to browse your results, selectively show and hide output, change the display, order result and move presentation – quality tables and charts between SPSS and other applications. This window opens automatically the first time you run a procedure that generates some output.

**Private table Editor** - Output displayed in pivot tables can be modified in a number of ways. Using editor, it is possible to edit text, rearrange rows, columns and layers, add colors, create multidimensional tables and selectively hide and display results.

**File** – The File menu allows you to create new files, open existing files, read in files from other software programs, save files and print.

**Edit** – The Edit menu allows you to modify or copy text from the output or syntax windows, and to search for and replace text or data. It also offered a number of personal preference option.

**View** - The view menu allows you to make the status bar and toolbar active, and to change particular characteristics of the window (for example, by removing grid lines, displaying value labels and changing font style and size.)

**Data** – The Data menu allows you to define variable and create variable templates. In addition, global changes to SPSS data files are available, such as measuring files, inserting, sorting and transposing variables and cases, and selecting weighting cases.

**Transform** – The Transform menu allows you to change certain variables in the data file.

**Analyze** – The Analyze menu allows you to select the analysis you require. A variety of statistical procedure is available, rearranging from summarizing data through to more complex designs.

**Graphs** – The Graphs menu allows you to create bar, line, area and pie charts, as well as histograms and scatter plots.

**Utilities** – The utilities menu allows you to display file and variable information. In addition, it allows you to define and use different variable sets.

### **The steps used in hypothesis testing:**

The basic objectives of hypothesis testing are to prove or disprove the research question. By only allowing an error of 5% or 1% and making correct decisions based on statistical principles, from the outcome of statistical analysis researcher can conclude the result. The five steps are followed for testing hypothesis. These five steps consist of all the decisions a researcher has followed in order to answer research question.

**Stating the research question** – The first step used in the present study is to state the research question that identifies the population(s) of interest, the parameter(s) of the variable under investigation, and the hypothesized value of the parameter(s). This step helps in defining what is to be tested and what variable will be used in sample data collection. The type of variable whether it is categorical, discrete or continuous further defines the statistical test which can be performed on the collected data set.

**The null and alternative Hypothesis** – The second step followed in the study is to state alternate and null hypothesis to select a significance level.

**Calculate test statistics** - The third step used in the study is calculation of a statistic analogous to the parameter specified by the null hypothesis.

**Compute probability of test statistic or rejection region** – The fourth step is calculation of the probability value (often called the *p*-value) which is the probability of the test statistic for both tails.

**State conclusions** – The fifth and final step is description of the results and state correct statistical conclusions in an understandable way. The conclusions consist of two statements-ones describing the results of the null hypothesis and the other describing the results of the alternative hypothesis.

### **Statistical tests used for hypothesis testing –**

The researcher has used two statistical methods to validate the hypothesis formulated for the present study.

- a) “Z” Test for single sample : Researcher using the formula has calculated original value and compared it with “Z” value from the “Z” Table to validate the hypothesis.
- b) Chi Square Test : Researcher has further used Chi square test from SPSS environment and compared the Chi square values and critical value to validate the hypothesis.

**Confidence interval (CI)** is a kind of interval estimate of population parameter and is used to indicate the reliability of an estimate. It is an observed interval and differs from sample to sample that frequently includes the parameter of interest, if the experiment is repeated. How frequently the observed interval contains the parameter is determined by the **confidence level** or **confidence coefficient**. Confidence intervals consist of a range of values that act as good estimates of the unknown population parameter. The level of confidence of the confidence interval would indicate the probability that the confidence range captures this true population parameter given a distribution of samples. Researcher has selected the confidence level equal to 95% which reflects a significance level of 0.05.

#### **4.13) Limitations of the study –**

The limitations of the present study are given below –

- Time span considered for the state of knowledge workers management is from 2009 to 2014.
- Responses of the Department Managers sometimes are beyond control.
- Only the factors other than knowledge workers management and other issues related with them are taken for the study.

#### **4.14) Chapter Scheme:**

##### **Chapter 1 - Introduction**

This chapter includes the relevance, importance and novelty of the study in the field of HR with special reference to knowledge workers management process of the various industries in the city of Pune. It further covers managerial implications, major objectives, scope and limitations of the study and further covers hypothesizes used in the study.

##### **Chapter 2 - Historical Background**

This chapter includes following historical developments related with knowledge workers and significance of the knowledge workers initiatives. The history has been gathered .

##### **Chapter 3 Review of literature:**

This chapter includes following 2 mainstreams of the research analysis concerning the subject.

Researcher has discussed the concept of knowledge workers, their preference, advantages, characteristics, issues, HRM practices for effective engagement and management of knowledge workers with the help of books, magazines, research papers, reports and other on line publications, web sites related to the subject of the research. They are arranged in chronological order.

## **Chapter 4 - Research Methodology**

Researcher has discussed the problem statement, need and significance of the study, objectives of the study, hypothesis, scope, limitations, chapter scheme etc. This chapter consists of various research methods used in the study. The research methods consist of source of primary data, secondary data and research tool. Sample procedure consists of sample size and type of a sample used in the study and finally research plan. The variables and the data coding procedure is the integral part of research methodology.

## **Chapter 5- Company profiles**

The histories of the companies taken for the study are mentioned in this chapter.

## **Chapter 6 - Results and discussions –**

This chapter is divided into following six sections –

### **6.1) Analysis of the HR manager's opinion about organizational growth**

This section considers the opinion of the employees from various industries and other factors affecting the knowledge workers management .Further, the comparison of the opinion of the employees from the said segments are done.. Further, this topic presents the graphical representation of the data related with the opinion of the employees.

### **6.2) Analysis of departmental manager's opinion about organizational growth**

This section includes the opinion of the managers from various industries and other factors affecting the knowledge workers management .Further, the comparison of the opinion of the managers from the said segments are done. Further, this topic presents the graphical representation of the data related with the opinion of the managers.

### **6.3) Hypothesis Testing –**

All the Hypothesis formulated based on objectives are tested and validated using statistical techniques in this section. The statistical techniques in form of Z test and Chi Square tests are used to validate the Hypothesis. Further, conclusions are drawn based on the inferences of the Hypothesis.

## **Chapter 7 - Observations and findings**

This chapter includes summary of all the results. Discussions related to the knowledge workers management process and its implications to the top management, employees and HR managers, the findings pertaining employees, management and the opinion about knowledge workersmanagement issues process. Further, the results pertaining to three different segments of the HR managers are summarized. The short conclusion is mentioned based on the findings at the end of the study.

## **Chapter 8 Conclusion and Suggestions**

The chapter includes conclusions and model addressing the issues of knowledge workers.

### **Bibliography**

This includes the list of the books, reports, journals, articles that are arranged chronologically.

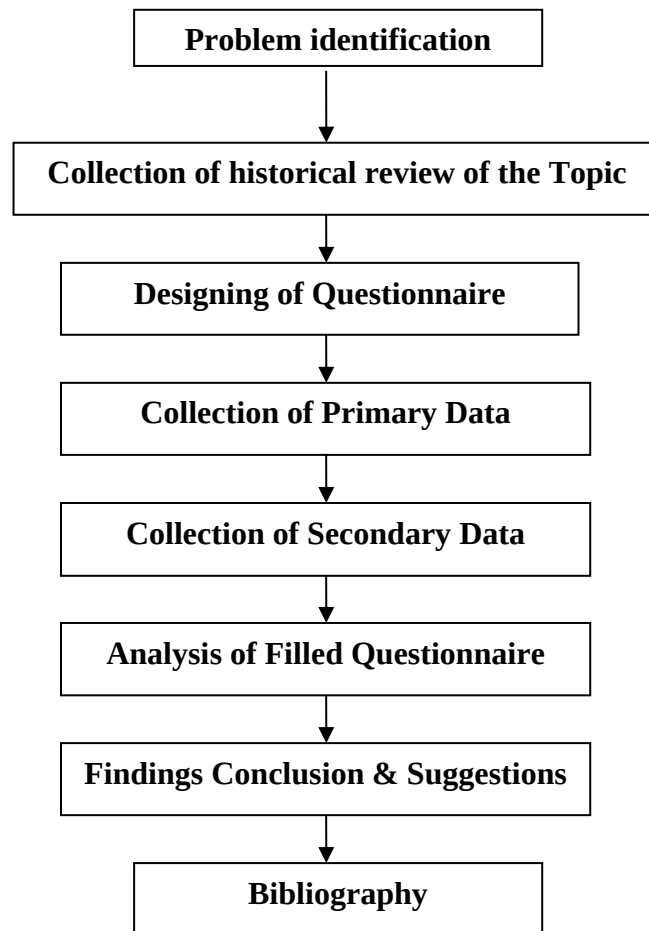
### **Appendices**

Appendices include :

- Questionnaire for the Pilot Study.
- Questionnaire for the research study.
- Response Statement.

Source : Financial Management by I. M. Pandey published by Vikas publication pvt. Ltd., Delhi, 2009.

#### 4.12 Research Process –



Thus, this chapter describes the research methods, significance of sampling plan. Sample procedure and use of statistical methods in the context of the data analysis used in the study. The outcome of the chapter indicates that there is need of gathering the primary data regarding the opinion of the managers of the various organizations. The chapter clearly mentions about various steps followed while coding and decoding of the data .The chapter describes various variables used for the study .The next chapter describes about data analysis of the various aspects of knowledge workers management issues. The variables selected for the study are presented in respective sections of the next topic i.e. results and discussion, from various sections A of the chapter to section C of the chapter.

## References –

1. Gable, G., "Integrating Case Study and Survey Research Methods: An Example in Information Systems," *European Journal of Information Systems*, (3:2), 1994, pp. 112-126.
2. Gopal M. A., *An Introduction to Research Procedure in Social Sciences*, Asia Publishing House – Bombay
3. Kothari C. R., (1990) *Research Methodology – Methods & Techniques*, ed 2, Vishwa Prakashan – New Delhi
4. Patten, M. (2007). *Understanding research methods: An overview of the essentials*. (6th ed.). Glendale, CA: Pyrczak Publishing. Q180.55.M4 P316 2007
5. Salkind, N. J. (2012). *100 questions (and answers) about research methods*. Los Angeles, CA: Sage. H62.S3195 2012

## **Chapter 5**

### **Company Profile**

A research population is also known as a well-defined collection of respondents objects known to have similar characteristics. A research population is generally a large collection of respondents or objects that are the focus of a scientific query. To understand the opinion of population researches are done. However, due to the large sizes of populations, it is difficult to test every individual in the population because it is too expensive and time-consuming. All respondents or objects within a certain population usually have a common binding characteristic.

#### **Population Definition :**

Research is with respect to the location :Chakan Industrial Area. Therefore, the population is defined from Chakan Industrial Area based on the criterion mentioned below. Managerial and supervisory staff in such companies are considered as Population.

#### **Criterion for defining Population :**

From the data available from the Office of the Dy. Director (Industrial Safety), office of registration of factories, in Chakan Industrial Area, there are 326 engineering industries. 91% industries are auto component manufacturing engineering industries.

While defining the population the following criterion are considered :

- ❖ Industries from the Chakan Industrial Area which covers : the industries within the geographical limits of : Tehsil Khed, known as Chakan Industrial Area covering Mahalunge, Chakan, Ambethan, Kharabwadi, Nighoje, Talegaon Road, Sadumbre, Khalumbre, Talwade, Shikrapur Road, Nasik Road, Moshi, NanekarWadi.
- ❖ The industries engaging both - knowledge workers (Diploma / Engineers / Science Graduates) and traditional workers are engaged at operative level.

- ❖ The industries having minimum strength 350 employees (direct and indirect).
- ❖ The industries who have advanced, modern techniques of production.
- ❖ The industries having similar a) product range b) process flow c) skill and competence requirements.
- ❖ **Managerial and supervisory staff in such Companies are considered as population.**

The total number of objects are called as Population. In the Research Work undertaken by the Research Student, there are 30 Companies, to which the above criterion is applicable. **A list of 30 companies is as mentioned hereunder.**

**Sample Selection :**

Sample is a portion of the total population that is considered for the study and analysis. The type of sampling the researcher has used is a stratified sampling. The respondents, as specified in Sampling Plan, are taken for research work.

The Companies representing similar characters from the population are selected as Sample. These Companies are 30 in numbers. These sample companies possess and cover all the characteristics specified for the defining the population. Group of these Companies is called as Sample. The details of these companies are specified as under:

| Sr. No. | NAME & ADDRESS                                                          | YEAR OF ESTABLISHMENT | PRODUCTS                                                                | CUSTOMER                                            | STRENGTH | TRADITIONAL WORKER | KNOWLEDGE WORKER |        |
|---------|-------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------|-----------------------------------------------------|----------|--------------------|------------------|--------|
|         |                                                                         |                       |                                                                         |                                                     |          |                    | BSC / DIPLOMA    |        |
|         |                                                                         |                       |                                                                         |                                                     |          |                    | MALE             | FEMALE |
| 1       | Sansera Engineering Pvt. Ltd, b-18, Midc, Chakan, Pune - 410501. India. | 1987                  | CONNECTING ROD, Rocker Arm Gear Shifter Fork Sprocket Shaft Crank Shaft | BAJAJ, General Motors, HERO, HONDA, MAHINDRA, TATA. | 450      | 120                | 315              | 15     |

|   |                                                                                                                                                           |      |                                                                                                              |                                                                                |     |     |     |    |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----|-----|-----|----|
|   | Tel -<br>021356662<br>28                                                                                                                                  |      |                                                                                                              |                                                                                |     |     |     |    |
| 2 | Advik Hi-Tech Pvt. Ltd.<br>Gat No.357/99,<br>Chakan-Talegaon Road,<br>Kharabwadi, Tal-Khed,<br>Chakan, Pune-410501,<br>India.<br>Phone: +91 (2135) 669500 | 2000 | CAM CHAIN ADJUSTER,<br>OIL PUMPS, DECOMPRESSION UNIT,<br>FUEL COCK                                           | BAJAJ,<br>YAMAHA,<br>SUZUKI,<br>HONDA,<br>LML,<br>LOMBARDINI                   | 600 | 210 | 370 | 20 |
| 3 | Lucas-TVS CHAKAN PLANT<br>B-1/1, MIDC Industrial Area,<br>Village Nighoje, Kheda Taluka,<br>Chakan, Pune - 410501.<br>Tel: 91-2135 327707                 | 1961 | WIPER MOTOR,<br>ENGINE COOLING FAN ASSEMBLY,<br>ALTERNATOR,<br>BLOWER MOTOR,<br>REAR WIPER,<br>STARTER MOTOR | General Motors,<br>FIAT,<br>HYUNDAI,<br>HONDA,<br>MAHINDRA,<br>TATA,<br>BAJAJ. | 800 | 270 | 440 | 90 |

|   |                                                                                                                                                                                                                                 |      |                                                                      |                                                                                                             |      |     |     |    |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------|-----|-----|----|
| 4 | Keihin Fie Pvt. Ltd.<br>B-3,<br>MIDC<br>Chakan,<br>Mahalunge<br>Village,<br>Tal. Khed,<br>Dist. Pune<br>Maharashtra<br>410 501<br>(India)<br>Phone :<br>+91-2135-<br>664300/40<br>0/405                                         | 1982 | Carburetors,<br>AIR<br>SUCTION<br>VALVE                              | BAJAJ,<br>TVS,<br>HERO,<br>HONDA,<br>MAHINDR<br>A,<br>YAMAHA,<br>ROYAL<br>ENFIELD.                          | 750  | 320 | 420 | 10 |
| 5 | Endurance<br>Technologi<br>es Private<br>Limited.<br>Address :<br>Gut No.<br>416,<br>Village<br>TakveBudruk,<br>Taluka:<br>VadgoanM<br>aval, Dist.<br>Pune -<br>412106.<br>India.<br>Telephone<br>: +91-<br>2114-<br>211331/2/3 | 1985 | ALUMINIUM<br>CASTING,<br>TRANSMISSI<br>ON,<br>BRAKING,<br>SUSPENSION | BAJAJ,<br>SUZUKI,<br>HERO,<br>HONDA,<br>MAHINDR<br>A,<br>YAMAHA,<br>ROYAL<br>ENFIELD,<br>HARLEY<br>DAVIDSON | 1100 | 385 | 690 | 25 |
| 6 | Magnetima<br>rellimother<br>son Shock<br>Absorbers<br>India Pvt.<br>Ltd<br>Plot No. B-<br>23, MIDC,<br>Chakan<br>Industrial<br>Area,<br>Village<br>Nighoje,<br>Tal.<br>Rajgurunag                                               | 1975 | STEERING<br>DAMPER,<br>GAS SPRING,<br>STRUTS,<br>REAR<br>SHOCKS      | BAJAJ,<br>SUZUKI,<br>HERO,<br>HONDA,<br>MAHINDR<br>A.                                                       | 430  | 140 | 285 | 5  |

|   |                                                                                                                                            |      |                                                                                                                                                                                        |                                                                       |     |     |     |    |
|---|--------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----|-----|-----|----|
|   | ar,<br>Dist. Pune<br>– 410 501.<br>India<br>Phone: +91<br>2135<br>663946                                                                   |      |                                                                                                                                                                                        |                                                                       |     |     |     |    |
| 7 | Excel<br>Auto<br>Industries<br>Block No.<br>616,<br>Mahalunge<br>Chakan,<br>ChakanTal<br>egon Road,<br>Pune.                               | 2009 | FLOAT<br>SWITCHES,<br>PRESSURE &<br>INDICATOR<br>SWITCHES,<br>DOME<br>SWITCHES                                                                                                         | BAJAJ,<br>HERO,<br>HONDA,<br>MAHINDR<br>A.                            | 400 | 90  | 288 | 22 |
| 8 | Brakes<br>India<br>Limited<br>Gat No<br>1059, Plot<br>No 3,<br>Kirshna<br>Industrial<br>Park,<br>WakiBudru<br>k, Khed,<br>Pune -<br>410501 | 192  | BRAKE<br>PADS,<br>AIR CALIPER<br>PARTS,<br>WHEEL<br>CYLINDER                                                                                                                           | SWARAJ<br>MAZDA,<br>FORD,<br>ASHOK<br>LEYLAND,<br>FIAT.               | 445 | 155 | 275 | 15 |
| 9 | Rinder<br>India Pvt.<br>Ltd.<br>Gat No<br>148,<br>MhalungeI<br>ngale,<br>Off<br>ChakanTal<br>egaon<br>Road<br>Tal –<br>Khed,<br>Chakan     | 1965 | Headlamps,<br>Projectors,<br>DRL,<br>Tail lamps,<br>Blinkers and<br>Turn<br>indicators, Side<br>and position<br>indicators,<br>Brake lights,<br>Work lamps,<br>Auxiliary<br>equipment. | BAJAJ,<br>JCB,<br>HERO,<br>TVS,<br>MAHINDR<br>A,<br>MARUTI<br>SUZUKI. | 450 | 120 | 295 | 35 |

|    |                                                                                                                                                                  |      |                                                                                                                                       |                                                                                                                      |      |     |      |    |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------|-----|------|----|
|    | Dist - Pune<br>- 410501<br>India<br>Tel: +91<br>(020)<br>30616100 /<br>200                                                                                       |      |                                                                                                                                       |                                                                                                                      |      |     |      |    |
| 10 | Sigma<br>Electric<br>Manufactur<br>ing<br>Corporatio<br>n Pvt Ltd<br>154/1,<br>Mahalunge<br>, Chakan<br>Pune –<br>410501,<br>India<br>T :<br>+91.2135.3<br>07100 | 1982 | DIE<br>CASTING<br>FERROUS<br>AND NON<br>FERROUS<br>PRODUCTS,<br>FITTINGS<br>AND<br>WEATHER<br>PROOF<br>PRODUCTS,                      | SIEMENS,<br>ABB,<br>BLACK &<br>DECOR,<br>WHIRLPOO<br>L,<br>CROMPTO<br>N.                                             | 1500 | 240 | 1180 | 80 |
| 11 | Mindarika<br>Pvt. Ltd.<br>Gat No.<br>143/1,<br>Village -<br>Mahalunge<br>, Tal -<br>Khed, Dist<br>- Pune -<br>410501.                                            | 1992 | Two and Three<br>Wheeler<br>Switches, Off<br>Road Switches,<br>Automotive<br>Electronics,<br>Sensors,<br>Controllers and<br>Actuators | BAJAJ,<br>HERO,<br>HONDA,<br>MAHINDR<br>A,<br>YAMAHA.                                                                | 490  | 65  | 400  | 25 |
| 12 | Tenneco<br>Automotiv<br>e India<br>Private<br>Limited<br>Gat no. -<br>G6, Phase -<br>III, Chakan<br>MIDC,<br>Kuruli,<br>TalukaKhe<br>d,                          | 1999 | Clean Air and<br>ride<br>performance,<br>products and<br>systems for the<br>Automotive                                                | Ashok<br>Leyland,<br>Bharat Benz,<br>Club Car,<br>General<br>Motors,<br>Mahindra,<br>Volkswagen,<br>Maruti<br>Suzuki | 500  | 45  | 440  | 15 |

|    |                                                                                                                                    |      |                                                                                                                                     |                                                                      |     |    |     |    |
|----|------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----|----|-----|----|
|    | Pune - 410501, Maharashtra. (O) +91 2135 612501                                                                                    |      |                                                                                                                                     |                                                                      |     |    |     |    |
| 13 | Autocomp corporation Panse Pvt. Ltd. Gat no. - 392/2, Talegaon Chakan Road, Chakan MIDC, Taluka Khe d, Pune - 410501, Maharashtra. | 1983 | Door Assembly Fuel Tank Filler, Bracket Exhaust Muff H-Shield, Bracket Tail Pipe Hanger, Car Seating Panels, Radiator Support Panel | BAJAJ, TATA, MAHINDRA, GENERAL MOTORS, TRELLEBO RG                   | 500 | 70 | 425 | 5  |
| 14 | Mahindra Navistar Engines Pvt Ltd. Plot No. A1/1, Phase - IV, Nighoje, Chakan MIDC, Taluka Khe d, Pune - 410501, Maharashtra.      | 1945 | Diesel engines for manufacturers of diesel-powered agricultural, construction and industrial equipment                              | Mahindra                                                             | 500 | 35 | 452 | 13 |
| 15 | Minda Industries Limited. – Lighting Division, B-1/5, Chakan Industrial                                                            | 1980 | Automotive lamps manufacturers                                                                                                      | Yamaha, Suzuki, Swaraj Mazda, New Holland, Eicher, Mahindra, Maruti, | 500 | 55 | 417 | 28 |

|    |                                                                                                                                                                                            |      |                                                                                                                                |                                                                                               |     |    |     |    |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----|----|-----|----|
|    | Area ,<br>Nighoje,<br>Chakan,<br>Mahalunge<br>Ingale,<br>Maharashtra 410501<br>Phone:012<br>4 229 1621                                                                                     |      |                                                                                                                                | General<br>Motors, Fiat,<br>Volkswagen,<br>Toyota, Tata,<br>Ford                              |     |    |     |    |
| 16 | Philips<br>Electronics<br>India Ltd.<br>Plot No. B<br>- 79,<br>MIDC,<br>Phase E-II,<br>Chakan,<br>Tal - Khed,<br>Dist - Pune<br>- 410501.                                                  | 1930 | Advanced<br>Molecular<br>Imaging,<br>Clinical<br>Informatics,<br>Diagnostic<br>ECG,<br>Fluoroscopy,<br>Interventional<br>X-ray | Hospitals,<br>Various<br>Healthcare<br>Institutes                                             | 500 | 25 | 440 | 35 |
| 17 | Suprajit<br>Engineering<br>Limited<br>Unit V, B<br>- 13,<br>MIDC,<br>Chakan<br>Industrial<br>Area, Tal -<br>Khed, Dist<br>- Pune -<br>410501.                                              | 1985 | Automotive<br>Cables,<br>Non -<br>Automotive<br>Cables, Two<br>Wheeler<br>Cables,<br>Instruments                               | Tata, BMW,<br>General<br>Motors,<br>Bajaj, Volks<br>- wagen,<br>Ford,<br>Mahindra,<br>Suzuki. | 500 | 33 | 449 | 18 |
| 18 | Thai<br>Summit<br>Neel Auto<br>Private<br>Limited,<br>C-1,<br>Chakan<br>MIDC<br>Area,<br>ChakanTal<br>egaon<br>Road,<br>Village<br>Mahalunge<br>, Tal-khed,<br>Pune,<br>Maharashtra 410501 | 1983 | Pressing,<br>Welding, Pipe<br>Bending,<br>Painting and<br>Powder<br>coating<br>products                                        | Volks -<br>wagen, Tata,<br>General<br>Motors,<br>Bajaj, Ford,<br>Mahindra,<br>Suzuki.         | 500 | 45 | 440 | 15 |

|    |                                                                                                                             |      |                                                                            |                                                                                                                                       |     |    |     |    |
|----|-----------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----|----|-----|----|
| 19 | Minda Industries Limited - Switch Division<br>Plot No B-1/5, MIDC, Industrial Area, Chakan, Pune, Maharashtra               | 1960 | Two wheeler automotive switches                                            | Bajaj, Yamaha, Suzuki, Swaraj Mazda, New Holland, Eicher, Mahindra, Tafe, Royal Enfield, Maruti, Fiat, Volkswagen, Toyota, Tata, Ford | 628 | 57 | 526 | 45 |
| 20 | Jbm Ma Automotive Pvt Ltd<br>C-1/2, MIDC, Chakan Talgaon Road Chakan, Pune – 410501                                         | 1983 | Skin Panels, Sheet Metal Components and Welded Assemblies, Cross Car Beam. | Volks - wagen, Tata, General Motors, Bajaj, Ford, Mahindra, Maruti Suzuki.                                                            | 856 | 55 | 795 | 6  |
| 21 | Mindavale Security Systems Pvt Ltd.<br>B - 21, M. I. D. C. , Chakan AT Nighoje, Kuruli , Tal Khed, Pune, Maharashtra 410501 | 1980 | Remote Key Less Antena, Door Handles, Door Latches, Flip Key.              | Maruti Suzuki, Force, General Motors, Jaguar, Land Rover, Mahindra, Fiat, Volkswagen, Toyota, Tata, Ford                              | 825 | 70 | 702 | 53 |
| 22 | Mercedes Benz India Pvt Ltd<br>E-3, MIDC, Phase-III, Chakan Industrial Area, Kuruli & Nighoje,                              | 1965 | Small and Medium Size Passenger Cars                                       | Asia Pacific Countries                                                                                                                | 700 | 10 | 667 | 23 |

|    |                                                                                                                           |      |                                                                                                |                                                      |      |     |      |     |
|----|---------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------|------------------------------------------------------|------|-----|------|-----|
|    | TalukaKhed, Pune, Maharashtra 410501<br>Phone:021 35 673 000                                                              |      |                                                                                                |                                                      |      |     |      |     |
| 23 | Lumax Industries Ltd,<br>608, ChakanTalgaon Road, Mahalunge, Tal - Khed, Dist - Pune - 410501.                            | 1945 | Head Lamps, Tail Lamps, Sundry Lamps, Auxiliary Lamps                                          | BAJAJ, HERO, HONDA, MAHINDRA, YAMAHA, Maruti Suzuki. | 1000 | 77  | 843  | 80  |
| 24 | Volkswagen India Pvt. Ltd.<br>E-1, MIDC Phase - III, Mahalunge, Tal - Khed, Dist - Pune - 410501.                         | 1937 | Small and Medium Size Passenger Cars                                                           | Asia Pacific Countries                               | 3000 | 115 | 2755 | 130 |
| 25 | Flash Electronics India Pvt Ltd,<br>A4, MIDC Chakan Industrial Area, Mahalunge, Chakan, Tal - Khed, Dist - Pune - 410501. | 1989 | Magneto, Stater Motor, Wiper Motor, Ignition Coil, Spark Plug, LED Module, Flasher, Regulators | BAJAJ, YAMAHA, PIAGGIO, HONDA, LML, MAHINDRA         | 998  | 40  | 888  | 70  |

|    |                                                                                                                                                                       |      |                                                                                                                     |                                                                                                                     |      |    |      |    |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------|----|------|----|
| 26 | Badveautoc<br>omp Pvt<br>Ltd,<br>A3, MIDC<br>Chakan<br>Industrial<br>Area,<br>Mahalunge<br>, Chakan,<br>Tal - Khed,<br>Dist - Pune<br>- 410501.                       | 1989 | Exhaust<br>System,<br>Chasis&<br>Frame<br>Assembly,<br>Plastic Molded<br>& Painted<br>Parts<br>Assembly             | BAJAJ,<br>TATA,<br>FIAT,<br>GENERAL<br>MOTORS,<br>YAMAHA,<br>PIAGGIO,<br>HONDA,<br>ASHOK<br>LEYLAND<br>MAHINDR<br>A | 1100 | 68 | 984  | 48 |
| 27 | Lear<br>Automotiv<br>e Pvt. Ltd.<br>Gat No.<br>427/6, H.<br>No. 6 to 9,<br>ChakanTal<br>egaon<br>Road,<br>MIDC,<br>Chakan,<br>Tal - Khed,<br>Dist - Pune<br>- 410501. | 1917 | Passenger and<br>Commercial<br>Vehicle Seats                                                                        | TATA,<br>FIAT,<br>GENERAL<br>MOTORS,<br>HONDA,<br>ASHOK<br>LEYLAND<br>MAHINDR<br>A                                  | 1308 | 52 | 1184 | 72 |
| 28 | Varroc<br>Engineerin<br>g Pvt Ltd.,<br>Plot No. B-<br>24 & 25,<br>MIDC<br>Chakan,<br>Tal - Khed,<br>Dist - Pune<br>- 410501                                           | 1990 | Magneto,<br>Stater Motor,<br>Wiper Motor,<br>Ignition Coil,<br>Spark Plug,<br>LED Module,<br>Flasher,<br>Regulators | BAJAJ,<br>YAMAHA,<br>PIAGGIO,<br>HONDA,<br>LML,<br>MAHINDR<br>A                                                     | 1380 | 98 | 1187 | 95 |
| 29 | Mahindra<br>Forgings<br>Ltd.,<br>Gat No.<br>856 to 860,<br>Ambethan<br>Road,<br>Chakan,<br>Khed,<br>Pune,<br>Maharashtr<br>a 410501                                   | 1996 | Crank Shaft,<br>Nuckles                                                                                             | MARUTI<br>SUZUKI,<br>TATA,<br>GENERAL<br>MOTORS,<br>VOLVO<br>MAHINDR<br>A.                                          | 1420 | 86 | 1325 | 9  |

|    |                                                                                                                                                  |      |                                                                                                                     |                                                                                                |     |    |     |   |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----|----|-----|---|
| 30 | S N<br>Casting Pvt<br>Ltd<br>Gate No<br>22, Village<br>Mahalunge<br>, Chakan-<br>Talegaon<br>Road,<br>Chakan,<br>Pune,<br>Maharashtr<br>a 410501 | 2002 | Reflector,<br>Cover Starter,<br>Lever<br>Handle,Cover<br>Upper Bracket,<br>Heat Shink,<br>Holder, Wiper<br>Cylinder | MINDA<br>INDUSTRIE<br>S,<br>TATA<br>FICOSA,<br>HUECO<br>ELECTRON<br>ICS,<br>ADVIK HI -<br>TECH | 355 | 58 | 293 | 4 |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----|----|-----|---|

## Chapter 6 : Results & Discussions

# INDEX

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In this Chapter researcher has done the factorization based on the significant factors in respect of the study. The factors are as under :

- 6.1 Impact of Economic Reforms.
- 6.2 Opinion about impact on competencies.
- 6.3 Opinion about preference of merits of KWs / TWs
- 6.4 Opinion about issues of KWs/TWs
- 6.5 Opinion about IR/Legal issues
- 6.6 Opinion about issues pertaining to HR strategies
- 6.7 Opinion about hiring and retention
- 6.8 Opinion about motivation and career planning
- 6.9 Opinion about training and performance management

Response against the above factors are measured, analyzed on the Likert scale as under :

| Scale | Rating             |
|-------|--------------------|
| 1     | Strongly Dis Agree |
| 2     | Dis Agree          |
| 3     | Neutral            |
| 4     | Agree              |
| 5     | Strongly Agree.    |

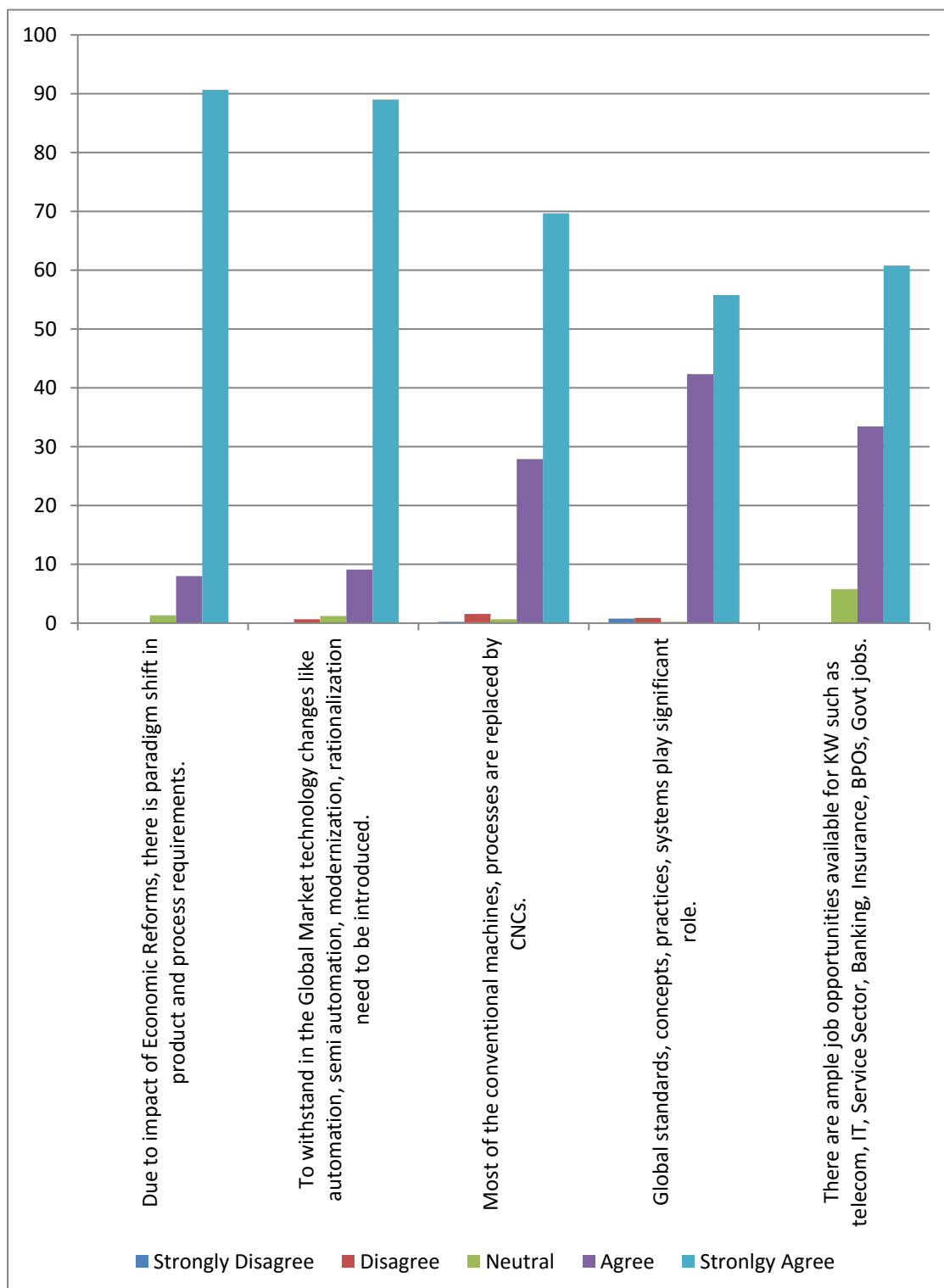
Response Statement is prepared as attached in appendix.

Researcher has discussed the results with the help of tables & graphs.

**Table 6.1 – Table showing opinion about impact of economic reforms**

| Sr. No. | Particulars                                                                                                                                  | 1 | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------|---|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                              | 0 | 0    | 0  | 0    | 12 | 1.33 | 72  | 8     | 816 | 90.67 | 900   | 100 |
| 2       | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced. | 0 | 0    | 6  | 0.67 | 11 | 1.22 | 82  | 9.11  | 801 | 89    | 900   | 100 |
| 3       | Most of the conventional machines, processes are replaced by CNCs.                                                                           | 2 | 0.22 | 14 | 1.56 | 6  | 0.67 | 251 | 27.89 | 627 | 69.67 | 900   | 100 |
| 4       | Global standards, concepts, practices, systems play significant role.                                                                        | 7 | 0.78 | 8  | 0.89 | 2  | 0.22 | 381 | 42.33 | 502 | 55.78 | 900   | 100 |
| 5       | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs.                 | 0 | 0    | 0  | 0    | 52 | 5.78 | 301 | 33.44 | 547 | 60.78 | 900   | 100 |

**Graph 6.1 – Graph showing opinion about impact of economic reforms**



## **Description**

From tables and graphs, it can be observed that majority [98.67 % - sum of Strongly Agree (90.67%) and Agree (8%)] of the respondents from manager's category agreed that, on the fact that because of the economic reforms, there is a paradigm shift in the product and process requirements. While only 1.33% of the respondents are disagree with this view

From tables and graphs, it can be observed that substantial percentage [98.11 % - sum of Strongly Agree (89%) and Agree (9.11%)] of the respondents from managers category agreed that, to withstand in the Global Market, technology changes like automation, semi automation, modernization, rationalization need to be introduced. While only 1.89% of the respondents are disagree with this view

From tables and graphs, it can be observed that majority [97.56 % - sum of Strongly Agree (69.67%) and Agree (27.89%)] of the respondents from manager's category state that most of the conventional machines, processes are replaced by CNCs. While only 2.44% of the respondents are disagree with this view

From tables and graphs, it can be observed that substantial percentage [98.11 % - sum of Strongly Agree (55.78%) and Agree (42.33%)] of the respondents from manager's category state that, global standards, concepts, practices, systems play significant role. While only 1.89% of the respondents are disagree with this view

From tables and graphs, it can be observed that high percentage [94.22 % - sum of Strongly Agree (60.78%) and Agree (33.44%)] of the respondents from manager's category state that there are ample job opportunities available for knowledge workers such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Government jobs. Managers further stated that, knowledge workers have a decent level of educational qualification. While only 5.78% of the respondents are disagree with this view.

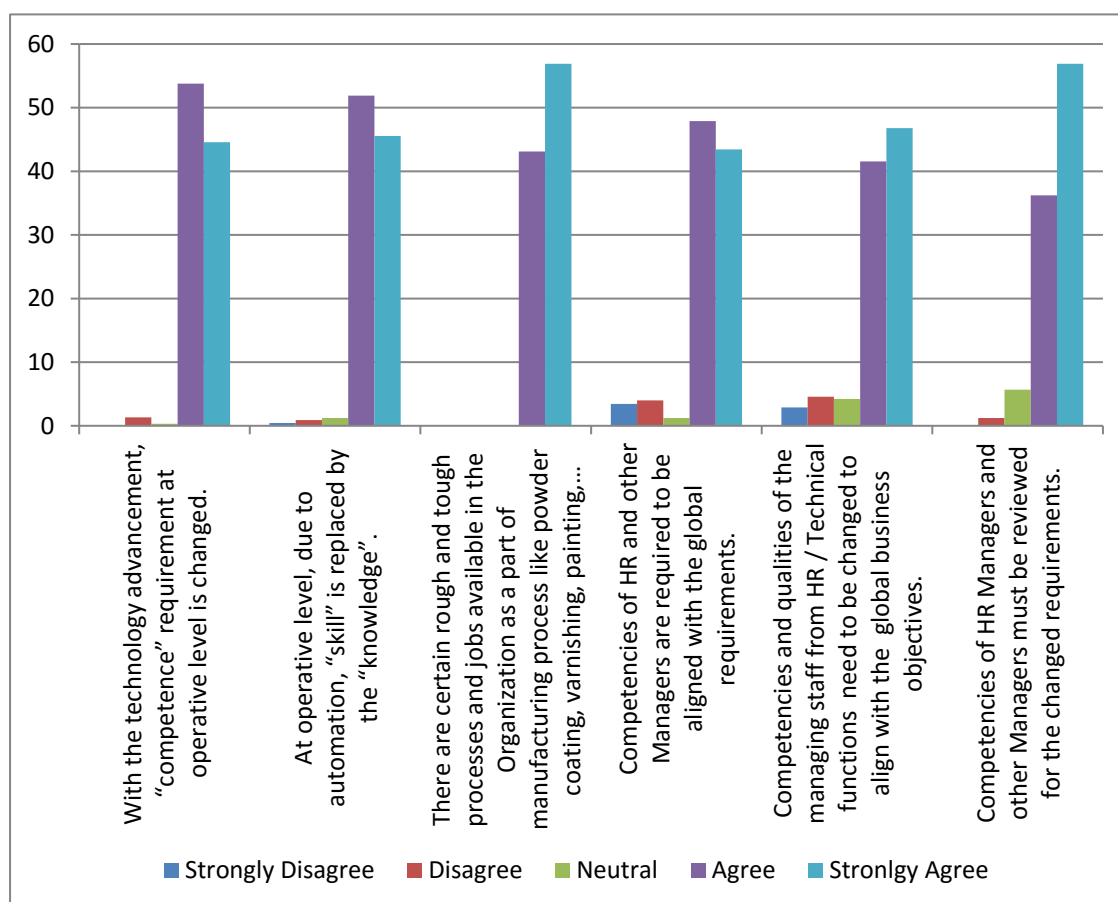
## 6.2 Impact on Competencies

**Table 6.2 – Table showing opinion about impact on Competencies**

| Sr<br>·<br>N<br>o. | Particulars                                                                                                                                                                                              | 1  | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Tot<br>al | %   |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-----------|-----|
| 1                  | With the technology advancement, “competence” requirement at operative level is changed.                                                                                                                 | 0  | 0    | 12 | 1.33 | 3  | 0.33 | 484 | 53.78 | 401 | 44.56 | 900       | 100 |
| 2                  | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                                                                                           | 4  | 0.44 | 8  | 0.89 | 11 | 1.22 | 467 | 51.89 | 410 | 45.56 | 900       | 100 |
| 3                  | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. | 0  | 0    | 0  | 0    | 0  | 0    | 388 | 43.11 | 512 | 56.89 | 900       | 100 |
| 4                  | Competencies of HR and other Managers are required to be aligned with the global requirements.                                                                                                           | 31 | 3.44 | 36 | 4    | 11 | 1.22 | 431 | 47.89 | 391 | 43.44 | 900       | 100 |

|   |                                                                                                                                                 |    |      |    |      |    |      |     |       |     |       |     |     |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-----|-----|
| 5 | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives. | 26 | 2.89 | 41 | 4.56 | 38 | 4.22 | 374 | 41.56 | 421 | 46.78 | 900 | 100 |
| 6 | Competencies of HR Managers and other Managers must be reviewed for the changed requirements.                                                   | 0  | 0    | 11 | 1.22 | 51 | 5.67 | 326 | 36.22 | 512 | 56.89 | 900 | 100 |

**Graph 6.2 - Graph showing opinion about different parameters of “Impact on Competencies”**



## **Description**

Based on the responses obtained from the managers following are the description on the manager's opinion about the impact on competencies:

From tables and graphs, it can be observed that majority [98.33 % - sum of Strongly Agree (44.56%) and Agree (53.78%)] of the respondents from manager's category state that, users cannot continue to work with their traditional methods / knowledge. They have to work upon increasing the level of competency at the operating level. While only 1.67% of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority [97.44 % - sum of Strongly Agree (45.56%) and Agree (51.89%)] of the respondents from manager's category state that, at operative level, due to automation, "skill" is replaced by the "knowledge". While only 2.56% of the respondents are disagree with this view.

From tables and graphs, it can be observed that all [100 % - sum of Strongly Agree (56.89%) and Agree (43.11%)] of the respondents from manager's category state that, there are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. While only 2.56% of the respondents are disagree with this view.

From tables and graphs, it can be observed that Substantial number [91.33 % - sum of Strongly Agree (43.44%) and Agree (47.89%)] of the respondents from manager's category mention that, competencies of HR and other Managers are required to be aligned with the global requirements. While only 8.67% of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [93.11 % - sum of Strongly Agree (56.89%) and Agree (36.22%)] of the respondents from manager's category mention that,, competencies of HR Managers and other Managers must be reviewed for the changed requirements. While only 8.67% of the respondents are disagree with this view.

### 6.3 Preference / Merits of KWs and TWs :

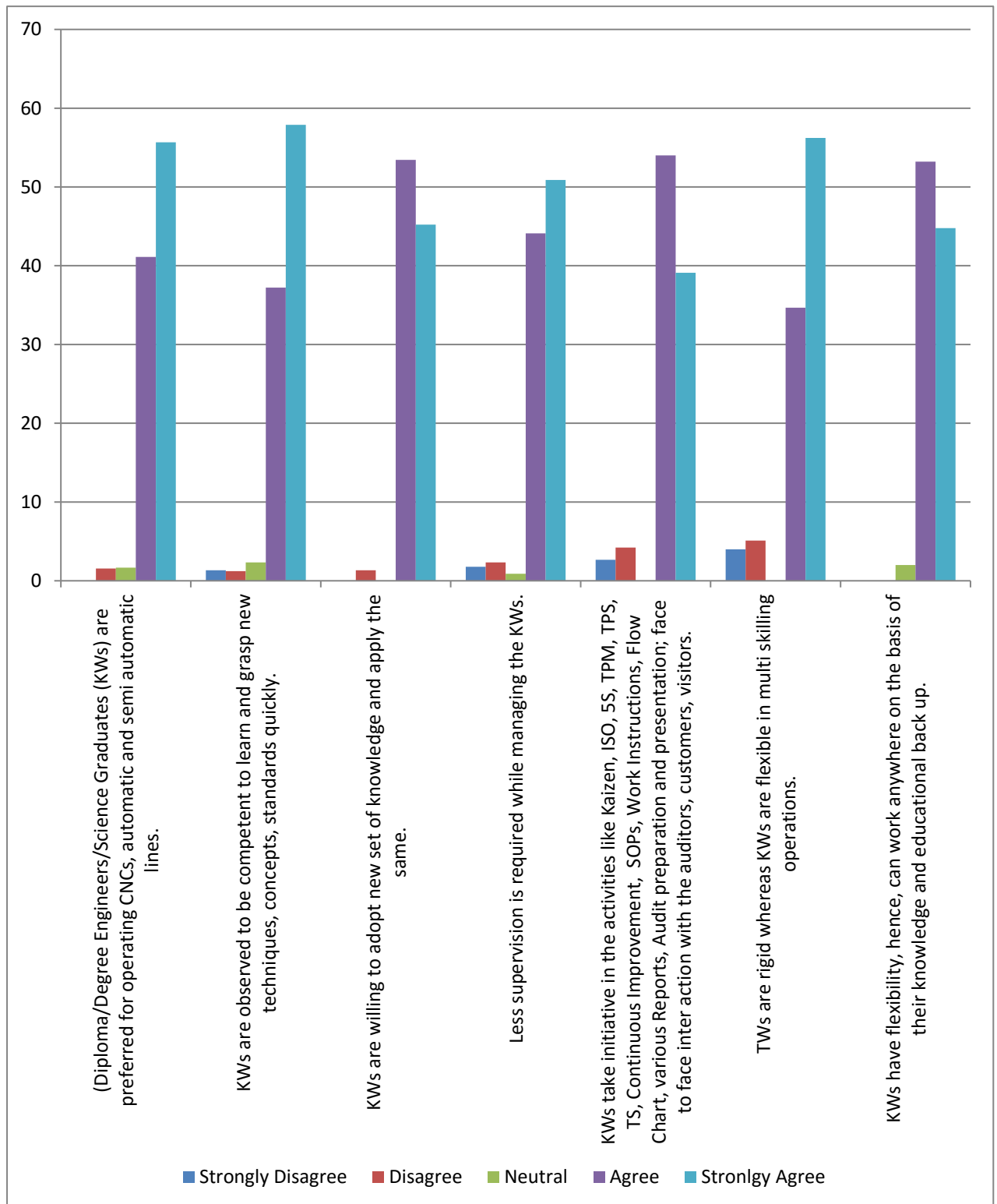
**Table 6.3 – Table showing the opinion about preference / Merits of KWs and TWs**

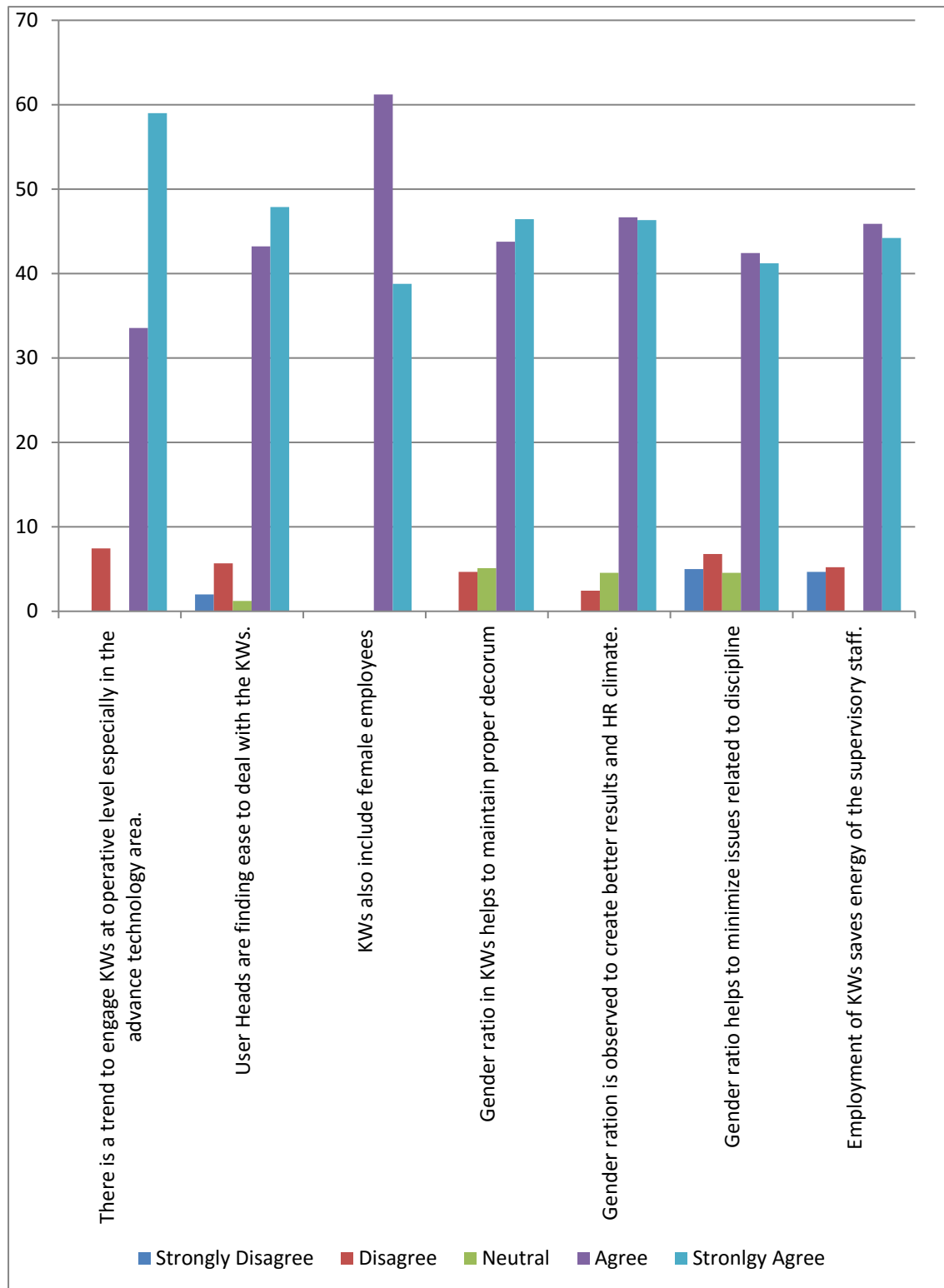
| Sr. No. | Particulars                                                                                                                                                                                                                             | 1  | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | (Diploma/Degree Engineers/Science Graduates (KW)s are preferred for operating CNCs, automatic and semi automatic lines.                                                                                                                 | 0  | 0    | 14 | 1.56 | 15 | 1.67 | 370 | 41.11 | 501 | 55.67 | 900   | 100 |
| 2       | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                                                        | 12 | 1.33 | 11 | 1.22 | 21 | 2.33 | 335 | 37.22 | 521 | 57.89 | 900   | 100 |
| 3       | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                                                       | 0  | 0    | 12 | 1.33 | 0  | 0    | 481 | 53.44 | 407 | 45.22 | 900   | 100 |
| 4       | Less supervision is required while managing the KWs.                                                                                                                                                                                    | 16 | 1.78 | 21 | 2.33 | 8  | 0.89 | 397 | 44.11 | 458 | 50.89 | 900   | 100 |
| 5       | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face interaction with the auditors, | 24 | 2.67 | 38 | 4.22 | 0  | 0    | 486 | 54    | 352 | 39.11 | 900   | 100 |

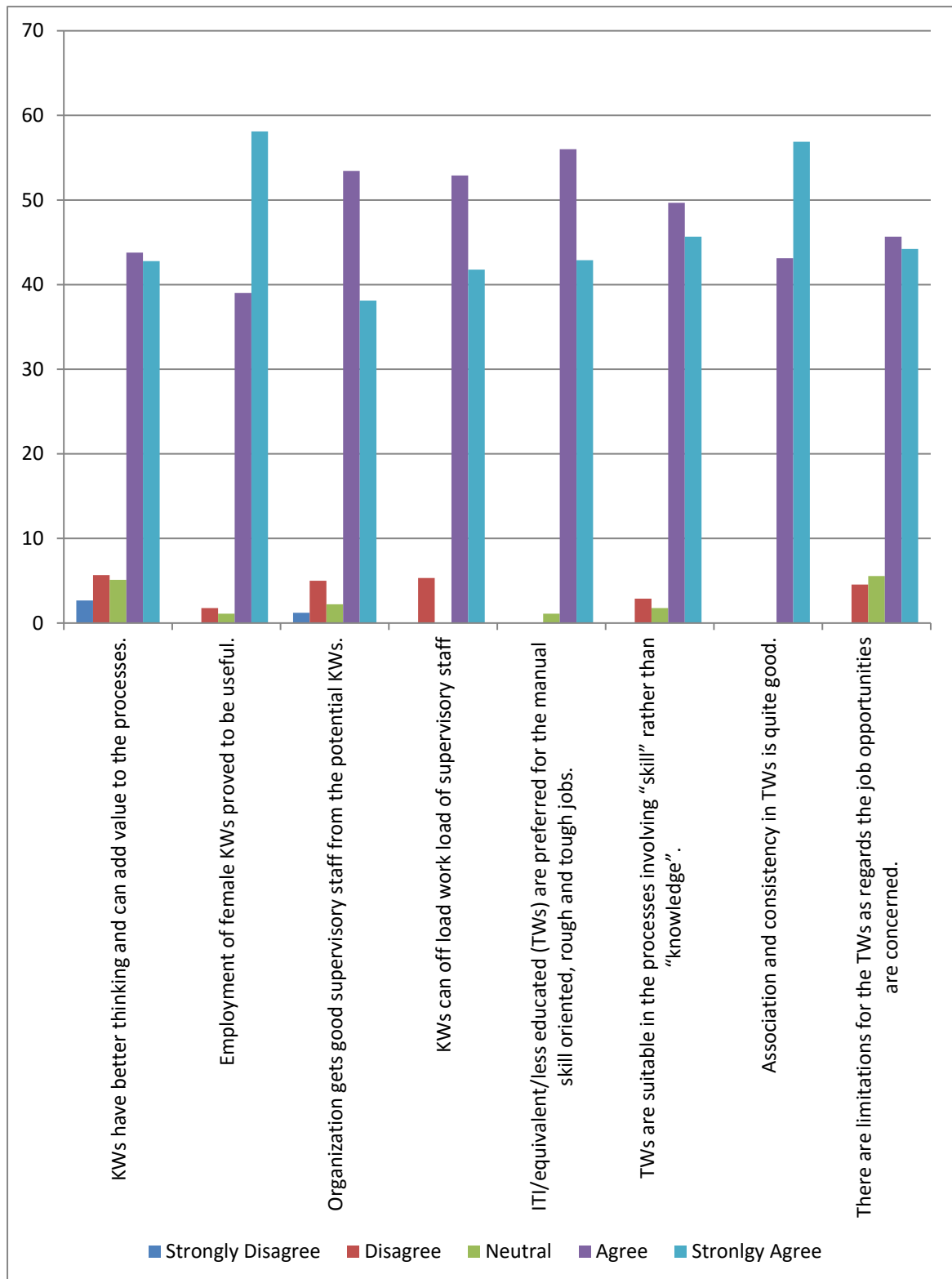
|    |                                                                                                         |    |      |    |      |    |      |     |       |     |       |     |     |
|----|---------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-----|-----|
|    | customers, visitors.                                                                                    |    |      |    |      |    |      |     |       |     |       |     |     |
| 6  | TWs are rigid whereas KWs are flexible in multi skilling operations.                                    | 36 | 4    | 46 | 5.11 | 0  | 0    | 312 | 34.67 | 506 | 56.22 | 900 | 100 |
| 7  | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up. | 0  | 0    | 0  | 0    | 18 | 2    | 479 | 53.22 | 403 | 44.78 | 900 | 100 |
| 8  | There is a trend to engage KWs at operative level especially in the advance technology area.            | 0  | 0    | 67 | 7.44 | 0  | 0    | 302 | 33.56 | 531 | 59    | 900 | 100 |
| 9  | User Heads are finding ease to deal with the KWs.                                                       | 18 | 2    | 51 | 5.67 | 11 | 1.22 | 389 | 43.22 | 431 | 47.89 | 900 | 100 |
| 10 | KWs also include female employees                                                                       | 0  | 0    | 0  | 0    | 0  | 0    | 551 | 61.22 | 349 | 38.78 | 900 | 100 |
| 11 | Gender ratio in KWs helps to maintain proper decorum                                                    | 0  | 0    | 42 | 4.67 | 46 | 5.11 | 394 | 43.78 | 418 | 46.44 | 900 | 100 |
| 12 | Gender ration is observed to create better results and HR climate.                                      | 0  | 0    | 22 | 2.44 | 41 | 4.56 | 420 | 46.67 | 417 | 46.33 | 900 | 100 |
| 13 | Gender ratio helps to minimize issues related to discipline                                             | 45 | 5    | 61 | 6.78 | 41 | 4.56 | 382 | 42.44 | 371 | 41.22 | 900 | 100 |
| 14 | Employment of KWs saves energy of the supervisory staff.                                                | 42 | 4.67 | 47 | 5.22 |    | 0    | 413 | 45.89 | 398 | 44.22 | 900 | 100 |
| 15 | KWs have better thinking and can add value to the processes.                                            | 24 | 2.67 | 51 | 5.67 | 46 | 5.11 | 394 | 43.78 | 385 | 42.78 | 900 | 100 |

|    |                                                                                                       |    |      |    |      |    |      |     |       |     |       |     |     |
|----|-------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-----|-----|
| 16 | Employment of female KWs proved to be useful.                                                         | 0  | 0    | 16 | 1.78 | 10 | 1.11 | 351 | 39    | 523 | 58.11 | 900 | 100 |
| 17 | Organization gets good supervisory staff from the potential KWs.                                      | 11 | 1.22 | 45 | 5    | 20 | 2.22 | 481 | 53.44 | 343 | 38.11 | 900 | 100 |
| 18 | KWs can off load work load of supervisory staff                                                       | 0  | 0    | 48 | 5.33 | 0  | 0    | 476 | 52.89 | 376 | 41.78 | 900 | 100 |
| 19 | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs. | 0  | 0    | 0  | 0    | 10 | 1.11 | 504 | 56    | 386 | 42.89 | 900 | 100 |
| 20 | TWs are suitable in the processes involving “skill” rather than “knowledge”.                          | 0  | 0    | 26 | 2.89 | 16 | 1.78 | 447 | 49.67 | 411 | 45.67 | 900 | 100 |
| 21 | Association and consistency in TWs is quite good.                                                     | 0  | 0    | 0  | 0    | 0  | 0    | 388 | 43.11 | 512 | 56.89 | 900 | 100 |
| 22 | There are limitations for the TWs as regards the job opportunities are concerned.                     | 0  | 0    | 41 | 4.56 | 50 | 5.56 | 411 | 45.67 | 398 | 44.22 | 900 | 100 |

**Graph 6.3 - Graphs showing opinion about different parameters of “Preference / Merits of KWs and TWs”**







### Description

From tables and graphs, it can be observed that substantial number [96.78 % - sum of Strongly Agree (55.67%) and Agree (41.11%)] of the respondents from manager's category, (Diploma/Degree Engineers/Science Graduates (KW) are preferred for

operating CNCs, automatic and semi-automatic lines. While only 3.22% of the respondents are disagree with this view.

From tables and graphs, it can be observed that High number [98.67 % - sum of Strongly Agree (45.22%) and Agree (53.44%)] of the respondents from manager's category, knowledge workers are willing to adopt new set of knowledge and apply the same. While only 2.33% of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority [95 % - sum of Strongly Agree (50.89%) and Agree (44.11%)] of the respondents from manager's category agreed that ,less supervision is required while managing the Knowledge workers. While only 5% of the respondents are disagree with this view.

From tables and graphs, it can be observed that high number [93.11 % - sum of Strongly Agree (39.11%) and Agree (54%)] of the respondents from manager's category agreed that knowledge workers take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. While only 6.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [90.89 % - sum of Strongly Agree (56.22%) and Agree (34.67%)] of managers agreed that, traditional workers are rigid whereas knowledge workers are flexible in multi skilling operations. While only 9.11 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [98 % - sum of Strongly Agree (44.78%) and Agree (53.22%)] of the respondents from manager's category agreed that knowledge workers have flexibility, hence, can work anywhere on the basis of their knowledge and educational backup. While only 2 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that high number [91.11 % - sum of Strongly Agree (47.89%) and Agree (43.22%)] of the respondents from manager's category agreed that, user heads are finding ease to deal with the KWs. While only 8.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that all [100 % - sum of Strongly Agree (38.78%) and Agree (61.22%)] of managers agreed that, knowledge workers also include female employees.

From tables and graphs, it can be observed that majority [90.22 % - sum of Strongly Agree (46.44%) and Agree (43.78%)] of managers agreed that, gender ratio in knowledge workers helps to maintain proper decorum. While only 9.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority [93 % - sum of Strongly Agree (46.67%) and Agree (46.33%)] of the respondents from manager's category agreed that,, gender ratio is observed to create better results and HR climate. While only 7 % of the respondents are disagree with this view

From tables and graphs, it can be observed that majority [83.67 % - sum of Strongly Agree (41.22%) and Agree (42.44%)] of the respondents from manager's category agreed that gender ratio helps to minimize issues related to discipline. While only 16.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [90.11 % - sum of Strongly Agree (44.22%) and Agree (45.89%)] of the respondents from manager's category agreed that, employment of KWs saves energy of the supervisory staff. While only 16.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [86.56 % - sum of Strongly Agree (42.78%) and Agree (43.78%)] of the respondents from manager's category agreed that knowledge workers have better thinking and can add value to the processes. While only 16.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number [97.11 % - sum of Strongly Agree (58.11%) and Agree (39%)] of the respondents from manager's category agreed that, employment of female knowledge workers proved to be useful. While only 2.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority of [91.56 % - sum of Strongly Agree (38.11%) and Agree (53.44%)] of the respondents from manager's category agreed that,, organization gets good supervisory staff from the potential knowledge workers. While only 8.44 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority of [94.67 % - sum of Strongly Agree (41.78%) and Agree (52.89%)] of the respondents from manager's category agreed that, knowledge workers can off load work load of supervisory staff. Manager further mentioned that, knowledge workers normally have the approach of taking the ownership of their own job and working towards getting it done. Hence this helps to reduce the work of the supervisory staff to a great extent. While only 8.44 % of the respondents are disagree with this view

From tables and graphs, it can be observed that majority [98.89 % - sum of Strongly Agree (42.89%) and Agree (56%)] of the respondents from manager's category agreed that, ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs. While only 8.44 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority substantial percentage of the [95.33 % - sum of Strongly Agree (45.67%) and Agree (49.67%)] of the respondents from manager's category agreed that TWs are suitable in the processes involving "skill" rather than "knowledge". While only 4.67 % of the respondents are disagree with this view

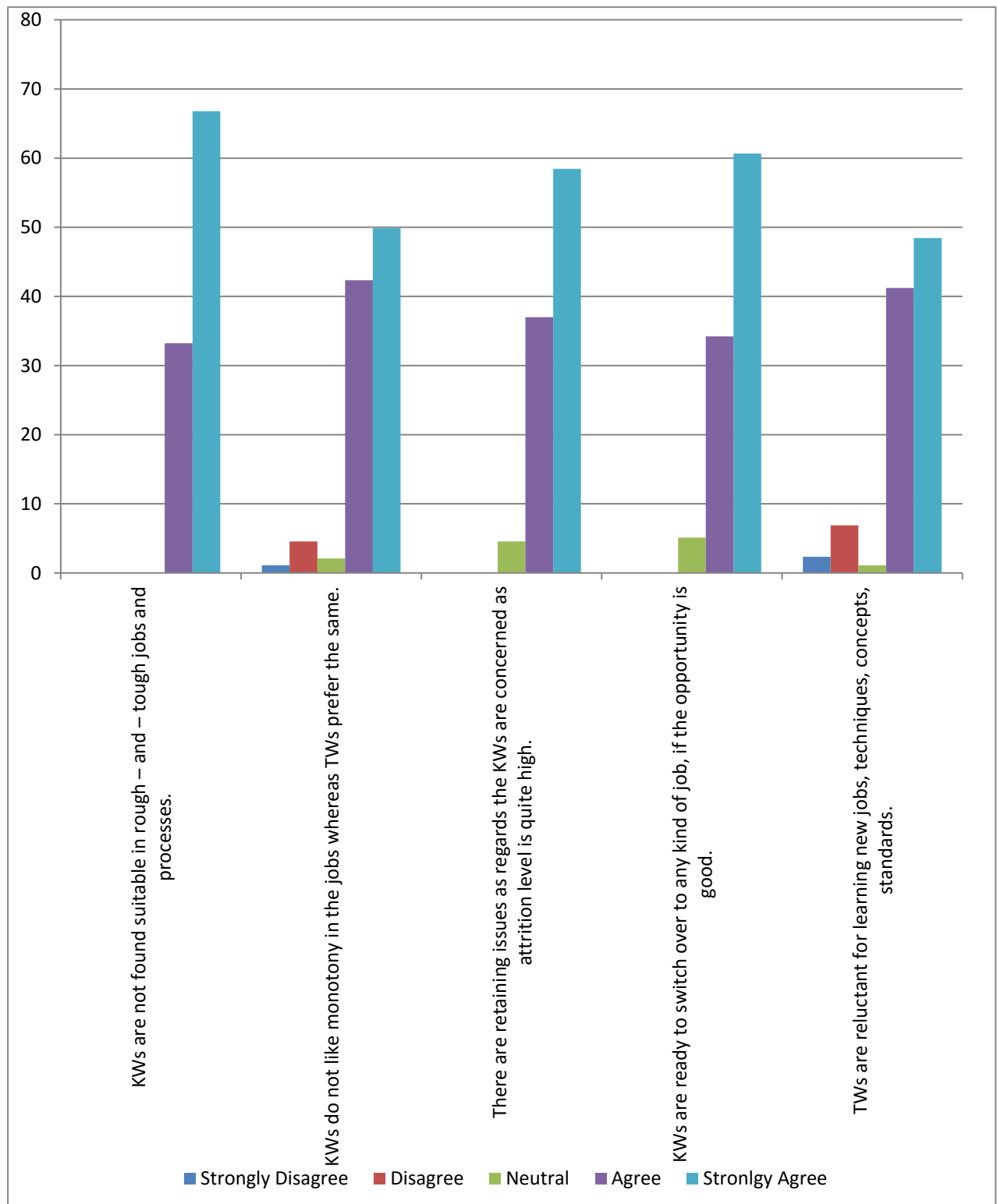
From tables and graphs, it can be observed that all of the [100 % - sum of Strongly Agree (56.89%) and Agree (43.11%)] of the respondents from manager's category agreed that association and consistency in traditional workers is quite good.

From tables and graphs, it can be observed that substantial percentage of [89.89 % - sum of Strongly Agree (44.22%) and Agree (45.67 of the respondents from manager's category agreed that, there are limitations for the TWs as regards the job opportunities are concerned. While only 10.11 % of the respondents are disagree with this view.

**Table 6.4: Table showing opinion about different parameters of “Issues of KWs and TwS”**

| Sr. No | Particulars                                                                                   | 1  | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|--------|-----------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1      | KWs are not found suitable in rough – and – tough jobs and processes.                         | 0  | 0    | 0  | 0    | 0  | 0    | 299 | 33.22 | 601 | 66.78 | 900   | 100 |
| 2      | KWs do not like monotony in the jobs whereas TWs prefer the same.                             | 10 | 1.11 | 41 | 4.56 | 19 | 2.11 | 381 | 42.33 | 449 | 49.89 | 900   | 100 |
| 3      | There are retaining issues as regards the KWs are concerned as attrition level is quite high. | 0  | 0    | 0  | 0    | 41 | 4.56 | 333 | 37    | 526 | 58.44 | 900   | 100 |
| 4      | KWs are ready to switch over to any kind of job, if the opportunity is good.                  | 0  | 0    | 0  | 0    | 46 | 5.11 | 308 | 34.22 | 546 | 60.67 | 900   | 100 |
| 5      | TWs are reluctant for learning new jobs, techniques, concepts, standards.                     | 21 | 2.33 | 62 | 6.89 | 10 | 1.11 | 371 | 41.22 | 436 | 48.44 | 900   | 100 |

**Graph 6.4: Graph showing opinion about different parameters of “Issues of KWs and TwS”**



**Description:**

Based on the responses obtained from the managers following are the findings on the manager's opinion about the issues of knowledge workers and traditional workers:

From tables and graphs, it can be observed that all of the [100 % - sum of Strongly Agree (66.78%) and Agree (33.22%)] of the respondents from manager's category, knowledge workers are not found suitable in rough – and – tough jobs and processes. While no respondents are disagree with this view.

From tables and graphs, it can be observed that majority of the [92.22 % - sum of Strongly Agree (49.89%) and Agree (42.33%)] of the respondents from manager's category agreed that, knowledge workers do not like monotony in the jobs whereas Traditional workers prefer the same. While only 7.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority of the majority of the [95.44 % - sum of Strongly Agree (58.44%) and Agree (37.00%)] of the respondents from manager's category agreed that, there are retaining issues as regards the KWs are concerned as attrition level is quite high. While only 7.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that most of the [94.89 % - sum of Strongly Agree (60.67%) and Agree (34.22%)] of the respondents from manager's category agreed that, knowledge workers are ready to switch over to any kind of job, if the opportunity is good. While only 5.11 % of the respondents are disagree with this view.

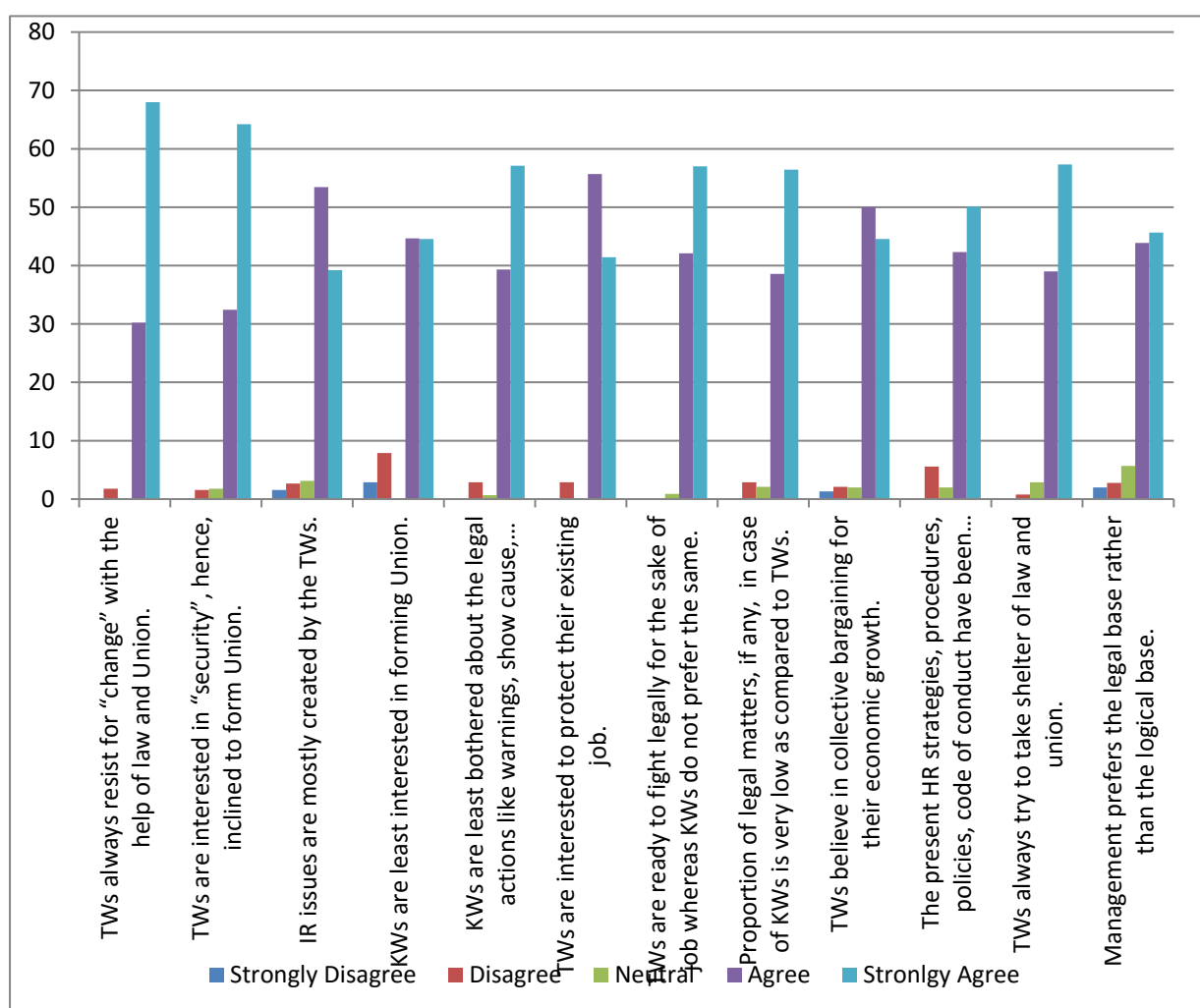
From tables and graphs, it can be observed that Substantial percentage [89.67 % - sum of Strongly Agree (48.44%) and Agree (41.22%)] of the respondents from manager's category agreed that, traditional workers are reluctant for learning new jobs, techniques, concepts, standards. While only 10.33 % of the respondents are disagree with this view

**Table 6.5: Table showing opinion about IR /Legal Issues**

| Sr No | Particulars                                                                                                                                                                  | 1  | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1     | TWs always resist for “change” with the help of law and Union.                                                                                                               | 0  | 0    | 16 | 1.78 | 0  | 0    | 272 | 30.22 | 612 | 68    | 900   | 100 |
| 2     | TWs are interested in “security”, hence, inclined to form Union.                                                                                                             | 0  | 0    | 14 | 1.56 | 16 | 1.78 | 292 | 32.44 | 578 | 64.22 | 900   | 100 |
| 3     | IR issues are mostly created by the TWs.                                                                                                                                     | 14 | 1.56 | 24 | 2.67 | 28 | 3.11 | 481 | 53.44 | 353 | 39.22 | 900   | 100 |
| 4     | KWs are least interested in forming Union.                                                                                                                                   | 26 | 2.89 | 71 | 7.89 | 0  | 0    | 402 | 44.67 | 401 | 44.56 | 900   | 100 |
| 5     | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. | 0  | 0    | 26 | 2.89 | 6  | 0.67 | 354 | 39.33 | 514 | 57.11 | 900   | 100 |
| 6     | TWs are interested to protect their existing job.                                                                                                                            | 0  | 0    | 26 | 2.89 | 0  | 0    | 501 | 55.67 | 373 | 41.44 | 900   | 100 |
| 7     | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                                                                       | 0  | 0    | 0  | 0    | 8  | 0.89 | 379 | 42.11 | 513 | 57    | 900   | 100 |
| 8     | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                                                                          | 0  | 0    | 26 | 2.89 | 19 | 2.11 | 347 | 38.56 | 508 | 56.44 | 900   | 100 |
| 9     | TWs believe in collective bargaining for their economic growth.                                                                                                              | 12 | 1.33 | 19 | 2.11 | 18 | 2    | 450 | 50    | 401 | 44.56 | 900   | 100 |

|    |                                                                                                                                             |    |   |    |      |    |      |     |       |     |       |     |     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------|----|---|----|------|----|------|-----|-------|-----|-------|-----|-----|
| 10 | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law | 0  | 0 | 50 | 5.56 | 18 | 2    | 381 | 42.33 | 451 | 50.11 | 900 | 100 |
| 11 | TWs always try to take shelter of law and union.                                                                                            | 0  | 0 | 7  | 0.78 | 26 | 2.89 | 351 | 39    | 516 | 57.33 | 900 | 100 |
| 12 | Management prefers the legal base rather than the logical base.                                                                             | 18 | 2 | 25 | 2.78 | 51 | 5.67 | 395 | 43.89 | 411 | 45.67 | 900 | 100 |

**Graph 6.5: Graph showing opinion about different parameters of “IR /Legal Issues”**



**Description:**

Based on the responses obtained from the managers following are the data analysis on the manager's opinion about the issues on IR and legal issues:

From tables and graphs, it can be observed that high percentage of the [98.22 % - sum of Strongly Agree (68.00%) and Agree (30.22%)] of the respondents from manager's category agreed that TWs always resist for "change" with the help of law and Union. While only 2.78 % of the respondents are disagree with this view .

From tables and graphs, it can be observed that substantial percentage of the [96.67 % - sum of Strongly Agree (64.22%) and Agree (32.44%)] of the respondents from manager's category agreed that, TWs are interested in "security", hence, inclined to form Union. While only 3.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the [92.67 % - sum of Strongly Agree (39.22%) and Agree (53.44%)] of the respondents from manager's category agreed that, IR issues are mostly created by the TWs. On account of the limitation on the educational qualification, knowledge, experience, fear for their value in the market, and the fact the they would be continuing in the same organization almost up-to the retirement, they create the IR issues. While only 7.33 % of the respondents are disagree with this view

From tables and graphs, it can be observed that most of the [89.22 % - sum of Strongly Agree (44.56%) and Agree (44.67%)] of the respondents from manager's category agreed that,, KWs are least interested in forming Union. While only 7.33 % of the respondents are disagree with this view .

From tables and graphs, it can be observed that high number of the [96.44 % - sum of Strongly Agree (57.11%) and Agree (39.33%)] of the respondents from manager's category agreed that, KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. While only 3.56 % of the respondents are disagree with this view

From tables and graphs, it can be observed that majority of the [97.11 % - sum of Strongly Agree (41.44%) and Agree (55.67%)] of the respondents from manager's category agreed that, TWs are interested to protect their existing job. Managers further stated that, traditional workers not having decent educational qualification and

knowledge. They are good / excellent in the current job profile that they are into. However they don't have any other experience. While only 2.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the [99.11 % - sum of Strongly Agree (57%) and Agree (42.11%)] of the respondents from manager's category agreed that, TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same. Managers further stated that, traditional workers not having decent educational qualification and knowledge. While only 1.89 % of the respondents are disagree with this view.

**Table 6.6: Table showing the opinion about Issues pertaining to HR strategies**

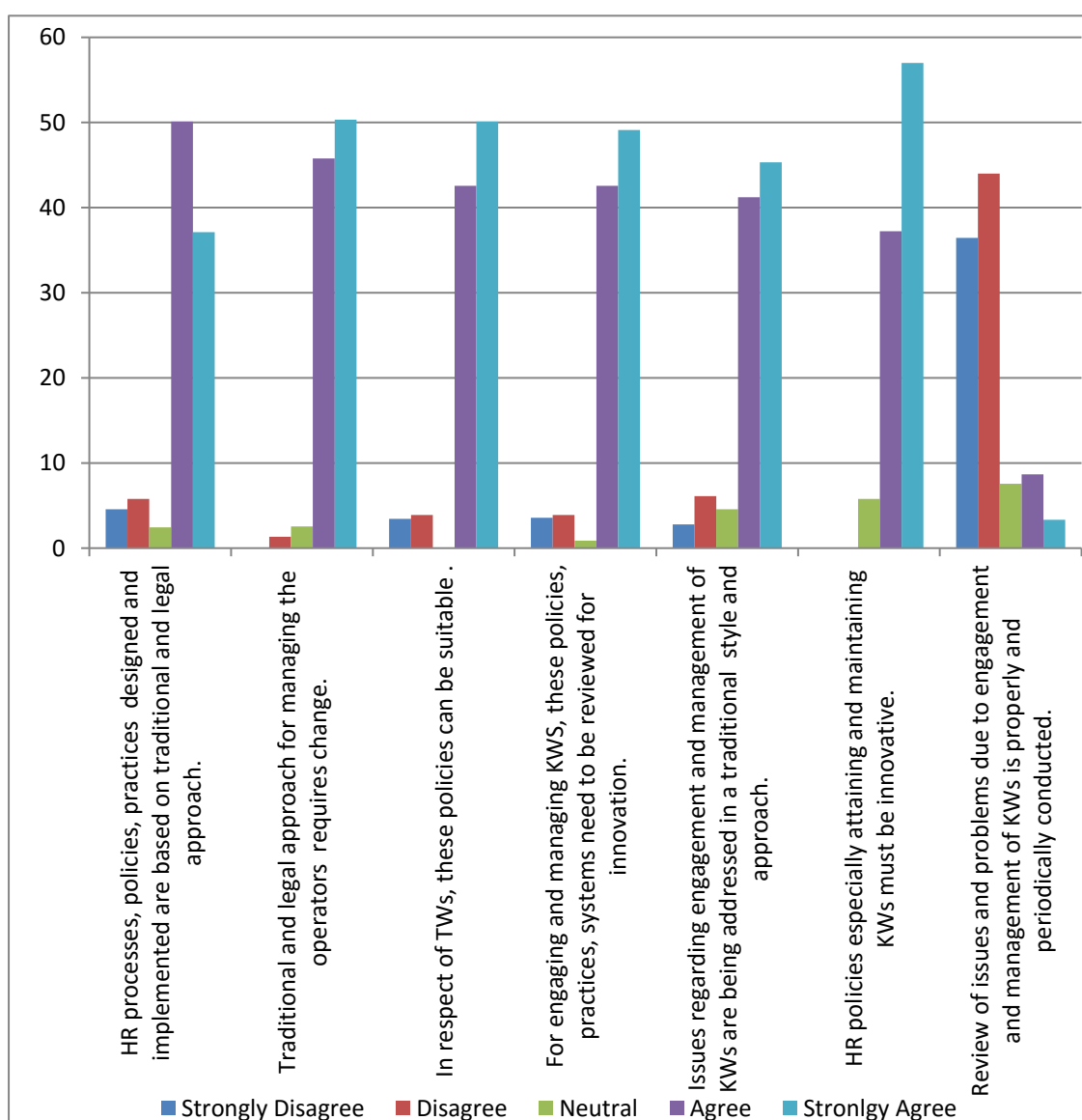
| Sr. No. | Particulars                                                                                             | 1  | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|---------------------------------------------------------------------------------------------------------|----|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | HR processes, policies, practices designed and implemented are based on traditional and legal approach. | 41 | 4.56 | 52 | 5.78 | 22 | 2.44 | 451 | 50.11 | 334 | 37.11 | 900   | 100 |
| 2       | Traditional and legal approach for managing the operators requires change.                              | 0  | 0    | 12 | 1.33 | 23 | 2.56 | 412 | 45.78 | 453 | 50.33 | 900   | 100 |
| 3       | In respect of TWs, these policies can be suitable .                                                     | 31 | 3.44 | 35 | 3.89 | 0  | 0    | 383 | 42.56 | 451 | 50.11 | 900   | 100 |
| 4       | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.   | 32 | 3.56 | 35 | 3.89 | 8  | 0.89 | 383 | 42.56 | 442 | 49.11 | 900   | 100 |

|    |                                                                                                                                                                                      |         |           |         |      |    |      |     |       |     |       |     |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|---------|------|----|------|-----|-------|-----|-------|-----|-----|
| 5  | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                                                                           | 25      | 2.78      | 55      | 6.11 | 41 | 4.56 | 371 | 41.22 | 408 | 45.33 | 900 | 100 |
| 6  | HR policies especially attaining and maintaining KWs must be innovative.                                                                                                             | 0       | 0         | 0       | 0    | 52 | 5.78 | 335 | 37.22 | 513 | 57    | 900 | 100 |
| 7  | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        | 32<br>8 | 36.4<br>4 | 39<br>6 | 44   | 68 | 7.56 | 78  | 8.67  | 30  | 3.33  | 900 | 100 |
| 8  | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. | 35      | 3.89      | 65      | 7.22 | 0  | 0    | 375 | 41.67 | 425 | 47.22 | 900 | 100 |
| 9  | There is a lack of attention in designing the policies.                                                                                                                              | 0       | 0         | 0       | 0    | 45 | 5    | 412 | 45.78 | 443 | 49.22 | 900 | 100 |
| 10 | There is a lack of drive in implementation of policies.                                                                                                                              | 16      | 1.78      | 23      | 2.56 | 47 | 5.22 | 415 | 46.11 | 399 | 44.33 | 900 | 100 |
| 11 | Policies are there but not implemented with a proper and natural style.                                                                                                              | 6       | 0.67      | 42      | 4.67 | 42 | 4.67 | 416 | 46.22 | 394 | 43.78 | 900 | 100 |
| 12 | HR strategies need to consider the requisite requirements of female KWs.                                                                                                             | 0       | 0         | 0       | 0    | 0  | 0    | 388 | 43.11 | 512 | 56.89 | 900 | 100 |

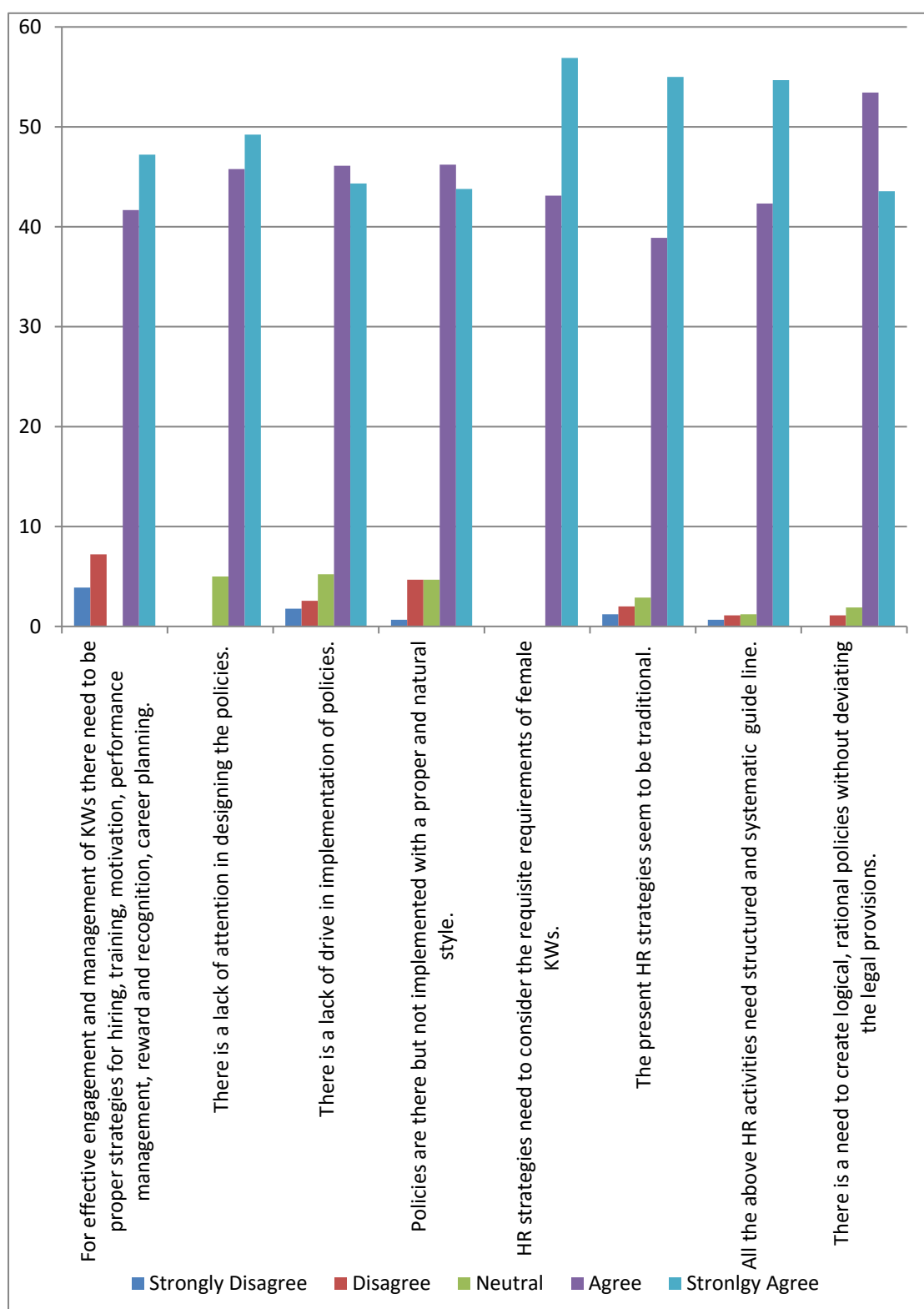
|    |                                                                                                            |    |      |     |       |    |      |     |       |     |       |     |     |
|----|------------------------------------------------------------------------------------------------------------|----|------|-----|-------|----|------|-----|-------|-----|-------|-----|-----|
| 13 | The present HR strategies seem to be traditional.                                                          | 11 | 1.22 | 18  | 2     | 26 | 2.89 | 350 | 38.89 | 495 | 55    | 900 | 100 |
| 14 | All the above HR activities need structured and systematic guide line.                                     | 6  | 0.67 | 10  | 1.11  | 11 | 1.22 | 381 | 42.33 | 492 | 54.67 | 900 | 100 |
| 15 | There is a need to create logical, rational policies without deviating the legal provisions.               | 0  | 0    | 10  | 1.11  | 17 | 1.89 | 481 | 53.44 | 392 | 43.56 | 900 | 100 |
| 16 | Employment of KWs creates work load and work pressure especially in HR Department in the following areas : |    | 0    |     | 0     |    | 0    |     | 0     |     | 0     | 900 | 100 |
|    | a) Recruitment                                                                                             | 0  | 0    | 38  | 4.22  | 49 | 5.44 | 401 | 44.56 | 412 | 45.78 | 900 | 100 |
|    | b) Joining formalities                                                                                     | 0  | 0    | 34  | 3.78  | 51 | 5.67 | 417 | 46.33 | 398 | 44.22 | 900 | 100 |
|    | c) Documentation : personal file etc.                                                                      | 0  | 0    | 31  | 3.44  | 43 | 4.78 | 323 | 35.89 | 503 | 55.89 | 900 | 100 |
|    | d) Induction                                                                                               | 0  | 0    | 42  | 4.67  | 52 | 5.78 | 406 | 45.11 | 400 | 44.44 | 900 | 100 |
|    | e) On Job Training (OJT)                                                                                   | 0  | 0    | 51  | 5.67  | 35 | 3.89 | 416 | 46.22 | 398 | 44.22 | 900 | 100 |
|    | f) Succession Planning                                                                                     | 0  | 0    | 40  | 4.44  | 55 | 6.11 | 411 | 45.67 | 394 | 43.78 | 900 | 100 |
|    | g) Performance Management / Skill Development                                                              | 0  | 0    | 66  | 7.33  | 60 | 6.67 | 460 | 51.11 | 314 | 34.89 | 900 | 100 |
|    | h) Competency Mapping                                                                                      | 0  | 0    | 45  | 5     | 54 | 6    | 485 | 53.89 | 316 | 35.11 | 900 | 100 |
|    | i) Training                                                                                                | 0  | 0    | 34  | 3.78  | 55 | 6.11 | 300 | 33.33 | 511 | 56.78 | 900 | 100 |
|    | j) Career Planning                                                                                         | 10 | 1.11 | 35  | 3.89  | 42 | 4.67 | 501 | 55.67 | 312 | 34.67 | 900 | 100 |
|    | k) Reward & Recognition                                                                                    | 59 | 6.56 | 100 | 11.11 | 35 | 3.89 | 490 | 54.44 | 216 | 24    | 900 | 100 |
|    | l) Welfare activities                                                                                      | 0  | 0    | 46  | 5.11  | 43 | 4.78 | 420 | 46.67 | 391 | 43.44 | 900 | 100 |
|    | m) Benefits administration                                                                                 | 10 | 1.11 | 25  | 2.78  | 42 | 4.67 | 498 | 55.33 | 325 | 36.11 | 900 | 100 |

|                                         |   |      |    |      |    |      |     |       |     |       |     |     |
|-----------------------------------------|---|------|----|------|----|------|-----|-------|-----|-------|-----|-----|
| n) Compensation Management              | 0 | 0    | 16 | 1.78 | 61 | 6.78 | 495 | 55    | 328 | 36.44 | 900 | 100 |
| o) Time Office activities               | 5 | 0.56 | 60 | 6.67 | 12 | 1.33 | 498 | 55.33 | 325 | 36.11 | 900 | 100 |
| p) Statutory compliances                | 8 | 0.89 | 31 | 3.44 | 26 | 2.89 | 412 | 45.78 | 423 | 47    | 900 | 100 |
| q) Full and final settlement activities | 9 | 1    | 30 | 3.33 | 51 | 5.67 | 508 | 56.44 | 302 | 33.56 | 900 | 100 |

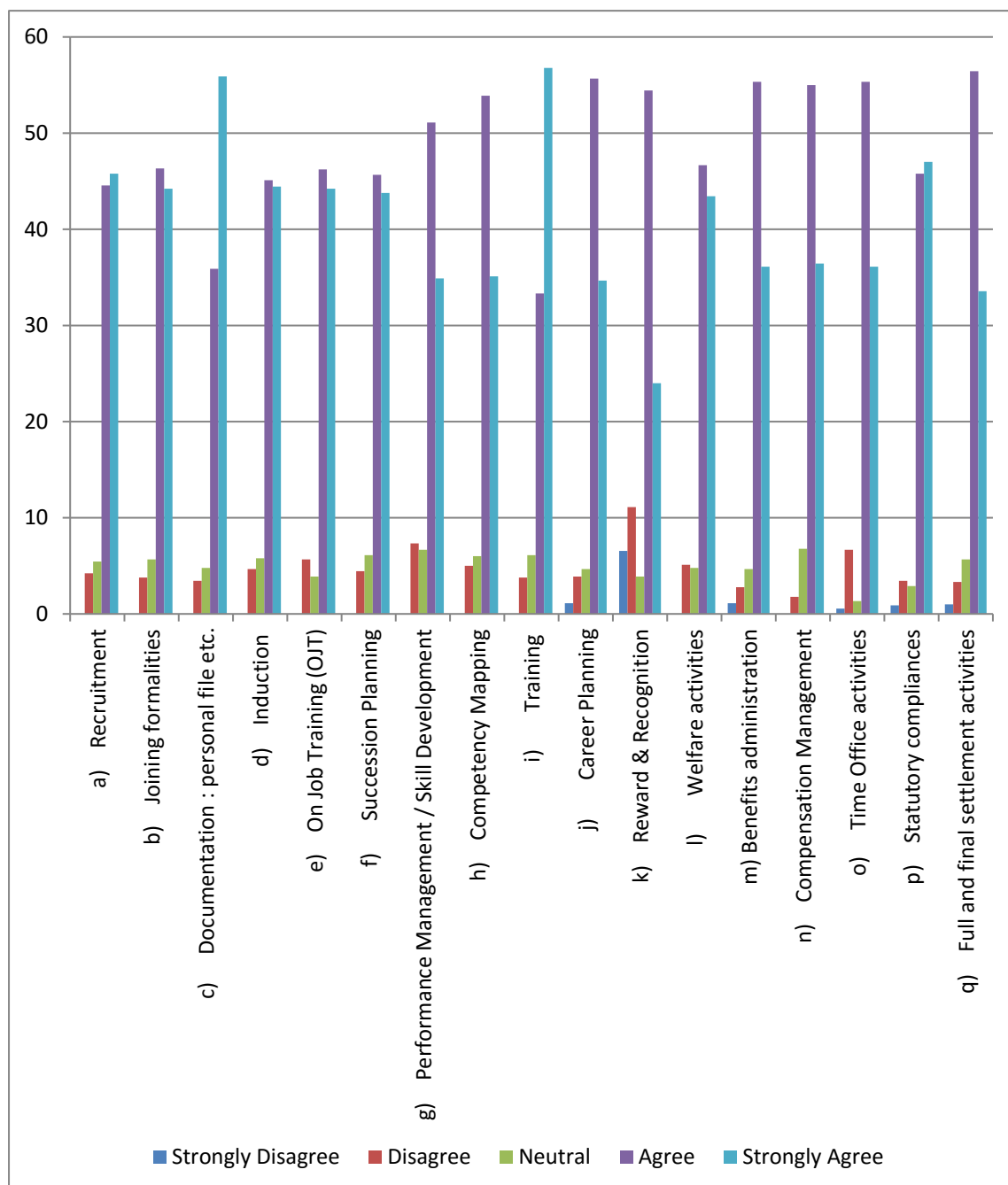
**Graph 6.6 a: Graph showing opinion about different parameters of “Issues pertaining to HR strategies”**



**Graph 6.6 b: Graph showing opinion about different parameters of “Issues pertaining to HR strategies”**



**Graph 6.6 c: Graph showing the opinion about areas in which the KWs / TWs creates work pressure especially in HR Department**



### Description:

Based on the responses obtained from the managers following are the findings on the manager's opinion about the Issues pertaining to HR strategies:

From tables and graphs, it can be observed that high percentage of the high percentage of the [87.22 % - sum of Strongly Agree (37.11%) and Agree (50.11%)]

from the category of managers agreed that, HR processes, policies, practices designed and implemented are based on traditional and legal approach. While 12.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority of the respondents [96.11 % - sum of Strongly Agree (50.33%) and Agree (45.78%)] from the category of managers agreed that,, Traditional and legal approach for managing the operators requires change. While 3.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that majority of the most of the respondents [92.67 % - sum of Strongly Agree (42.56%) and Agree (50.11%)] from the category of managers agreed that in respect of TWs, these policies can be suitable. While 7.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number of the respondents most of the [91.67 % - sum of Strongly Agree (49.11%) and Agree (42.56%)] from the category of managers agreed that, for engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation. While 8.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial number of the respondents [86.56 % - sum of Strongly Agree (45.33%) and Agree (41.22%)] from the category of managers agreed that, issues regarding engagement and management of KWs are being addressed in a traditional style and approach. While 13.44 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that Substantial percentage of the respondents [94.22 % - sum of Strongly Agree (57.00%) and Agree (37.22%)] from the category of managers agreed that,, HR policies especially attaining and maintaining KWs must be innovative. While 5.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that high percentage of the [80.44 % - sum of Strongly Disagree (36.44%) and Disagree (44.00%)] from the category of managers agreed that review of issues and problems due to engagement and management of KWs is properly and periodically conducted. While 5.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that Substantial percentage of the respondents [88.89 % - sum of Strongly Agree (47.22%) and Agree (41.67%)] from the category of managers agreed that, for effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. While 5.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that Substantial percentage of the respondents [95% - sum of Strongly Agree (49.22%) and Agree (45.78%)] managers agreed that, there is a lack of attention in designing the policies. While 5. % of the respondents are disagree with this view

From tables and graphs, it can be observed that Substantial percentage of the respondents [90.44% - sum of Strongly Agree (44.33%) and Agree (46.11%)] from the category of managers agreed that, there is a lack of drive in implementation of policies. While 11.56. % of the respondents are disagree with this view.

From tables and graphs, it can be observed that Substantial percentage of the respondents [90.00% - sum of Strongly Disagree (46.22%) and disagree (43.78%)] from the category of managers agreed that policies are there but not implemented with a proper and natural style. While 10. % of the respondents are disagree with this view.

From tables and graphs, it can be observed that all of the [100% - sum of Strongly Agree (56.89%) and Agree (43.11%)] from the category of managers agreed that HR strategies need to consider the requisite requirements of female KWs.

From tables and graphs, it can be observed that high percentage of the managers agreed that, employment of Knowledge workers creates work load and work pressure especially in HR Department in the areas of Recruitment, Joining formalities, Documentation : personal file etc., Induction, On Job Training (OJT), Succession Planning, Performance Management / Skill Development, Competency Mapping, Training, Career Planning, Reward & Recognition, Welfare activities, Benefits administration, Compensation Management, Time Office activities, Statutory compliances, Full and final settlement activities.

**Recruitment:**

From tables and graphs, it can be observed that all of the in regards to the parameter for recruitment, the majority of managers [90.33% - total of strongly agree (45.78%) and agree (44.56%)] stated that, knowledge workers have the attitude of switching the jobs and they don't continue to stay in one job. Whenever they get some good offer they opt for it. Thus on account of this, the HR has to continuously keep on searching for new employees (knowledge workers). Hence it increases the efforts of the HR team in the area of recruitment, while 10. % of the respondents are disagree with this view.

**Joining formalities:**

From tables and graphs, it can be observed that in regards to the parameter for joining formalities, the majority of manager [90.56% - total of strongly agree (44.22%) and agree (46.33%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to get the joining formalities done from HR. Hence this also increases the efforts of HR team, while 10. 44 % of the respondents are disagree with this view.

**Documentation:**

From tables and graphs, it can be observed that regarding to the parameter for documentation, high percentage of managers [91.78% - total of strongly agree (55.89%) and agree (35.89%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. HR has to maintain documentation (personalized file) for each and every new joiner. Hence this also increases the efforts of HR team. While 8. 22 % of the respondents are disagree with this view.

**Induction:**

From tables and graphs, it can be observed that regarding induction, the majority of manager [89.56% - total of strongly agree (44.44%) and agree (45.11%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to get the induction done. Hence this also increases the efforts of HR team. While 10. 44 % of the respondents are disagree with this view.

**On Job Training:**

From tables and graphs, it can be observed that regarding the method of on job training, the majority of manager [89.56% - total of strongly agree (44.44%) and agree (45.11%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to be trained. On the job training is one of the key aspects. Hence this also increases the efforts of HR team. While 10.44 % of the respondents are disagree with this view.

**Succession Planning:**

From tables and graphs, it can be observed that regarding the parameter for succession planning, the majority of managers [89.44% - total of strongly agree (43.78%) and agree (45.67%)] mentioned that, there is continuous turnover in the knowledge workers. Hence the HR team has continuously keep on working for the succession planning. Hence this also adds up to the increase in efforts of the HR team. While 10.56 % of the respondents are disagree with this view.

**Performance Management / Skill Development:**

From tables and graphs, it can be observed that regarding the parameter for Performance Management / Skill Development, the majority of managers [86.00% - total of strongly agree (34.89%) and agree (51.11%)] state that, evaluation of the performance of the knowledge cannot be done in accordance with the traditional workers. Separate parameters are required to make the assessment. Apart from this the skill development requirements of the knowledge workers are also different and may differ from one knowledge worker to other. Hence additional efforts are required to figure out the exact requirements. Hence this adds up to the increase in efforts of the HR team. While 14 % of the respondents are disagree with this view.

**Competency Mapping:**

From tables and graphs, it can be observed that regarding the parameter for Competency Mapping, high percentage of managers [89.00% - total of strongly agree (35.11%) and agree (53.89%)] mentioned that, competency mapping of the knowledge is different from that of traditional workers. Competency mapping framework is required to be designed for the knowledge workers which requires an

additional efforts. Thus this also adds up to the increase in the efforts of HR team. While 11 % of the respondents are disagree with this view.

### **Training:**

From tables and graphs, it can be observed that regarding the parameter for training, substantial percentage of managers [90.11% - total of strongly agree (56.78%) and agree (33.33%)] mentioned that, training requirements of the knowledge workers are different. Hence deciding on the training requirements of the knowledge workers is key. Further the knowledge workers also have their own requirements on the training. The HR also has to take into consideration the feasibility of the requirements from the knowledge workers. Thus all this also adds up to the increase in the efforts of HR team. While 9.89 t% of the respondents are disagree with this view.

### **Career Planning:**

From tables and graphs, it can be observed that regarding the parameter for Career Planning, substantial percentage of managers [90.33% - total of strongly agree (34.67%) and agree (55.67%)] mentioned that, special efforts are required for career planning of the knowledge workers. Hence the career planning effectively increases the efforts of HR team. While 9.67 t% of the respondents are disagree with this view.

### **Reward & Recognition:**

From tables and graphs, it can be observed that regarding the parameter for Reward & Recognition, high percentage of managers [78.44% - total of strongly agree (24.00%) and agree (54.44%)] mentioned that, the reward and recognition program for the knowledge workers has to be framed up differently as regards to the traditional workers. Knowledge workers have lot of expectations in comparison to the traditional workers. Hence additional efforts for deciding on the rewards and recognition are required. Thus all this also adds up to the increase in the efforts of HR team. While 21.56 t% of the respondents are disagree with this view.

### **Welfare activities:**

From tables and graphs, it can be observed that regarding the parameter for Welfare activities, high percentage of managers [90.11% - total of strongly agree (43.44%) and agree (46.67%)] mentioned that, welfare activities are required to be planned and conducted for the knowledge workers. This requires additional efforts and hence leads

to the increase in the efforts of HR team. While 9.89 t% of the respondents are disagree with this view.

#### **Benefits administration:**

From tables and graphs, it can be observed that regarding the parameter for Benefits administration, Substantial percentage of managers [91.44% - total of strongly agree (36.11%) and agree (55.33%)] mentioned that, deciding on the benefits that are to be granted to the knowledge workers is required to be thought of in detail. Hence this requires investing time by the HR team. This requires additional efforts and hence leads to the increase in the efforts of HR team. While 8.56 t% of the respondents are disagree with this view.

#### **Compensation Management:**

From tables and graphs, it can be observed that regarding the parameter for Compensation Management, high percentage of managers [91.44% - total of strongly agree (36.44%) and agree (55.00%)] mentioned that, deciding on the compensation of the knowledge workers is key factor. The knowledge workers have high expectations in terms of the compensation as they are ready to invest more time, take lead in performing the work, they have the knowledge and educational qualification. Hence deciding on the compensation is key factor and involves investing time and efforts. While 8.56 t% of the respondents are disagree with this view.

#### **Time Office activities:**

From tables and graphs, it can be observed that regarding parameter for Time Office activities, majority of managers [91.44% - total of strongly agree (36.11%) and agree (55.33%)] mentioned that, time office activities are required to be planned effectively for the knowledge workers. This planning requires additional efforts and hence leads to the increase in the efforts of HR team. While 8.56 t% of the respondents are disagree with this view.

#### **Statutory compliances:**

From tables and graphs, it can be observed that regarding to the parameter for Statutory compliances, high percentage of managers [92.78% - total of strongly agree (47.00%) and agree (45.78%)] mentioned that, adhering to the statutory compliance is one of the key factors. If there are any non-compliances on the statutory front, it may

have serious impact on the organization as a whole. This leads to the increase in the efforts of HR team. While 7.22 t% of the respondents are disagree with this view.

#### **Full and final settlement activities:**

From tables and graphs, it can be observed that regarding to the parameter for Full and final settlement activities, the majority of managers [90.00% - total of strongly agree (33.56%) and agree (56.44%)] stated that, knowledge workers have the attitude of switching the jobs and they don't continue to stay in one job. Whenever they get some good offer they opt for it. Thus on account of this, the HR has to continuously keep working on the full and final settlement of the employees that are leaving the organization. Hence it increases the efforts of the HR team. While 10 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that regarding to the parameter those high percentage of the [93.89 % - sum of Strongly Agree (55.00%) and Agree (38.89%) respondents from managers category agreed that, the present HR strategies seem to be traditional. Managers further mentioned that, the HR processes, policies, practices are defined and designed many years ago and there has been no significant update to these policies and practices to incorporate the new requirements. Hence the HR strategies seem to be traditional. fair number (55.00%) of managers have rated this parameter in the category of "Strongly Agree". While 6.11 % of the respondents are disagree with this view.

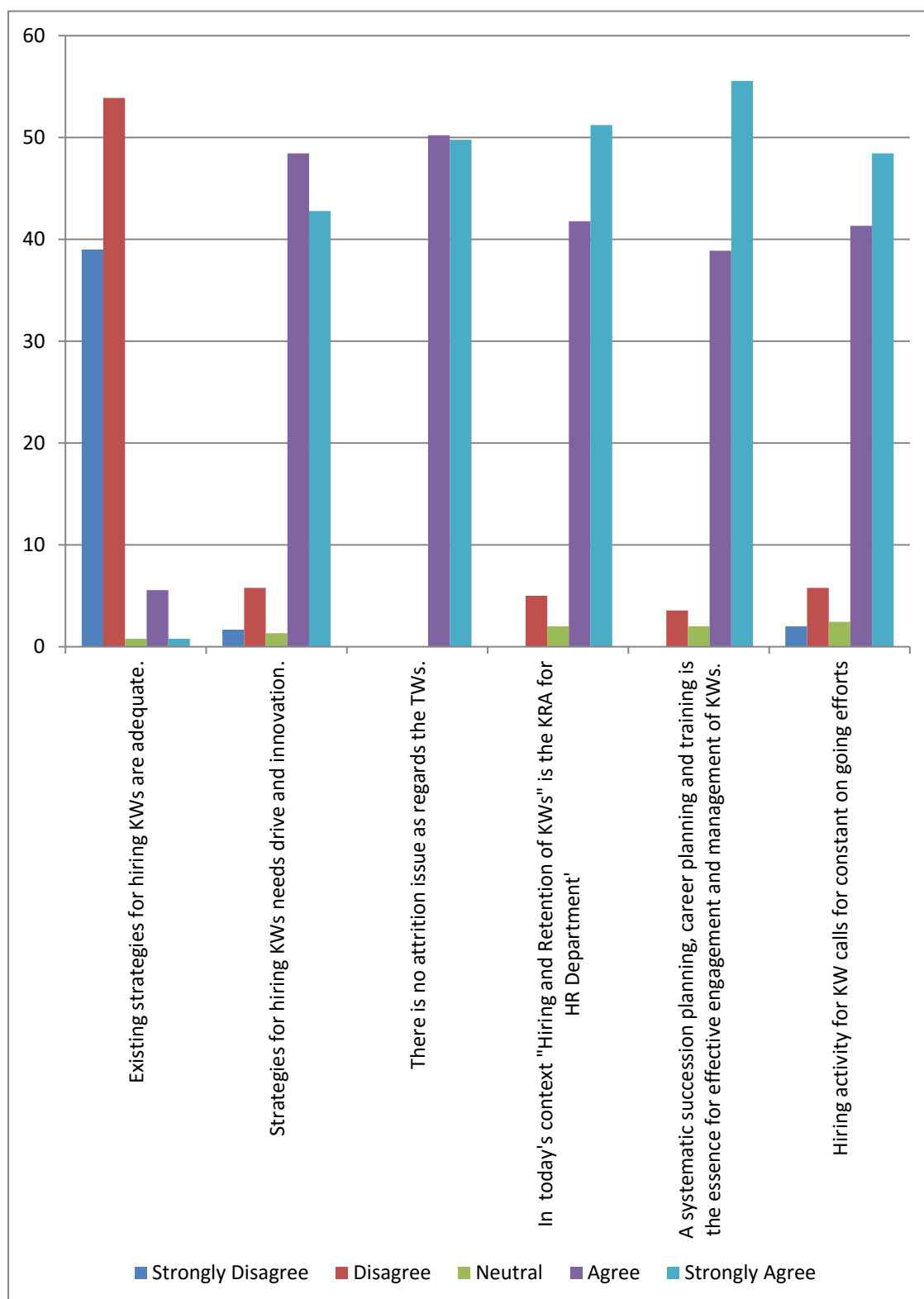
From tables and graphs, it can be observed that substantial percentage of the [97.00 % - sum of Strongly Agree (54.67%) and Agree (42.33%)] managers agreed that, all the above HR activities need structured and systematic guide line. While 3 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the [97.00 % - sum of Strongly Agree (43.56%) and Agree (53.44%)] managers agreed that, there is a need to create logical, rational policies without deviating the legal provisions. While 3 % of the respondents are disagree with this view.

**Table 6.7: Table showing the opinion about Hiring and Retention**

| Sr. No. | Particulars                                                                                                                   | 1   | %    | 2   | %     | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|-------------------------------------------------------------------------------------------------------------------------------|-----|------|-----|-------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | Existing strategies for hiring KWs are adequate.                                                                              | 351 | 39   | 485 | 53.89 | 7  | 0.78 | 50  | 5.56  | 7   | 0.78  | 900   | 100 |
| 2       | Strategies for hiring KWs needs drive and innovation.                                                                         | 15  | 1.67 | 52  | 5.78  | 12 | 1.33 | 436 | 48.44 | 385 | 42.78 | 900   | 100 |
| 3       | There is no attrition issue as regards the TWs.                                                                               | 0   | 0    | 0   | 0     | 0  | 0    | 452 | 50.22 | 448 | 49.78 | 900   | 100 |
| 4       | In today's context "Hiring and Retention of KWs" is the KRA for HR Department'                                                | 0   | 0    | 45  | 5     | 18 | 2    | 376 | 41.78 | 461 | 51.22 | 900   | 100 |
| 5       | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. | 0   | 0    | 32  | 3.56  | 18 | 2    | 350 | 38.89 | 500 | 55.56 | 900   | 100 |
| 6       | Hiring activity for KW calls for constant on going efforts                                                                    | 18  | 2    | 52  | 5.78  | 22 | 2.44 | 372 | 41.33 | 436 | 48.44 | 900   | 100 |

**Graph 6.7 : Graph showing the opinion about Hiring and Retention**



## Description

Based on the responses obtained from the managers following are the findings on the manager's opinion about the hiring and retention:

From tables and graphs, it can be observed that substantial percentage of high percentage of the [92.89 % - sum of Strongly Disagree (39.00%) and Disagree (53.89%)] from the respondents of managers category disagreed that, existing strategies for hiring KWs are adequate. While 7.11 % of the respondents are agree with this view.

From tables and graphs, it can be observed that substantial percentage of the [91.22 % - sum of Strongly Agree (42.78%) and Agree (48.44 %)] from the respondents of managers category, Strategies for hiring KWs needs drive and innovation. While 8.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that all of the [100 % - sum of Strongly Agree (49.78%) and Agree (50.22%)] managers agreed that, there is no attrition issue as regards the TWs. While 8.78 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that high percentage of the [93.00 % - sum of Strongly Agree (51.22%) and Agree (41.78%)] of the respondents from managers category agreed that, in today's context "Hiring and Retention of KWs" is the KRA for HR Department'. While 7 % of the respondents are disagree with this view.

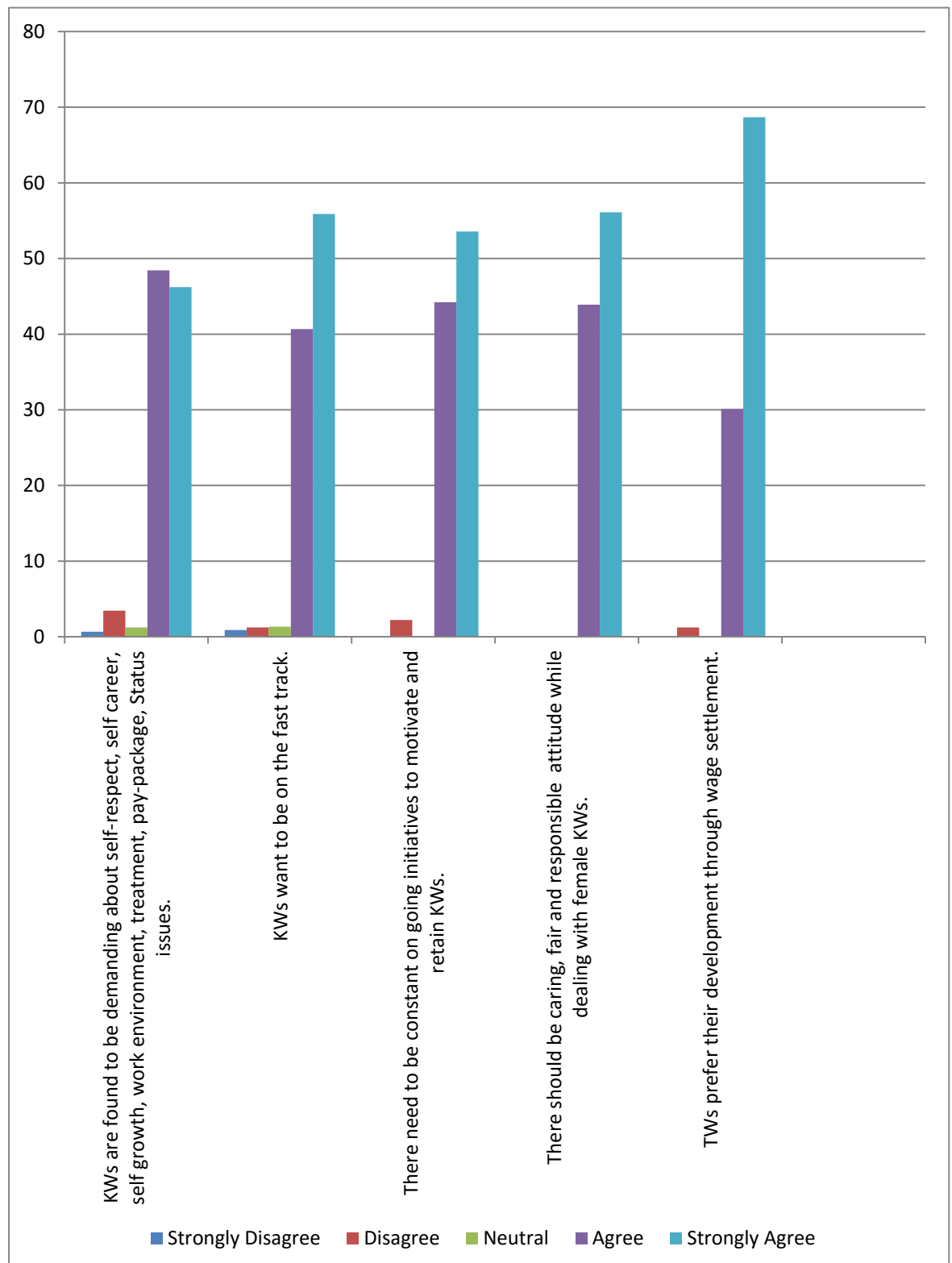
From tables and graphs, it can be observed that substantial percentage of the [94.44 % - sum of Strongly Agree (55.56%) and Agree (38.89%)] of the respondents from managers category agreed that, a systematic succession planning, career planning and training is the essence for effective engagement and management of KWs., While 5.56 % of the respondents are disagree with this view

From tables and graphs, it can be observed that majority of the [89.78 % - sum of Strongly Agree (48.44%) and Agree (41.33%)] of the respondents from managers category agreed that, hiring activity for KW calls for constant ongoing efforts. While 10.22 % of the respondents are disagree with this view.

**Table 6.8 : Table showing the opinion about “Motivational and career planning”**

| Sr. No. | Particulars                                                                                                                          | 1 | %    | 2  | %    | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|--------------------------------------------------------------------------------------------------------------------------------------|---|------|----|------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | KWs are found to be demanding about self-respect, self career, self growth, work environment, treatment, pay-package, Status issues. | 6 | 0.67 | 31 | 3.44 | 11 | 1.22 | 436 | 48.44 | 416 | 46.22 | 900   | 100 |
| 2       | KWs want to be on the fast track.                                                                                                    | 8 | 0.89 | 11 | 1.22 | 12 | 1.33 | 366 | 40.67 | 503 | 55.89 | 900   | 100 |
| 3       | There need to be constant on going initiatives to motivate and retain KWs.                                                           | 0 | 0    | 20 | 2.22 | 0  | 0    | 398 | 44.22 | 482 | 53.56 | 900   | 100 |
| 4       | There should be caring, fair and responsible attitude while dealing with female KWs.                                                 | 0 | 0    | 0  | 0    | 0  | 0    | 395 | 43.89 | 505 | 56.11 | 900   | 100 |
| 5       | TWs prefer their development through wage settlement.                                                                                | 0 | 0    | 11 | 1.22 | 0  | 0    | 271 | 30.11 | 618 | 68.67 | 900   | 100 |

**Graph 6.8 : Graph showing opinion about ‘Motivation and career planning’**



**Description:**

From tables and graphs, it can be observed that substantial percentage of the ,substantial percentage of the [94.67 % - sum of Strongly Agree (46.22%) and Agree (48.44%)] from the respondents category of managers agreed that, Knowledge workers are found to be demanding about self-respect, self-career, self-growth, work environment, treatment, pay-package, Status issues. While 5.33 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the High percentage of the [96.56 % - sum of Strongly Agree (55.89%) and Agree (40.67%)] from the respondents category of managers agreed that, Knowledge workers want to be on the fast track.. While 3.44 % of the respondents are dis agree with this view.

From tables and graphs, it can be observed that substantial percentage of the Majority of the [97.78 % - sum of Strongly Agree (53.56%) and Agree (44.22%)] from the respondents category of managers agreed that, there need to be constant on going initiatives to motivate and retain Knowledge workers. While 2.22 % of the respondents are disagree with this view.

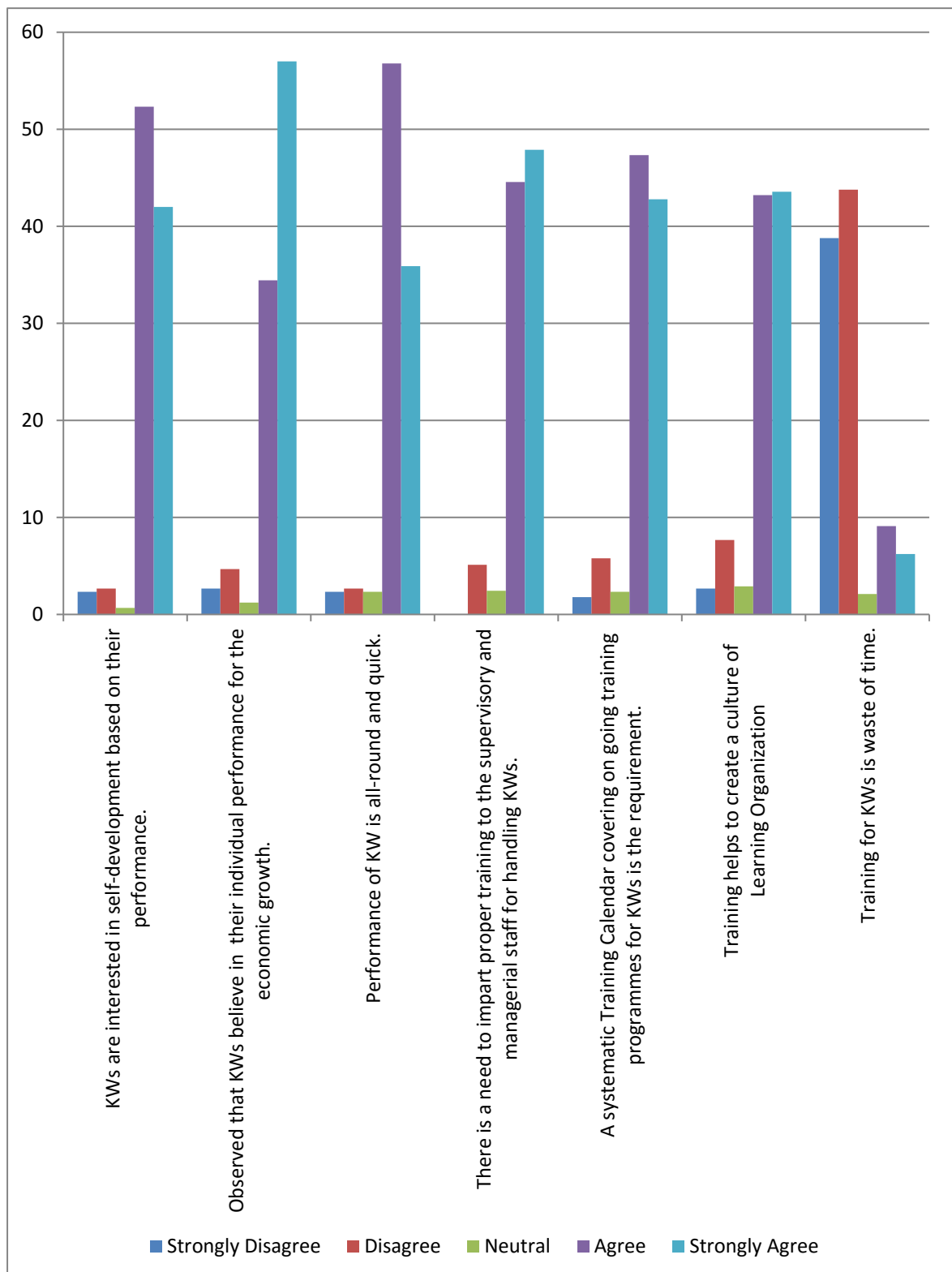
From tables and graphs, it can be observed that substantial percentage of the all of the [100 % - sum of Strongly Agree (56.11%) and Agree (43.89%)] from the respondents category of managers agreed that, there should be caring, fair and responsible attitude while dealing with female Knowledge workers. While no respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the most of the [98.78 % - sum of Strongly Agree (68.67%) and Agree (30.11%)] from the respondents category of managers agreed that, Traditional workers prefer their development through wage settlement. While 1.22 % of the respondents are disagree with this view.

**Table 6.9 : Table showing the opinion about “Training and Performance Management practices”**

| Sr. No. | Particulars                                                                                         | 1   | %     | 2   | %     | 3  | %    | 4   | %     | 5   | %     | Total | %   |
|---------|-----------------------------------------------------------------------------------------------------|-----|-------|-----|-------|----|------|-----|-------|-----|-------|-------|-----|
| 1       | KWs are interested in self-development based on their performance.                                  | 21  | 2.33  | 24  | 2.67  | 6  | 0.67 | 471 | 52.33 | 378 | 42    | 900   | 100 |
| 2       | Observed that KWs believe in their individual performance for the economic growth.                  | 24  | 2.67  | 42  | 4.67  | 11 | 1.22 | 310 | 34.44 | 513 | 57    | 900   | 100 |
| 3       | Performance of KW is all-round and quick.                                                           | 21  | 2.33  | 24  | 2.67  | 21 | 2.33 | 511 | 56.78 | 323 | 35.89 | 900   | 100 |
| 4       | There is a need to impart proper training to the supervisory and managerial staff for handling KWs. | 0   | 0     | 46  | 5.11  | 22 | 2.44 | 401 | 44.56 | 431 | 47.89 | 900   | 100 |
| 5       | A systematic Training Calendar covering on going training programmes for KWs is the requirement.    | 16  | 1.78  | 52  | 5.78  | 21 | 2.33 | 426 | 47.33 | 385 | 42.78 | 900   | 100 |
| 6       | Training helps to create a culture of Learning Organization                                         | 24  | 2.67  | 69  | 7.67  | 26 | 2.89 | 389 | 43.22 | 392 | 43.56 | 900   | 100 |
| 7       | Training for KWs is waste of time.                                                                  | 349 | 38.78 | 394 | 43.78 | 19 | 2.11 | 82  | 9.11  | 56  | 6.22  | 900   | 100 |

**Graph showing the opinion about ‘Training and Performance Management practices’**



**Description:**

From tables and graphs, it can be observed that substantial percentage of the substantial percentage of the [94.33 % - sum of Strongly Agree (42.00%) and Agree (52.33%)] from the respondents category of managers agreed that, Knowledge workers are interested in self-development based on their performance. While 5.67 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the high percentage of the [91.44 % - sum of Strongly Agree (57.00%) and Agree (34.44%)] from the respondents category of managers agreed that, Knowledge workers believe in their individual performance for the economic growth. While 8.56 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the most of the [92.67 % - sum of Strongly Agree (35.89%) and Agree (56.78%)] from the respondents category of managers agreed that, Performance of KW is all-round and quick. Managers further mentioned that, on account of the educational qualification, knowledge level and attitude of the knowledge workers they mostly quick in whatever they are doing. They are interested to take charge of their own job and also have an attitude for all round performance. Good number (56.78%) of managers have rated this parameter in the category of “Agree”.

From tables and graphs, it can be observed that substantial percentage of the majority of the [92.44 % - sum of Strongly Agree (47.89%) and Agree (44.56%)] from the respondents category of managers agreed that, there is a need to impart proper training to the supervisory and managerial staff for handling Knowledge workers. While 7.56 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the high percentage of the [90.11 % - sum of Strongly Agree (42.78%) and Agree (47.33%)] from the respondents category of managers agreed that, a systematic Training Calendar covering on-going training program for Knowledge workers is the requirement. While 9.89 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the substantial percentage of the [9.89 % - sum of Strongly Agree (43.56%) and Agree (43.22%)] from the respondents category of managers agreed that, training helps to

create a culture of Learning Organization. While 10.22 % of the respondents are disagree with this view.

From tables and graphs, it can be observed that substantial percentage of the most of the [82.56 % - sum of Strongly Disagree (38.78%) and Disagree (43.78%)] from the respondents category of managers disagreed that, Training for Knowledge workers is waste of time. Managers further stated that, it is very important to provide training to the knowledge workers. The knowledge workers are majorly working on the specialized areas which require technical expertise and knowledge. Hence providing training to the knowledge workers for these areas is very important, so that the knowledge workers can perform in their job. Hence providing training to the knowledge workers is not at all a waste of time. Fair number (43.78%) of managers have rated this parameter in the category of “Disagree” While 17.44 % of the respondents are agree with this view.

## 6.10 Hypothesis Testing

Knowledge workers Management is an integral part of most of the organization and is the most significant and indispensable tool for an organization. It provides information, which helps taking decision for the development of an employee and also creates knowledge workers-driven culture in the organization.

The following Hypothesis are framed for their verification and validity in the light of the research being carried out. In view of the problem, aim and objectives, on the basis of experience and judgment the following Hypothesis are framed:

- 1) The traditional approach and strategies in tackling issues and problems of the knowledge workers engaged in Computer Driven Manufacturing Technology Processes, in Auto Engineering Industries, Chakan Industrial Area, Pune are aimed at fulfillment of legal requirements only.
- 2) Innovative Model HR strategies for engagement and management of knowledge workers is an imperative need of auto engineering industries.
- 3) In view of typical problems and issues of knowledge workers, proper training to the supervisory staff needs to be imparted.

**Hypothesis 1:**

H<sub>0</sub>: (Null Hypothesis): Majority of managerial and supervisory staff, managing knowledge workers, in engineering industries believes that management do not prefer traditional legal framework.

H<sub>1</sub>: (Alternative Hypothesis): Majority of managerial and supervisory staff, managing knowledge workers, in engineering industries believes that management prefers traditional legal framework.

In case of knowledge workers in engineering industries, management prefers traditional legal framework.

**Justification:** while formulating this hypothesis, the researcher's assumptions are:

1. Before impact of economic reforms and LPG, the manufacturing processes, in engineering (auto) industries, were dominated the conventional machines, methods. These processes and the machinery has requirement of respective skills at operative level. Hence, preference was being given to the workers trained in a particular. At operative level, classification of the work was based on skills: skilled, semi-skilled, and unskilled. The attitude, approach, style of the managing the resources including the Human Resource was to frame the policies, procedures, code of conduct based on the law, within the frame work of law. Such practice worked well while managing such set of people.
2. After 1990 -91, due to liberalization in economy, these engineering (auto) industries have undergone paradigm shift as regards the technology, to grow, survive, sustain and prosper the global market. To compete with the global standards, engineering (auto) industries especially in Chakan, adopted business process reengineering in all respects.
3. Introduction of advance technology, automation, semi automation, CNCs, changed the requirement of human resource at operative level. "Skill" concept gets replaced by the "knowledge" concept.
4. Preference is being given to the Diploma Engineers, Science Graduates, who are termed in this thesis as "knowledge workers" for various reasons.
5. These knowledge workers proved to be more resourceful as they are flexible to learn, grasp, deliver new techniques, to work with multi skilling approach, likes to be proactive in global concepts like SOPs, Work Instructions, Flow Chart, Dos and Don'ts , Kaizen, TS, TPM, TPS, Continuous Improvements.

6. However, along with the merits, knowledge workers have issues like inconsistency; too short association, high attrition.
7. These industries though changed their resources, their philosophy, policies, style, approach is not changed. The same traditional and legal approach is the base of their HR strategies and policies.
8. Knowledge workers are neither interested to stick up with the same job, organization.
9. There are ample opportunities like IT, BPO, Banking, Insurance, Telecom, Service Sector, Government Sector, Education Sector are available for them and they are prepared to switch over to any job, sector, location.
10. They have no fear of legal actions.
11. They are neither interested in formation nor interested in collective bargaining for their terms of employment, growth.
12. No / Low IR issue situation, hence, no / low legal action requirements. Hence, the procedures, practices, policies with legal and penal orientation remain as a part of legal frame work with less application.
13. Strategies and Policies for their benefits, facilities, based on laws are inadequate: e.g. Minimum wages, bonus, leaves, working conditions.
14. Traditional controlling and authoritative attitude leads to attrition.
15. The approach and the strategies with the legal base are proved to be inadequate.

To test this hypothesis, z test is used. The step by step procedure of z test is as given below –

**Table 4.6.1 - Table showing employee's opinion on various parameters related with legal base**

| Sr. No. | Parameter                                                                                                                                   | Yes  |       | No   |      | Total |     |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------|------|-------|------|------|-------|-----|
|         |                                                                                                                                             | Res. | %     | Res. | %    | Res.  | %   |
| 1       | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                                         | 855  | 95    | 45   | 5    | 900   | 100 |
| 2       | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law | 832  | 92.44 | 68   | 7.56 | 900   | 100 |

|   |                                                                                                         |               |       |              |       |            |     |
|---|---------------------------------------------------------------------------------------------------------|---------------|-------|--------------|-------|------------|-----|
| 3 | Management prefers the legal base rather than the logical base.                                         | 806           | 89.56 | 94           | 10.44 | 900        | 100 |
| 4 | HR processes, policies, practices designed and implemented are based on traditional and legal approach. | 785           | 87.22 | 115          | 12.78 | 900        | 100 |
|   | <b>Average</b>                                                                                          | <b>819.5</b>  |       | <b>80.5</b>  |       | <b>900</b> |     |
|   | <b>Percentage</b>                                                                                       | <b>91.055</b> |       | <b>8.945</b> |       | <b>100</b> |     |

Thus, after calculating the average of the frequencies of 4 parameters and having the percentage analysis, null and alternative hypothesis is formulated for applying z-test.

Null hypothesis: Majority of managerial and supervisory staff, managing knowledge workers, in engineering industries believes that management do not prefer traditional legal framework.

$$\therefore P = 0.8$$

Alternative hypothesis: Majority of managerial and supervisory staff, managing knowledge workers, in engineering industries believes that management prefers traditional legal framework.

$$\therefore P > 0.8 \quad (\text{hence right tailed test})$$

Level of significance for testing the hypothesis,  $\alpha = 0.05$ ,

Proportion of employees who are in favor of the hypothesis,  $P_{H0} = 0.8$

Proportion of employees who are not in favor of the hypothesis,  $Q_{H0} = 0.2$

Sample Size,  $n = 900$

Sample proportion of employees who are in favor of the hypothesis,

$$P = 819.5/900 = 0.9105$$

Sample proportion of employees who are in favor of the hypothesis,

$$Q = 80.5/900 = 0.0894$$

Std. error of the proportion using the hypothesized population proportion is,

$$\sigma_p = \text{SQRT}((P_{H0} * Q_{H0})/900) = \text{SQRT}(0.8*0.2/900) = 0.0133$$

z value is,

$$z = (P - P_{H0}) / \sigma_p = (0.9105 - 0.8) / 0.0133 = 8.308271$$

Tabled value of z for  $\alpha = 0.05$  is 1.645

Since this is right tailed test and tabled value of z i.e. 1.645 is less than the calculated value of z i.e. 8.308271, null hypothesis is rejected and alternative hypothesis is accepted. Hence, majority of managerial and supervisory staff managing knowledge workers in engineering industries believes that management prefers traditional legal framework.

### **Hypothesis 2:**

H<sub>0</sub>: (Null Hypothesis): Innovative Model for HR strategies for the knowledge workers at operative level does not need to be developed.

H<sub>1</sub>: (Alternative Hypothesis): Innovative Model for HR strategies for the knowledge workers engaged in Computer Driven Manufacturing Technology Processes needs to be developed.

**Justification:** Researcher would like to state his basic assumptions as under:

1. "Hiring and Retention" of knowledge workers is a challenge.
2. "Hiring" of knowledge workers is not being addressed in a proper way.
3. "Hiring" issue of knowledge is not being handled with proper plan and drive.
4. "Hiring" issue is delegated to some junior person in the HR Department who may have limitations as regards the implementation is concerned.
5. Dedicated, on-going efforts for "hiring and retention" can only help the organization to bring the good knowledge workers and retain them.
6. "Hiring" is not being done with proper study and analysis of the job requirement.
7. Knowledge workers are ambitious, self-career oriented. They require fast growth rate.
8. Knowledge workers do not like monotony, prefer autonomy and freedom.
9. Knowledge workers save supervision time. They are resourceful and enterprising to take care of activities like preparation of presentations, reports, facing the auditors, visitors, customers.
10. Knowledge workers need fair pay, fair treatment, fair working conditions.
11. HR policies and strategies need to be aligned to take care of the requirements of knowledge workers.

12. HR strategies in respect of hiring & retention, motivation and career planning, training & performance management need to be aligned with the requirements.
13. Proper, innovative HR strategies certainly help to reduce issues of knowledge workers .

The opinion regarding the innovation in HR strategies for effective management of KWs was measured on 5-point Likert scale. As variables were discrete categorical variables, Chi square test was thought to be most appropriate test. The result of the test is as shown in the table below.

| Opinion_Agree_Disagree |            |            |          |
|------------------------|------------|------------|----------|
|                        | Observed N | Expected N | Residual |
| Strongly Disagree      | 41         | 720.0      | -679.0   |
| Disagree               | 86         | 720.0      | -634.0   |
| Neutral                | 114        | 720.0      | -606.0   |
| Agree                  | 1417       | 720.0      | 697.0    |
| Strongly Agree         | 1942       | 720.0      | 1222.0   |
| Total                  | 3600       |            |          |

| Test Statistics |                        |
|-----------------|------------------------|
|                 | Opinion_Agree_Disagree |
| Chi-Square      | 4457.397 <sup>a</sup>  |
| df              | 4                      |
| Asymp. Sig.     | .000                   |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 720.0.

#### **Inference:**

Since the result of chi square test statistics is in the favour of alternative hypothesis (chi-square value 4457.397,  $p < 0.05$ ), it can be finally concluded that the hypothesis is accepted and null hypothesis is rejected. Hence, Innovative Model for HR strategies for the knowledge workers needs to be developed and it is imperative need of auto engineering industries.

**Hypothesis 3:**

H<sub>0</sub>: (Null Hypothesis): Proper training is not essential for the supervisory staff for handling issues and problems of knowledge workers engaged in Computer Driven Manufacturing Technology Processes.

H<sub>1</sub>: (Alternative Hypothesis): Proper training is essential for the supervisory staff for handling issues and problems of knowledge workers engaged in Computer Driven Manufacturing Technology Processes.

**Justification:** While formulating the hypothesis the researcher would like to express his assumptions as:

1. Supervisory and Managerial Staff are used to the style of managing their work force with traditional approach, authoritative style.
2. There was a gap in terms of education between supervisors and skill based conventional worker under him.
3. Supervisory and Managerial staff like the relationship : Superior – Subordinate.
4. Knowledge workers do not like any sort of bossing.
5. Knowledge workers are educated and the gap between them and the supervisor in terms of education is less.
6. Knowledge workers expect self-respect.
7. Knowledge workers expect a fair treatment.
8. Knowledge workers need to be treated as a team member, as a colleague.
9. Style of supervisory staff matter in creating issues of knowledge workers.
10. Supervisory staff and managerial have inadequate skill to manage knowledge workers.
11. One of the reasons for attrition is “treatment”.
12. Caring, nurturing, fair and positive approach of supervisory and managerial staff helps to reduce issues like attrition, drop outs.
13. Supervisory and Managerial Staff need to be trained for effective utilization and management of knowledge workers.

14. There is a training essential for supervisors to attract, motivate, retain the knowledge workers creating interest, involvement amongst them about the job, department, organization.

The opinion regarding the need to impart proper training to the supervisory and managerial staff for handling KWs was measured on 5-point Likert scale. As variables were discrete categorical variables, Chi square test was thought to be most appropriate test. The result of the test is as shown in the table below.

**Opinion\_Agree\_Disagree**

|                | Observed N | Expected N | Residual |
|----------------|------------|------------|----------|
| Disagree       | 46         | 225.0      | -179.0   |
| Neutral        | 22         | 225.0      | -203.0   |
| Agree          | 401        | 225.0      | 176.0    |
| Strongly Agree | 431        | 225.0      | 206.0    |
| Total          | 900        |            |          |

**Test Statistics**

|             | Opinion_Agree_Disagree |
|-------------|------------------------|
| Chi-Square  | 651.831 <sup>a</sup>   |
| df          | 3                      |
| Asymp. Sig. | .000                   |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 225.0.

#### **Inference:**

Since the result of chi square test statistics is in the favour of alternative hypothesis (chi-square value 651.831,  $p < 0.05$ ), it can be finally concluded that the hypothesis is accepted and null hypothesis is rejected. Hence, in view of the typical problems and issues of knowledge workers, proper training is essential for the supervisory staff for handling issues and problems of knowledge workers engaged in Computer Driven Manufacturing Technology Processes.

## Chapter 7 : Observations & Findings

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Researcher has certain observations and findings in the light of this study which are discussed as under :

### **7.1) Observations :**

1. Due to Impact of Economic Reforms, LPG phenomenon increase in the business opportunities in Domestic and the Global Market.
2. Emergence of new avenues : Service, Telecom, IT, BPO, Insurance, Banking is the outcome of LPG.
3. To withstand in the Global Market, introduction of advance techniques, methods, manufacturing facilities, processes, global concepts.
4. Auto Engineering Industries in Chakan, Pune area adopted the change in business environment.
5. Auto Engineering Industries in Chakan, Pune got an opportunity to introduce and develop business environment as per the requirements of global market.
6. Auto Engineering Industries have gone for computer driven manufacturing technology processes, automation, semi – automation, CNCs, advance techniques and technologies rather than conventional processes, practices due to requirement of precision, speed, quality.
7. In most of the auto engineering in Chakan, conventional machines and processes are replaced by CNCs and computer driven manufacturing technology.
8. There are certain process which are rough and tough in nature involving manual labour.
9. Use of advance technologies have changed the competency requirements at operative level.
10. In Computer Driven Manufacturing Technology Processes, “knowledge” base is preferred than the “skill” base.
11. There has been trend to engage “knowledge workers” (Diploma/Degree Engineers, Science Graduates) in industries in place of Traditional Workers (ITI, less educated) in computer driven manufacturing technology processes.
12. In certain areas, there is a trend to engage female knowledge workers which prove to be beneficial.
13. “Knowledge Workers” are flexible for change, learning new techniques, concepts, multi skilling operations.
14. “Knowledge Workers” gets easily groomed in global work environment.

15. "Knowledge Workers" are observed to be interested in the working style as per SOPs, Work Instructions, Flow Chart, Norms of Input-process-Output, quality.
16. There is ease to manage "knowledge workers" as less supervision is required.
17. "Knowledge workers" prefer autonomy, freedom, multi skilling, innovative learning.
18. "Knowledge workers" expect Self-Respect and like to be treated as "colleagues" rather than "sub - ordinates".
19. "Knowledge Workers" expect fast growth as they are career oriented.
20. "Knowledge Workers" prefer their growth based on performance and not through collective bargaining.
21. "Knowledge Workers" are not inclined to form union or participate in union issues.
22. "Knowledge Workers" do not bother about disciplinary actions like warnings, suspension, termination. They prefer to quit the job.
23. "Knowledge Workers" are flexible to switch over to any job, any avenue, any industry, any sector, any location.
24. Employment opportunities, Education opportunities are more for the "knowledge workers".
25. Due to privatization of higher education, availability of "Knowledge Workers" is possible.
26. Attrition of "Knowledge Workers" is considerably high.
27. Major issues in case of "Knowledge Workers" is hiring and retention.
28. Performance and behavior of "knowledge workers" is well accepted.
29. "Knowledge Workers" are confident and competent to face and present visitors, auditors, customers.
30. Computer literacy is one of the advantages of "knowledge workers". They can generate report, prepare presentations and save time of their supervisors.
31. "Traditional Workers" are rigid to accept the change.
32. "Traditional Workers" want monotony.
33. Interest of "Traditional Workers" to protect their job only.
34. "Traditional Workers" resist to learn new things as they have fear of loss of job.
35. "Traditional Workers" always prefer to form Union for protection of their employment and terms of employment.

36. “Traditional Workers” prefer their increments through collective bargaining,
37. “Traditional Workers” prefer to take shelter of law or consult Union for any change.
38. “Traditional Workers” are interested in defined job, location, terms of employment.
39. Consistency of “Traditional Workers” is very good.
40. There is no attrition or low attrition in case of “Traditional Workers”
41. “Knowledge Workers” are inconsistent as regards their association is concerned.
42. HR policies, strategies designed and monitored in many of the organizations have traditional and legal orientation.
43. Effective engagement and management of “knowledge workers” calls for innovative and effective policies, strategies.
44. Competencies and qualities of HR and User Managers need to be aligned with the requirements of change management.
45. Supervisory and Managerial staff needs to be trained in handling competencies and issues of “knowledge workers.”
46. Competencies of HR and other User staff need to be reviewed for handling the change.
47. “Knowledge Workers”, if not handled or managed properly, lead to attrition.
48. Proper “Reward and Recognition” systems will help create bonding.
49. “Employment Branding” helps to attract “knowledge workers”.
50. Ongoing training activity helps to create involvement “knowledge workers” for their value addition.
51. Engagement of “female Knowledge Workers” at feasible placements is beneficial in view of creating decent atmosphere.
52. Female Knowledge Workers are observed to be resourceful in terms of output and discipline.
53. Separate policies, systems, facilities necessary for female knowledge workers help them to settle down.
54. “Caring approach” helps to retain male and female knowledge workers.
55. “Knowledge Workers” are not suitable for rough-and-tough” jobs.
56. Preference of management to engage “knowledge workers” is their all-round delivery and less IR issue.

## 7.2) Findings

### 7.2.1) Findings related to Managers opinion on the impact of economic reforms:

For assessing the manager's opinion on the impact of the economic reforms, a detailed questionnaire comprising of 5 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the managers opinion included the parameters like whether due to Economic Reforms, there is paradigm shift in product and process requirements, whether to withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced, whether most of the conventional machines and processes are replaced by CNCs, whether global standards, concepts, practices, systems play significant role and whether there are ample job opportunities available for knowledge workers such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Government jobs.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager's opinion about the impact of economic reforms:

- Majority [98.67 % - sum of Strongly Agree (90.67%) and Agree (8%)] of managers agreed that, on account of the economic reforms there is a paradigm shift in the product and process requirements. Managers further mentioned that, on account of the economic reforms, the management / organizations cannot continue with the same old products and processes. In order to sustain the competition and continue with the growth, the management / organizations will have to re-think on their products and processes. Substantial number (98.67%) of managers have rated this parameter in the category of "Strongly Agree".
- Substantial percentage [98.11 % - sum of Strongly Agree (89%) and Agree (9.11%)] of managers agreed that, to withstand in the Global Market, technology changes like automation, semi automation, modernization, rationalization need to be introduced. Managers further stated that, there are continuous changes in the technology. Introduction of newer and newer technologies helps to bring in

efficiencies, increase productivity and many other benefits. If the changes in the technology will not be introduced, within a lesser time span, the competitors in the market will take over an added advantage, and it would then become difficult for the organizations to continue in the race. Hence if the organization need to sustain in the global market, they will have to bring in technology changes in regards to the automation, semi automation etc. Highnumber (89%) of managers have rated this parameter in the category of “Strongly Agree”.

- Majority [97.56 % - sum of Strongly Agree (69.67%) and Agree (27.89%)] of managers agreed that, most of the conventional machines, processes are replaced by CNCs. Managers further mentioned that, there are continuous changes in the technology. In earlier days, older technologies / machines which were less efficient were used in the organization for manufacturing their products. This was done because those were the only machine that could be used. However with the invention of the CNC machines, the process of manufacturing the products has changed a lot. This has helped to bring in efficient and more accuracy in production of the products. Hence the organizations preferred to replace their old conventional processes and machines by CNCs. Good number (69.67%) of managers have rated this parameter in the category of “Strongly Agree”.
- Substantial percentage [98.11 % - sum of Strongly Agree (55.78%) and Agree (42.33%)] of managers agreed that, global standards, concepts, practices, systems play significant role. Managers further mentioned that, each and every organization normally follows its own processes. However it is not always necessary that the processes that they are following are the best practices. Hence it is very important to look in for the global standards, global practices and global systems used by the other global players who are in the same line of business. Fairnumber (55.78%) of managers have rated this parameter in the category of “Strongly Agree”.
- High percentage [94.22 % - sum of Strongly Agree (60.78%) and Agree (33.44%)] of managers agreed that, there are ample job opportunities available for knowledge workers such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Government jobs. Managers further stated that, knowledge workers have a decent level of educational qualification. On account of this they are able to gain the understanding of new technologies and these users can quickly adapt to the

new technologies, processes and systems. On account of this, the knowledge workers have ample job opportunities in the telecom, IT, Service Sector, Banking, Insurance, BPOs, Government jobs. Goodnumber (60.78%) of managers have rated this parameter in the category of “Strongly Agree”.

#### **7.2.2) Findings related to Managers opinion on the impact on competencies:**

For assessing the manager’s opinion on the impact on competencies, a detailed questionnaire comprising of 6 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the managers opinion included the parameters like whether with the technology advancement, “competence” requirement at operative level is changed, whether at operative level, due to automation, “skill” is replaced by the “knowledge”, whether there are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices, whether competencies of HR and other Managers are required to be aligned with the global requirements, whether competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives and whether competencies of HR Managers and other Managers must be reviewed for the changed requirements.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager’s opinion about the impact on competencies:

- Majority [98.33 % - sum of Strongly Agree (44.56%) and Agree (53.78%)] of managers agreed that, on account of the changes in the technology / advancements in the technology, the competency requirements at the operative level have changed. Managers further mentioned that, because of changes in the technology, users cannot continue to work with their traditional methods / knowledge. They have to work upon increasing the level of competency at the operating level. Fairnumber (53.78%) of managers have rated this parameter in the category of “Agree”.

- Majority [97.44 % - sum of Strongly Agree (45.56%) and Agree (51.89%)] of managers agreed that, at operative level, due to automation, “skill” is replaced by the “knowledge”. Managers further mentioned that, because of introduction of automation at the operative level, only having good skillset will not suffice. The users need to have adequate knowledge of the new automated technologies. Thus on account of this skill is replaced by knowledge. Fair number (51.89%) of managers have rated this parameter in the category of “Agree”.
- All [100 % - sum of Strongly Agree (56.89%) and Agree (43.11%)] of managers agreed that, there are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. Managers further stated that, in manufacturing organization, there were various type of jobs which are required to be performed on day to day basis and out of these jobs, there are some jobs which involve processes like powder coating, varnishing, painting, packing and few conventional practices. Good number (56.89%) of managers have rated this parameter in the category of “Strongly Agree”.
- Substantial number [91.33 % - sum of Strongly Agree (43.44%) and Agree (47.89%)] of managers agreed that, competencies of HR and other Managers are required to be aligned with the global requirements. Managers further said that, it is always good to adopt good global practices. These practices can be in regards to the competencies of HR which are followed globally as well as the competencies of the managers which are implemented as a global practice. Such practices should be implemented by considering the scenarios locally and globally Good number (47.89%) of managers have rated this parameter in the category of “Agree”.
- Substantial number [93.11 % - sum of Strongly Agree (56.89%) and Agree (36.22%)] of managers agreed that, competencies of HR Managers and other Managers must be reviewed for the changed requirements. Managers further mentioned that, with the change in the scenarios, change in attitude of the people / employees, change in the skillset level / knowledge level of the employees, the existing competencies of the HR managers and other managers will not work in long term. A through thought process should go in to develop the new competencies of HR managers as well as the other managers to cope up with the

changing requirements of the employees. Fair number (56.89%) of managers have rated this parameter in the category of “Strongly Agree”.

### **7.2.3) Findings related to Managers opinion on the Preference / Merits of Knowledge Workers and Traditional Workers:**

For assessing the manager’s opinion on the preference / merits of Knowledge Workers and Traditional Workers, a detailed questionnaire comprising of 22 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the managers opinion included the parameters like whether (Diploma/Degree Engineers/Science Graduates (Knowledge workers) are preferred for operating CNCs, automatic and semi-automatic lines, whether Knowledge workers are observed to be competent to learn and grasp new techniques, concepts, standards quickly, whether Knowledge workers are willing to adopt new set of knowledge and apply the same, whether less supervision is required while managing the Knowledge workers, whether Knowledge workers take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face interaction with the auditors, customers, visitors, whether Traditional workers are rigid whereas Knowledge workers are flexible in multi skilling operations, whether Knowledge workers have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up, whether there is a trend to engage Knowledge workers at operative level especially in the advance technology area, whether User Heads are finding ease to deal with the Knowledge workers, whether Knowledge workers also include female employees, whether Gender ratio in Knowledge workers helps to maintain proper decorum, whether Gender ratio is observed to create better results and HR climate, whether Gender ratio helps to minimize issues related to discipline, whether Employment of Knowledge workers saves energy of the supervisory staff, whether Knowledge workers have better thinking and can add value to the processes, whether Employment of female Knowledge workers proved to be useful, whether Organization gets good supervisory staff from the potential Knowledge workers, whether Knowledge workers can off load work load of supervisory staff, whether ITI/equivalent/less educated (Traditional workers) are preferred for the manual skill oriented, rough and tough jobs, whether Traditional workers are suitable in the

processes involving “skill” rather than “knowledge”, whether Association and consistency in Traditional workers is quite good, whether there are limitations for the Traditional workers as regards the job opportunities are concerned.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager’s opinion about the preference / merits of Knowledge Workers and Traditional Workers:

- Substantial number [96.78 % - sum of Strongly Agree (55.67%) and Agree (41.11%)] of managers agreed that, (Diploma/Degree Engineers/Science Graduates (Knowledge workers) are preferred for operating CNCs, automatic and semi-automatic lines. Managers further mentioned that, in order to operate the CNCs, automatic and semi-automatic lines only having the skill set is not enough. In order to operate these CNCs, automatic and semi-automatic lines, the employees need to have a considerate educational qualification. Hence the employees who have done Diploma/Degree Engineers/Science Graduates i.e. the knowledge workers are preferred over the workers who are not so qualified. Fair number (55.67%) of managers have rated this parameter in the category of “Strongly Agree”.
- High number [98.67 % - sum of Strongly Agree (45.22%) and Agree (53.44%)] of managers agreed that, knowledge workers are willing to adopt new set of knowledge and apply the same. Managers further stated that, knowledge workers are basically having good educational qualification. They are keen on exploring into new areas and hence they pro-actively try to seek new knowledge and think of where they can make the use of their knowledge. They willingly adopt the new set of knowledge requirements of the organization and implement them once they gain the knowledge. Good number (53.44%) of managers have rated this parameter in the category of “Agree”.
- Majority [95 % - sum of Strongly Agree (50.89%) and Agree (44.11%)] of managers agreed that, less supervision is required while managing the Knowledge workers. Managers further said that, knowledge workers are basically having good educational qualification. They generally tend to plan out their own work, try to

find out the solution to their problem on their own. If they are not able to resolve the problem only then they approach their reporting managers. Hence the knowledge workers generally have the tendency / attitude to take the entire ownership of the job that they are performing. On account of this they require very less supervision as they work on their own and on periodic basis report the status to their managers. Half of (50.89%) of managers have rated this parameter in the category of “Strongly Agree”.

- High number [93.11 % - sum of Strongly Agree (39.11%) and Agree (54%)] of managers agreed that, knowledge workers take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. Managers further said that, knowledge workers are basically having good educational qualification. They like to take the ownership of their own job. Apart from this they also try to explore new areas and try to get involved into other areas wherever they can. Some of the areas that they mostly get involved are Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation, face to face inter action with the auditors, customers, visitors. Fair number of (54%) of managers have rated this parameter in the category of “Agree”.
- Substantial number [90.89 % - sum of Strongly Agree (56.22%) and Agree (34.67%)] of managers agreed that, traditional workers are rigid whereas knowledge workers are flexible in multi skilling operations. Manager further stated that, traditional workers most of the times work on the same type of job right from the date of joining. They are good at that work. However if they are asked to work in some other area, they are not willing to do so. They have a fear that they might not be able to work effectively in the other area and they might have to leave the job, if they are not able to perform in the new role. Hence they are rigid. However this is not the case in terms of knowledge workers. They are willing to take up new challenges. They know that even if they do not succeed in the new job / skillset assigned to them and if they are asked to leave the organization, they will surely get another job and hence they are much flexible as

compared to the traditional workers. Fair number of (56.22%) of managers have rated this parameter in the category of “Strongly Agree”.

- High number [98 % - sum of Strongly Agree (44.78%) and Agree (53.22%)] of managers agreed that, knowledge workers have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up. Manager further stated that, knowledge workers are having good educational qualification and knowledge. They are willing to take up new challenges. They know that even if they do not succeed in the new job / skillset assigned to them and if they are asked to leave the organization, they will surely get another job and hence they are much flexible as compared to the traditional workers. On account of this flexibility among the knowledge workers they are most of the time ready to work anywhere. Their educational qualification and knowledge plays a key role to make them flexible and take such decisions. Fair number of (53.22%) of managers have rated this parameter in the category of “Agree”.
- Majority [92.56 % - sum of Strongly Agree (59%) and Agree (33.56%)] of managers agreed that, there is a trend to engage knowledge workers at operative level especially in the advance technology area. Manager further stated that, knowledge workers are having good educational qualification and knowledge. On account on this, they are have the appropriate knowledge and skillset for handling the advance technology. Hence they are the first choice of the managers at the operative level. Good number of (59%) of managers have rated this parameter in the category of “Strongly Agree”.
- High number [91.11 % - sum of Strongly Agree (47.89%) and Agree (43.22%)] of managers agreed that, user heads are finding ease to deal with the Knowledge workers. Manager further stated that, knowledge workers are clear on their goals and targets and hence they put it straight to their respective heads. Hence the heads are aware about the requirement of the knowledge workers and hence they think that it is easy to deal with knowledge workers. Good number of (47.89%) of managers have rated this parameter in the category of “Strongly Agree”.
- All [100 % - sum of Strongly Agree (38.78%) and Agree (61.22%)] of managers agreed that, knowledge workers also include female employees. Manager further stated that, in the current age, the level of literacy of the women has gone up and women are also having good educational qualification. On account of this

knowledge workers also include the female employees. Good number of (61.22%) of managers have rated this parameter in the category of “Agree”.

- Majority [90.22 % - sum of Strongly Agree (46.44%) and Agree (43.78%)] of managers agreed that, gender ratio in knowledge workers helps to maintain proper decorum. Manager further mentioned that, on account of increase in level of the female population in the section of knowledge workers, it has surely helped to maintain proper decorum. Fair number of (46.44%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority [93 % - sum of Strongly Agree (46.67%) and Agree (46.33%)] of managers agreed that, gender ratio is observed to create better results and HR climate. Manager further mentioned that, on account of increase in level of the female population in the section of knowledge workers, it has surely helped to maintain proper decorum. This increase in level of male female ratio has helped to improve results as well as improve the HR environment in the organization. Fair number of (46.67%) of managers has rated this parameter in the category of “Strongly Agree”.
- High number [83.67 % - sum of Strongly Agree (41.22%) and Agree (42.44%)] of managers agreed that, gender ratio helps to minimize issues related to discipline. Manager further mentioned that, on account of increase in level of the female population in the section of knowledge workers, it has surely helped to maintain discipline. This change in level of male female ratio has helped to minimize the issues related to discipline. Fair number of (42.44%) of managers has rated this parameter in the category of “Agree”.
- Substantial number [90.11 % - sum of Strongly Agree (44.22%) and Agree (45.89%)] of managers agreed that, employment of Knowledge workers saves energy of the supervisory staff. Manager further mentioned that, knowledge workers have the ability as well as the zest to take the ownership of their own job and try to complete it at their own. Only the cases where they are not able to find a solution they need to trouble the supervisors. Hence the supervisory staff has to invest less time and efforts on the knowledge workers, which ultimately results in saving the energy of the supervisory staff. Good number of (45.89%) of managers have rated this parameter in the category of “Agree”.

- High number [86.56 % - sum of Strongly Agree (42.78%) and Agree (43.78%)] of managers agreed that, knowledge workers have better thinking and can add value to the processes. Manager further mentioned that, knowledge workers have a decent level of educational qualification. They apply a thorough thought process in job that they are into. As they apply thought into the job that they are doing, they continuously look into what new they can do to add value to the existing processes. Hence knowledge workers help to add value to the processes. Good number of (43.78%) of managers have rated this parameter in the category of “Agree”.
- Most of the [97.11 % - sum of Strongly Agree (58.11%) and Agree (39%)] managers agreed that, employment of female knowledge workers proved to be useful. Manager further mentioned that, employment of knowledge workers has helped to improve the level of discipline, help to maintain proper decorum, improve results etc. Good number of (58.11%) of managers has rated this parameter in the category of “Strongly Agree”.
- Majority of [91.56 % - sum of Strongly Agree (38.11%) and Agree (53.44%)] managers agreed that, organization gets good supervisory staff from the potential knowledge workers. Manager further mentioned that, knowledge workers have decent educational qualification. They are aware about what is required to be done from them as well as they are also aware about what the others are mostly expected. Once they complete some years in the profile, they also get the relevant experience and all these mentioned characteristics can make them good supervisors. Good number of (53.44%) of managers has rated this parameter in the category of “Agree”.
- Majority of the [94.67 % - sum of Strongly Agree (41.78%) and Agree (52.89%)] managers agreed that, Knowledge workers can off load work load of supervisory staff. Manager further mentioned that, knowledge workers normally have the approach of taking the ownership of their own job and working towards getting it done. Hence this helps to reduce the work of the supervisory staff to a great extent. Fair number of (52.89%) of managers have rated this parameter in the category of “Agree”.
- High percentage of the [98.89 % - sum of Strongly Agree (42.89%) and Agree (56%)] managers agreed that, ITI/equivalent/less educated (Traditional workers)

are preferred for the manual skill oriented, rough and tough jobs. Manager further mentioned that, knowledge workers normally don't prefer to work on the jobs which are rough and tough jobs and require manual skill. However the traditional workers mostly prefer to work on manual skill oriented, rough and tough jobs as they are good at that. Hence traditional workers are preferred for the manual skill oriented, rough and tough jobs. Fair number of (56%) of managers have rated this parameter in the category of "Agree".

- Substantial percentage of the [95.33 % - sum of Strongly Agree (45.67%) and Agree (49.67%)] managers agreed that, Traditional workers are suitable in the processes involving "skill" rather than "knowledge". Manager further mentioned that, traditional workers are not having good educational qualification and hence lack the level of knowledge. Rather they have the skill sets for performing the rough and tough jobs or jobs which are more of manual in nature. Hence traditional workers are suitable in the processes involving "Skill" rather than knowledge. Almost half of (49.67%) of managers have rated this parameter in the category of "Agree".
- All of the [100 % - sum of Strongly Agree (56.89%) and Agree (43.11%)] managers agreed that, association and consistency in traditional workers is quite good. Manager further said that, traditional workers are more stable in their job. They prefer to continue in the same job rather than switching on to jobs on periodic basis. On account of this the association and consistency in the traditional workers is quite good. Good number of (56.89%) of managers have rated this parameter in the category of "Strongly Agree".
- Substantial percentage of [89.89 % - sum of Strongly Agree (44.22%) and Agree (45.67%)] managers agreed that, there are limitations for the Traditional workers as regards the job opportunities are concerned. Manager further said that, traditional workers are not having good educational qualification. Over the years they continue to perform the same job in the industry. On account of this the level of experience is not vast. On account of these parameters they find it difficult to get job opportunities in other industries. Hence there are limitations for the traditional workers as regards the job opportunities are concerned. Fair number of (45.67%) of managers have rated this parameter in the category of "Agree".

#### **7.2.4) Findings related to Managers opinion on the Issues of Knowledge workers and Traditional workers:**

For assessing the manager's opinion on the Issues of Knowledge workers and Traditional workers, a detailed questionnaire comprising of 5 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the managers opinion included the parameters like whether knowledge workers are not found suitable in rough – and – tough jobs and processes, whether knowledge workers do not like monotony in the jobs whereas traditional workers prefer the same, whether there are retaining issues as regards the knowledge workers are concerned as attrition level is quite high, whether knowledge workers are ready to switch over to any kind of job, if the opportunity is good and whether traditional workers are reluctant for learning new jobs, techniques, concepts, standards.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager's opinion about the issues of knowledge workers and traditional workers:

- All of the [100 % - sum of Strongly Agree (66.78%) and Agree (33.22%)] managers agreed that, knowledge workers are not found suitable in rough – and – tough jobs and processes. Managers further mentioned that, knowledge workers have decent level of educational qualification and knowledge, however they are not having the excellent manual skillsets which are required in the rough and tough jobs and processes. Hence knowledge workers are not found suitable in rough and tough jobs and processes. Fair number (66.78%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [92.22 % - sum of Strongly Agree (49.89%) and Agree (42.33%)] managers agreed that, knowledge workers do not like monotony in the jobs whereas Traditional workers prefer the same. Managers further mentioned that, knowledge workers don't like to continuously work in the same profile. They prefer to continuously get into the other domains and get the experience in the variety of domains. However traditional workers prefer to work on the same job

for years together. They think that if they switch to other job, and they are not able to perform, they will have to lose their job. Hence the knowledge workers do not like monotony in the jobs whereas traditional workers prefer the same. Hence good number (49.89%) of managers have rated this parameter in the category of “Strongly Agree”.

- Majority of the [95.44 % - sum of Strongly Agree (58.44%) and Agree (37.00%)] managers agreed that, there are retaining issues as regards the Knowledge workers are concerned as attrition level is quite high. Managers further mentioned that, knowledge workers have good educational qualification. Once they get the experience they know that based on their level of knowledge and the education qualification, they will surely get job in any other organization. Hence if the knowledge workers are not getting what they are expecting in the current organization, they switch on to the other job. On account of this behavior and approach of the knowledge workers, retention of the knowledge workers is an issue and hence the attrition level among them is quite high. Hence good number (58.44%) of managers have rated this parameter in the category of “Strongly Agree”.
- Most of the [94.89 % - sum of Strongly Agree (60.67%) and Agree (34.22%)] managers agreed that, knowledge workers are ready to switch over to any kind of job, if the opportunity is good. Managers further mentioned that, knowledge workers are not very much attached to the job profile or the organization in which they are working. They are clear on their requirements and the growth path. If they feel that they are getting a better opportunity in other organization, they just go ahead and switch the current job. Hence good number (60.67%) of managers have rated this parameter in the category of “Strongly Agree”.
- Substantial percentage [89.67 % - sum of Strongly Agree (48.44%) and Agree (41.22%)] of the managers agreed that, traditional workers are reluctant for learning new jobs, techniques, concepts, standards. Managers further mentioned that, traditional workers like to continue working in the same profile over the years. They don't like to get into even other profile in the same organization. They are reluctant to learning new jobs, techniques, concepts, standards as they feel that, if they are not able to cope up with the new profile, they will be either warned for their performance or they might be told to leave the organization.

Further they also fear that they might not get job in other organization. Hence good number (48.44%) of managers have rated this parameter in the category of “Strongly Agree”.

#### **7.2.5) Findings related to Managers opinion on the IR / Legal Issues:**

For assessing the manager’s opinion on the IR / Legal Issues, a detailed questionnaire comprising of 12 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the managers opinion included the parameters like whether Traditional workers always resist for “change” with the help of law and Union, whether Traditional workers are interested in “security”, hence, inclined to form Union, whether IR issues are mostly created by the Traditional workers, whether Knowledge workers are least interested in forming Union, whether Knowledge workers are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations, whether Traditional workers are interested to protect their existing job, whether Traditional workers are ready to fight legally for the sake of job whereas Knowledge workers do not prefer the same, whether Proportion of legal matters, if any, in case of Knowledge workers is very low as compared to Traditional workers, whether Traditional workers believe in collective bargaining for their economic growth, whether The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law, whether Traditional workers always try to take shelter of law and union and whether Management prefers the legal base rather than the logical base.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager’s opinion about the issues on IR and legal issues:

- High percentage of the [98.22 % - sum of Strongly Agree (68.00%) and Agree (30.22%)] managers agreed that, Traditional workers always resist for “change” with the help of law and Union. Managers further mentioned that, traditional workers are not highly educated. They keep on working in the same job / profile / sometime even on the same workstation over the years. They know they are good

in that. However if they are said to change i.e. transfer to other job responsibility or work in some different section, they are not at all ready as they fear that they might not be able to perform and they prefer to work in the area where they are comfortable. The traditional workers hence get the help of the law and union to resist the change. Fair number (68%) of managers have rated this parameter in the category of “Strongly Agree”.

- Substantial percentage of the [96.67 % - sum of Strongly Agree (64.22%) and Agree (32.44%)] managers agreed that, Traditional workers are interested in “security”, hence, inclined to form Union. Managers further stated that, traditional workers are not highly educated. They keep on working in the same job / profile / sometime even on the same workstation over the years. They know they are good in that. However if they are said to change i.e. transfer to other job responsibility or work in some different section, they are not at all ready as they fear that they might not be able to perform and they prefer to work in the area where they are comfortable. Further they fear that if they are not able to perform in the new profile, they might be told to leave the organization and they further fear that they might not get any other job. The traditional workers hence are inclined to form union on account of the above mentioned fear. Fair number (64.22%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [92.67 % - sum of Strongly Agree (39.22%) and Agree (53.44%)] managers agreed that, IR issues are mostly created by the Traditional workers. On account of the limitation on the educational qualification, knowledge, experience, fear for their value in the market, and the fact the they would be continuing in the same organization almost up-to the retirement, they create the IR issues. Fair number (53.44%) of managers have rated this parameter in the category of “Agree”.
- Most of the [89.22 % - sum of Strongly Agree (44.56%) and Agree (44.67%)] managers agreed that, Knowledge workers are least interested in forming Union. Managers further stated that, knowledge workers are having decent educational qualification and knowledge. They are aware that they will surely get another job if they try and search in the job market. Hence if they are not satisfied with the current organization, they don’t get into the process of formation of unions etc. They simply opt to move out of the organization and join another

organization. Good number (44.67%) of managers have rated this parameter in the category of “Agree”.

- High number of the [96.44 % - sum of Strongly Agree (57.11%) and Agree (39.33%)] managers agreed that, Knowledge workers are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. Managers further stated that, knowledge workers are having decent educational qualification and knowledge. They are aware that they will surely get another job if they try and search in the job market. Hence if they are not satisfied with the current organization, they simply opt to move out of the organization and join another organization. The Knowledge workers are hence least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as they are prepared to leave the job with or without resignations. Good number (57.11%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [97.11 % - sum of Strongly Agree (41.44%) and Agree (55.67%)] managers agreed that, Traditional workers are interested to protect their existing job. Managers further stated that, traditional workers not having decent educational qualification and knowledge. They are good / excellent in the current job profile that they are into. However they don't have any other experience. On account of these factors they fear that they will not be getting any other job. Hence because of this fear, they are interested to protect their existing job. Fair number (55.67%) of managers has rated this parameter in the category of “Agree”.
- Substantial percentage of the [99.11 % - sum of Strongly Agree (57%) and Agree (42.11%)] managers agreed that, Traditional workers are ready to fight legally for the sake of job whereas Knowledge workers do not prefer the same. Managers further stated that, traditional workers not having decent educational qualification and knowledge. They are good / excellent in the current job profile that they are into. However they don't have any other experience. On account of these factors they fear that they will not be getting any other job. Hence because of this fear, they are interested to protect their existing job and hence they are ready to fight legally for the sake of job. However the knowledge workers have decent educational qualification and knowledge. They normally tend to have varied experience. They have the ability to take the charge of some job and they are also

suitable for the supervisory roles. On account of all these matter they are aware that they will surely get the job in other organization. Hence instead of fighting legally in the current organization, they prefer to leave the job. Fair number (57%) of managers have rated this parameter in the category of “Strongly Agree”.

- Majority of the [95 % - sum of Strongly Agree (56.44%) and Agree (38.56%)] managers agreed that, proportion of legal matters, if any, in case of Knowledge workers is very low as compared to Traditional workers. Managers further stated that, knowledge workers have decent educational qualification and knowledge. They normally tend to have varied experience. They have the ability to take the charge of some job and they are also suitable for the supervisory roles. On account of all these matter they are aware that they will surely get the job in other organization. Hence they are not very much interested to get into the legal matters. Instead they prefer to leave the job. Fair number (56.44%) of managers have rated this parameter in the category of “Strongly Agree”.
- High number of the [94.56 % - sum of Strongly Agree (44.56%) and Agree (50%)] managers agreed that, Traditional workers believe in collective bargaining for their economic growth. Managers further stated that, traditional workers on account of their poor educational qualification and knowledge, individually are not strong enough to go ahead and bargain with the management for their economic growth. Hence they feel that if they go collectively, it might create an impact on the management and would ultimately help in their economic growth. Half (50.00%) of managers have rated this parameter in the category of “Agree”.
- Most of the [92.44 % - sum of Strongly Agree (50.11%) and Agree (42.33%)] managers agreed that, the present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law. Managers further mentioned that, the currently used HR strategies, procedures, policies and code of conduct are designed focusing on the traditional workers, who prefer to fight legally for their job. However with the change in scenarios i.e. knowledge workers coming into picture, a thorough re-assessment and re-design of the present HR strategies, procedures, policies, code of conduct is required. Good number (50.11%) of managers have rated this parameter in the category of “Strongly Agree”.

- High number of the [96.33 % - sum of Strongly Agree (57.33%) and Agree (39.00%)] managers agreed that, Traditional workers always try to take shelter of law and union. Managers further said that, traditional workers are not having good educational qualification and knowledge. Hence most of them once get into one organization, retire from the same organization. They are not having the confidence that they will get job in any other organization if they are removed from the current organization. On account of this fear, the traditional workers always try to take shelter of law and union for safeguarding their existing job. Fair number (57.33%) of managers have rated this parameter in the category of “Strongly Agree”.
- Most of the [89.56 % - sum of Strongly Agree (45.67%) and Agree (43.89%)] managers agreed that, Management prefers the legal base rather than the logical base. Managers further stated that, the policies and procedures or the strategies that the management are currently following were designed considering the traditional workers in view. As the management has to abide to the defined and approved policies, procedures and strategies, they have to go with the legal base rather than the logical one. Good number (45.67%) of managers have rated this parameter in the category of “Strongly Agree”.

#### **7.2.6) Findings related to Managers opinion on the Issues pertaining to HR strategies:**

For assessing the manager’s opinion on the Issues pertaining to HR strategies, a detailed questionnaire comprising of 16 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the manager’s opinion included the parameters like whether HR processes, policies, practices designed and implemented are based on traditional and legal approach, whether Traditional and legal approach for managing the operators requires change, whether In respect of Traditional workers, these policies can be suitable, whether For engaging and managing KNOWLEDGE WORKERS, these policies, practices, systems need to be reviewed for innovation, whether Issues regarding engagement and management of Knowledge workers are being addressed in a traditional style and approach, whether HR policies especially attaining and maintaining Knowledge workers must be innovative, whether Review of issues and

problems due to engagement and management of Knowledge workers is properly and periodically conducted, whether For effective engagement and management of Knowledge workers there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning, whether There is a lack of attention in designing the policies, whether There is a lack of drive in implementation of policies, whether Policies are there but not implemented with a proper and natural style, whether Employment of Knowledge workers creates work load and work pressure especially in HR Department in the following areas (Recruitment, Joining formalities, Documentation : personal file etc., Induction, On Job Training (OJT), Succession Planning, Performance Management / Skill Development, Competency Mapping, Training, Career Planning, Reward & Recognition, Welfare activities, Benefits administration, Compensation Management, Time Office activities, Statutory compliances, Full and final settlement activities), whether The present HR strategies seem to be traditional, whether All the above HR activities need structured and systematic guide line and whether There is a need to create logical, rational policies without deviating the legal provisions.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager's opinion about the Issues pertaining to HR strategies:

- High percentage of the [87.22 % - sum of Strongly Agree (37.11%) and Agree (50.11%)] managers agreed that, HR processes, policies, practices designed and implemented are based on traditional and legal approach. Managers further mentioned that, the HR processes, policies, practices are defined and designed many years ago and there has been no significant update to these policies and practices to incorporate the new requirements. Goodnumber (50.11%) of managers have rated this parameter in the category of "Agree".
- Majority of the [96.11 % - sum of Strongly Agree (50.33%) and Agree (45.78%)] managers agreed that, Traditional and legal approach for managing the operators requires change. Managers further stated that, the traditional and legal approach to manage the operators was good in the older scenarios / era. This was one of the better approaches to handle with the traditional workers.

However with the knowledge workers coming in to the industry, this traditional and legal approach is not proving to be effective and surely it requires change. Half of (50.33%) of managers have rated this parameter in the category of “Strongly Agree”.

- Most of the [92.67 % - sum of Strongly Agree (42.56%) and Agree (50.11%)] managers agreed that, In respect of Traditional workers, these policies can be suitable. Managers further said that, the traditional and legal approach to manage the operators was good in the older scenarios / era. This was one of the better approaches to handle with the traditional workers. One of the reason for this was that traditional workers had more of the mindset to fight legally against the organization for any of the reason which could have an impact on their existing job. Half of (50.11%) of managers have rated this parameter in the category of “Agree”.
- Substantial number of the [91.67 % - sum of Strongly Agree (49.11%) and Agree (42.56%)] managers agreed that, for engaging and managing KNOWLEDGE WORKERS, these policies, practices, systems need to be reviewed for innovation. Managers further said that, the traditional and legal approach to manage the operators was good in the older scenarios / era. This was one of the better approaches to handle with the traditional workers. One of the reason for this was that traditional workers had more of the mindset to fight legally against the organization for any of the reason which could have an impact on their existing job. As against this, the knowledge workers don’t even think of going to fight legally against the organization. They know that they will get the job in other organization, if they look for. The knowledge workers have hence to be treated in different manner. Hence the same old policies that are applicable for the traditional workers will not be effective for the knowledge workers. Fair number of (49.11%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [86.56 % - sum of Strongly Agree (45.33%) and Agree (41.22%)] managers agreed that, Issues regarding engagement and management of Knowledge workers are being addressed in a traditional style and approach. Managers further said that, most of the organizations have the traditional old HR policies, practices and strategies in place. Even with the

knowledge workers coming in, still the policies, practices and strategies are not yet modified to incorporate new policies, strategies to deal with the knowledge workers. Hence currently the issues regarding the engagement and management of knowledge workers are handled in accordance with the same old traditional policies, practices and strategies. Fairnumber of (45.33%) of managers have rated this parameter in the category of “Strongly Agree”.

- Substantial percentage of the [94.22 % - sum of Strongly Agree (57.00%) and Agree (37.22%)] managers agreed that, HR policies especially attaining and maintaining Knowledge workers must be innovative. Managers further mentioned that, the mindset, approach and working style of the knowledge workers is totally different as compared to that of the traditional workers. Hence if the organization tries to apply the same policies that they apply for the traditional workers, it would certainly not satisfy the requirements of the knowledge workers. Hence a thorough thought process has to be applied and new innovative ideas have to be incorporated into the HR policies for attaining and maintaining the knowledge workers. Good number of (57.00%) of managers have rated this parameter in the category of “Strongly Agree”.
- High percentage of the [80.44 % - sum of Strongly Disagree (36.44%) and Disagree (44.00%)] managers disagreed that, review of issues and problems due to engagement and management of Knowledge workers is properly and periodically conducted. Managers further said that, currently there is no such process in place to assess the issues and problems which come up due to the engagement and management of knowledge workers on periodic basis. The knowledge workers are currently handled and managed in the same manner in which the traditional workers are handled. Hence the managers disagreed and said that, there is no periodical review being performed particularly in this domain. Fairnumber of (44.00%) of managers has rated this parameter in the category of “Disagree”.
- Majority of the [88.89 % - sum of Strongly Agree (47.22%) and Agree (41.67%)] managers agreed that, for effective engagement and management of Knowledge workers there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. Managers further stated that, a totally different strategy and

framework is required to be designed and implemented in regards to the strategies for hiring, training, motivation, performance management, reward and recognition and career planning especially for the knowledge workers. If the same old strategies used for traditional workers are used for the knowledge workers, it would be difficult to satisfy the requirements of the knowledge workers and it would be difficult to retain the knowledge workers. Fair number of (47.22%) of managers have rated this parameter in the category of “Strongly Agree”.

- Substantial percentage of the [95% - sum of Strongly Agree (49.22%) and Agree (45.78%)] managers agreed that, there is a lack of attention in designing the policies. Managers further mentioned that, the management and HR is not yet serious about the revision of the existing policies and procedures. They are not very much interested to design and develop new policies and strategies to be applied while treating the knowledge workers. Good number of (49.22%) of managers have rated this parameter in the category of “Strongly Agree”.
- Most of the [90.44% - sum of Strongly Agree (44.33%) and Agree (46.11%)] managers agreed that, there is a lack of drive in implementation of policies. Managers further mentioned that, the management and HR is not yet serious about the revision of the existing policies and procedures. They are not very much interested to design and develop new policies and strategies to be applied while treating the knowledge workers. As there are no new policies pertaining to the knowledge workers defined, there is no question of implementation of the new policies. The managers stated that, the management is not favorable and currently lacks the motivation and drive for implementation of the policies. Fair number of (46.11%) of managers have rated this parameter in the category of “Agree”.
- Majority of the [90.00% - sum of Strongly Disagree (46.22%) and disagree (43.78%)] managers disagreed that, policies are there but not implemented with a proper and natural style. Managers further mentioned that, currently there are no policies which can cater to the requirements of the knowledge workers. Hence policies are there but not implemented with proper and natural style was disagreed by the managers. Fair number of (46.22%) of managers have rated this parameter in the category of “Strongly Disagree”.

- All of the [100% - sum of Strongly Agree (56.89%) and Agree (43.11%)] managers agreed that, HR strategies need to consider the requisite requirements of female Knowledge workers. Managers further said that, in the earlier days, women were not very much employed in the manufacturing industry. Hence the policies that were designed were not very much focusing on the women. Apart from this currently there are no policies pertaining to the knowledge workers (either for men or for women). Hence the managers said that HR strategies need to consider the requirements of female knowledge workers. Good number of (56.89%) of managers have rated this parameter in the category of “Strongly Agree”.
- High percentage of the managers agreed that, employment of Knowledge workers creates work load and work pressure especially in HR Department in the areas of Recruitment, Joining formalities, Documentation : personal file etc., Induction, On Job Training (OJT), Succession Planning, Performance Management / Skill Development, Competency Mapping, Training, Career Planning, Reward & Recognition, Welfare activities, Benefits administration, Compensation Management, Time Office activities, Statutory compliances, Full and final settlement activities.

**Recruitment:** In regards to the parameter for recruitment, the majority of managers [90.33% - total of strongly agree (45.78%) and agree (44.56%)] stated that, knowledge workers have the attitude of switching the jobs and they don't continue to stay in one job. Whenever they get some good offer they opt for it. Thus on account of this, the HR has to continuously keep on searching for new employees (knowledge workers). Hence it increases the efforts of the HR team in the area of recruitment.

**Joining formalities:** In regards to the parameter for joining formalities, the majority of manager [90.56% - total of strongly agree (44.22%) and agree (46.33%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to get the joining formalities done from HR. Hence this also increases the efforts of HR team.

**Documentation:** In regards to the parameter for documentation, high percentage of managers [91.78% - total of strongly agree (55.89%) and agree

(35.89%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. HR has to maintain documentation (personalized file) for each and every new joiner. Hence this also increases the efforts of HR team.

**Induction:** In regards to the parameter for induction, the majority of manager [89.56% - total of strongly agree (44.44%) and agree (45.11%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to get the induction done. Hence this also increases the efforts of HR team.

**On Job Training:** In regards to the parameter for on job training, the majority of manager [89.56% - total of strongly agree (44.44%) and agree (45.11%)] mentioned that, there is continuous recruitment of the knowledge workers, as there is substantial turnover in the knowledge workers. Each and every new joiner (knowledge worker) has to be trained. On the job training is one of the key aspect. Hence this also increases the efforts of HR team.

**Succession Planning:** In regards to the parameter for succession planning, the majority of managers [89.44% - total of strongly agree (43.78%) and agree (45.67%)] mentioned that, there is continuous turnover in the knowledge workers. Hence the HR team has continuously keep on working for the succession planning. Hence this also adds up to the increase in efforts of the HR team.

**Performance Management / Skill Development:** In regards to the parameter for Performance Management / Skill Development, the majority of managers [86.00% - total of strongly agree (34.89%) and agree (51.11%)] mentioned that, evaluation of the performance of the knowledge cannot be done in accordance with the traditional workers. Separate parameters is required to make the assessment. Apart from this the skill development requirements of the knowledge workers are also different and may differ from one knowledge worker to other. Hence additional efforts are required to figure out the exact requirements. Hence this adds up to the increase in efforts of the HR team.

**Competency Mapping:** In regards to the parameter for Competency Mapping, high percentage of managers [89.00% - total of strongly agree (35.11%) and agree (53.89%)] mentioned that, competency mapping of the

knowledge is different from that of traditional workers. Competency mapping framework is required to be designed for the knowledge workers which requires an additional efforts. Thus this also adds up to the increase in the efforts of HR team.

**Training:** In regards to the parameter for training, substantial percentage of managers [90.11% - total of strongly agree (56.78%) and agree (33.33%)] mentioned that, training requirements of the knowledge workers are different. Hence deciding on the training requirements of the knowledge workers is key. Further the knowledge workers also have their own requirements on the training. The HR also has to take into consideration the feasibility of the requirements from the knowledge workers. Thus all this also adds up to the increase in the efforts of HR team.

**Career Planning:** In regards to the parameter for Career Planning, substantial percentage of managers [90.33% - total of strongly agree (34.67%) and agree (55.67%)] mentioned that, special efforts are required for career planning of the knowledge workers. Hence the career planning effectively increases the efforts of HR team.

**Reward & Recognition:** In regards to the parameter for Reward & Recognition, high percentage of managers [78.44% - total of strongly agree (24.00%) and agree (54.44%)] mentioned that, the reward and recognition program for the knowledge workers has to be framed up differently as regards to the traditional workers. Knowledge workers have lot of expectations in comparison to the traditional workers. Hence additional efforts for deciding on the rewards and recognition are required. Thus all this also adds up to the increase in the efforts of HR team.

**Welfare activities:** In regards to the parameter for Welfare activities, high percentage of managers [90.11% - total of strongly agree (43.44%) and agree (46.67%)] mentioned that, welfare activities are required to be planned and conducted for the knowledge workers. This requires additional efforts and hence leads to the increase in the efforts of HR team.

**Benefits administration:** In regards to the parameter for Benefits administration, Substantial percentage of managers [91.44% - total of strongly agree (36.11%) and agree (55.33%)] mentioned that, deciding on the benefits that are to be granted to the knowledge workers is required to be thought of in

detail. Hence this requires investing time by the HR team. This requires additional efforts and hence leads to the increase in the efforts of HR team.

**Compensation Management:** In regards to the parameter for Compensation Management, high percentage of managers [91.44% - total of strongly agree (36.44%) and agree (55.00%)] mentioned that, deciding on the compensation of the knowledge workers is key factor. The knowledge workers have high expectations in terms of the compensation as they are ready to invest more time, take lead in performing the work, they have the knowledge and educational qualification. Hence deciding on the compensation is key factor and involves investing time and efforts.

**Time Office activities:** In regards to the parameter for Time Office activities, majority of managers [91.44% - total of strongly agree (36.11%) and agree (55.33%)] mentioned that, time office activities are required to be planned effectively for the knowledge workers. This planning requires additional efforts and hence leads to the increase in the efforts of HR team.

**Statutory compliances:** In regards to the parameter for Statutory compliances, high percentage of managers [92.78% - total of strongly agree (47.00%) and agree (45.78%)] mentioned that, adhering to the statutory compliance is one of the key factor. If there are any non-compliances on the statutory front, it may have serious impact on the organization as a whole. This leads to the increase in the efforts of HR team.

**Full and final settlement activities:** In regards to the parameter for Full and final settlement activities, the majority of managers [90.00% - total of strongly agree (33.56%) and agree (56.44%)] stated that, knowledge workers have the attitude of switching the jobs and they don't continue to stay in one job. Whenever they get some good offer they opt for it. Thus on account of this, the HR has to continuously keep working on the full and final settlement of the employees that are leaving the organization. Hence it increases the efforts of the HR team.

- High percentage of the [93.89 % - sum of Strongly Agree (55.00%) and Agree (38.89%)] managers agreed that, the present HR strategies seem to be traditional. Managers further mentioned that, the HR processes, policies, practices are defined and designed many years ago and there has been no significant update to these policies and practices to incorporate the new requirements. Hence the HR

strategies seem to be traditional. Fair number (55.00%) of managers have rated this parameter in the category of “Strongly Agree”.

- Substantial percentage of the [97.00 % - sum of Strongly Agree (54.67%) and Agree (42.33%)] managers agreed that, all the above HR activities need structured and systematic guide line. Managers further said that, the HR processes, policies, practices are defined and designed many years ago and there has been no significant update to these policies and practices to incorporate the new requirements. Efforts are required to be taken up by the management and HR team to create a solid framework and prepare a formally structured and systematic guideline. Fair number (54.67%) of managers have rated this parameter in the category of “Strongly Agree”.
- High percentage of the [97.00 % - sum of Strongly Agree (43.56%) and Agree (53.44%)] managers agreed that, there is a need to create logical, rational policies without deviating the legal provisions. Managers further mentioned that, the HR processes, policies, practices are defined and designed many years ago and there has been no significant update to these policies and practices to incorporate the new requirements. Hence the management has to take it up and work on creation of the logical and rational policies which would also take into consideration the legal provisions. Fair number (53.44%) of managers have rated this parameter in the category of “Agree”.

#### **7.2.7) Findings related to Managers opinion on the Hiring and Retention:**

For assessing the manager’s opinion on the Hiring and Retention, a detailed questionnaire comprising of 6 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the manager’s opinion included the parameters like whether Existing strategies for hiring Knowledge workers are adequate, whether Strategies for hiring Knowledge workers needs drive and innovation, whether There is no attrition issue as regards the Traditional workers, whether In today's context "Hiring and Retention of Knowledge workers" is the KRA for HR Department', whether A systematic succession planning, career planning and training is the essence for effective engagement and management of Knowledge workers, whether Hiring activity for KW calls for constant on going efforts.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager's opinion about the hiring and retention:

- High percentage of the [92.89 % - sum of Strongly Disagree (39.00%) and Disagree (53.89%)] managers disagreed that, existing strategies for hiring Knowledge workers are adequate. Managers further mentioned that, the existing policies& strategies that are defined and designed for hiring of employees is defined considering the traditional workers. They are not updated to incorporate strategies for hiring knowledge workers. Hence the managers said that the existing strategies for hiring knowledge workers are not adequate and there is a requirement to change these strategies. Good number (53.89%) of managers have rated this parameter in the category of "Disagree".
- Substantial percentage of the [91.22 % - sum of Strongly Agree (42.78%) and Agree (48.44%)] managers agreed that, Strategies for hiring Knowledge workers needs drive and innovation. Managers further mentioned that, the existing strategies that are defined and designed for hiring of employees is defined considering the traditional workers. They are not updated to incorporate strategies for hiring knowledge workers. Hence the managers said that the existing strategies for hiring knowledge workers are not adequate and there is a requirement to change these strategies. Hence the management has to take it up and work on creation of the innovative strategies. Goodnumber (48.44%) of managers have rated this parameter in the category of "Agree".
- All of the [100 % - sum of Strongly Agree (49.78%) and Agree (50.22%)] managers agreed that, there is no attrition issue as regards the Traditional workers. Managers further mentioned that, the traditional workers are not having good educational qualification as well as good knowledge level. However they are excellent in whatever they are doing in the current job. On account of this, these employees don't even try to get into other profile in the same organization. They have the fear that, if they are not able to perform in new profile, they might have to leave the organization. Further they fear that on account of their low educational and knowledge level, they might not get job in other organization.

Hence they try to continue in the same job. Hence the level of attrition is low in traditional workers. Fair number (50.22%) of managers have rated this parameter in the category of “Agree”.

- High percentage of the [93.00 % - sum of Strongly Agree (51.22%) and Agree (41.78%)] managers agreed that, in today's context "Hiring and Retention of Knowledge workers" is the KRA for HR Department'. Managers further mentioned that, the knowledge workers have good educational qualification and knowledge. Once they get some experience, they are sure that they will get job in any other organization. Hence the knowledge workers also have high requirement on the compensation, training etc. If they are not satisfied with the current organization, they prefer to leave the organization and join another organization. Hence retention of these employees on account of their expectations is a challenge. Similarly as these knowledge workers keep on switching the job, there is continuous requirement for hiring of the knowledge workers. Hence hiring and retention of knowledge workers is the KRAs for HR department. Fair number (51.22%) of managers have rated this parameter in the category of “Strongly Agree”.
- Substantial percentage of the [94.44 % - sum of Strongly Agree (55.56%) and Agree (38.89%)] managers agreed that, a systematic succession planning, career planning and training is the essence for effective engagement and management of Knowledge workers. Managers further mentioned that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. If they are not fulfilled by the organization, they prefer to leave the job as they are aware that they will get the job in another organization. Hence management has to work on preparing a systematic succession planning, career planning and training for engagement and management of knowledge workers. Good number (55.56%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [89.78 % - sum of Strongly Agree (48.44%) and Agree (41.33%)] managers agreed that, hiring activity for KW calls for constant ongoing efforts. Managers further stated that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. If they are not fulfilled by the organization, they prefer to leave the

job as they are aware that they will get the job in another organization. Hence HR has to continuously deal with the existing knowledge workers in order to understand their requirements, expectation etc. The HR has to keep on dealing with the knowledge workers for retaining them in the organization. Apart from this hiring of new knowledge workers requires many activities like induction of the new joiners, preparing the documentation for each of the new joiner, providing training to the new joiners etc. Hence hiring activity of knowledge workers requires a constant ongoing efforts. Fair number (48.44%) of managers have rated this parameter in the category of “Strongly Agree”.

#### **7.2.8) Findings related to Managers opinion on the Motivational and career planning:**

For assessing the manager’s opinion on the Motivational and career planning, a detailed questionnaire comprising of 5 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the manager’s opinion included the parameters like whether Knowledge workers are found to be demanding about self-respect, self-career, self-growth, work environment, treatment, pay-package, Status issues, whether Knowledge workers want to be on the fast track, whether There need to be constant on going initiatives to motivate and retain Knowledge workers, whether there should be caring, fair and responsible attitude while dealing with female Knowledge workers and whether Traditional workers prefer their development through wage settlement.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager’s opinion about the Motivational and career planning:

- Substantial percentage of the [94.67 % - sum of Strongly Agree (46.22%) and Agree (48.44%)] managers agreed that, Knowledge workers are found to be demanding about self-respect, self-career, self-growth, work environment, treatment, pay-package, Status issues. Managers further mentioned that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. If they are not fulfilled by

the organization, they prefer to leave the job as they are aware that they will get the job in another organization. They are not at all ambiguous on their requirements and they directly communicate their expectations to the reporting managers. As they are aware about their strengths, the knowledge workers are normally found to be demanding about self-respect, self-career, self-growth, work environment, treatment, pay-package, Status issues. Fair number (48.44%) of managers have rated this parameter in the category of “Agree”.

- High percentage of the [96.56 % - sum of Strongly Agree (55.89%) and Agree (40.67%)] managers agreed that, Knowledge workers want to be on the fast track. Managers further mentioned that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. On account of this they know their strengths and they use this to discuss with the respective managers for their fast track growth. If they are not provided what they expect, they search for another job who will provide them the growth both in terms of the hierarchy in the organization as well in terms of the pay. Goodnumber (55.89%) of managers have rated this parameter in the category of “Strongly Agree”.
- Majority of the [97.78 % - sum of Strongly Agree (53.56%) and Agree (44.22%)] managers agreed that, there need to be constant on going initiatives to motivate and retain Knowledge workers. Managers further said that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. They are not interested to continuously work in the same profile. They are interested to get exposure to varied domains. Hence the managers have to constantly work on initiatives and methods that will keep on motivating the knowledge workers. The managers said this is one of the factor which would help to retain the knowledge workers. Hence there is a need to be constant on going initiatives to motivate and retain knowledge workers. Fairnumber (53.56%) of managers have rated this parameter in the category of “Strongly Agree”.
- All of the [100 % - sum of Strongly Agree (56.11%) and Agree (43.89%)] managers agreed that, there should be caring, fair and responsible attitude while dealing with female Knowledge workers. Managers further said that, method in which the male knowledge workers are handled might not be suitable for dealing

with the female knowledge workers. Hence a different approach is required for dealing with the female knowledge workers. Good number (56.11%) of managers have rated this parameter in the category of “Strongly Agree”.

- Most of the [98.78 % - sum of Strongly Agree (68.67%) and Agree (30.11%)] managers agreed that, Traditional workers prefer their development through wage settlement. Managers further mentioned that, traditional workers are not very much interested in gaining the knowledge. They normally don’t consider this as an area of development as they have prepared their mindset to work in the same organization, in the same department and mostly on the same workstation, throughout their tenure in the organization. They only consider wage settlement as their development. Substantial number (68.67%) of managers have rated this parameter in the category of “Strongly Agree”.

#### **7.2.9) Findings related to Managers opinion on the Training and Performance Management practices:**

For assessing the manager’s opinion on the Training and Performance Management practices, a detailed questionnaire comprising of 7 questions was drafted. The managers were requested for their response for each of the question. The questions that were drafted to assess the manager’s opinion included the parameters like whether Knowledge workers are interested in self-development based on their performance, whether Knowledge workers believe in their individual performance for the economic growth, whether Performance of KW is all-round and quick, whether There is a need to impart proper training to the supervisory and managerial staff for handling Knowledge workers, whether A systematic Training Calendar covering on-going training programs for Knowledge workers is the requirement, whether Training helps to create a culture of Learning Organization and whether Training for Knowledge workers is waste of time.

The managers were requested to respond to each of the question in one of the category among the multiple categories viz. Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree.

Based on the responses obtained from the managers following are the findings on the manager’s opinion about the Training and Performance Management:

- Substantial percentage of the [94.33 % - sum of Strongly Agree (42.00%) and Agree (52.33%)] managers agreed that, Knowledge workers are interested in self-development based on their performance. Managers further mentioned that, the knowledge workers have good educational qualification and knowledge. They have their own set of expectation from the organization. They are only focused on their own development. They assess their performance and identify the domain where they want to move into. Hence knowledge workers are interested in self-development. Fair number (52.33%) of managers have rated this parameter in the category of “Agree”.
- High percentage of the [91.44 % - sum of Strongly Agree (57.00%) and Agree (34.44%)] managers agreed that, Knowledge workers believe in their individual performance for the economic growth. Managers further mentioned that, the knowledge workers are aware that, if they perform in their current role in the organization, only then they will be able to go ahead and discuss with their manager for good raise in the pay and also discuss on the promotion. Thus the knowledge workers consider themselves as their factor for economic growth. Good number (57.00%) of managers have rated this parameter in the category of “Strongly Agree”.
- Most of the [92.67 % - sum of Strongly Agree (35.89%) and Agree (56.78%)] managers agreed that, Performance of KW is all-round and quick. Managers further mentioned that, on account of the educational qualification, knowledge level and attitude of the knowledge workers they mostly quick in whatever they are doing. They are interested to take charge of their own job and also have an attitude for all round performance. Good number (56.78%) of managers have rated this parameter in the category of “Agree”.
- Majority of the [92.44 % - sum of Strongly Agree (47.89%) and Agree (44.56%)] managers agreed that, there is a need to impart proper training to the supervisory and managerial staff for handling Knowledge workers. Managers further stated that, over the years the supervisors are having the experience to deal with the traditional workers. However it would not be feasible if the supervisors deal with the knowledge workers in the same manner as they deal with the traditional workers. Hence there is a need to impart proper training to the supervisory and managerial staff on dealing and handling the knowledge

workers. Fair number (47.89%) of managers have rated this parameter in the category of “Strongly Agree”.

- High percentage of the [90.11 % - sum of Strongly Agree (42.78%) and Agree (47.33%)] managers agreed that, a systematic Training Calendar covering on-going training program for Knowledge workers is the requirement. Managers further stated that, knowledge workers are working on different set of jobs as compared to the traditional workers. Hence they are required to be imparted with the specialized training that would be required to perform their job requirement. Apart from this the knowledge workers, themselves have their own training requirements. Both these factors have to be considered while designing the training program. Hence a systematic Training Calendar covering on-going training programs for knowledge workers is the required. Fair number (47.33%) of managers have rated this parameter in the category of “Agree”.
- Substantial percentage of the [86.78 % - sum of Strongly Agree (43.56%) and Agree (43.22%)] managers agreed that, training helps to create a culture of Learning Organization. Managers further stated that, with the use of effective training, the organization can impart the training to the employees in the domain where the company wants the employees to work in. By getting the training, the employees also feel that they are being trained and get a feeling that they are part of the learning organization. Fair number (43.56%) of managers have rated this parameter in the category of “Strongly Agree”.
- Most of the [82.56 % - sum of Strongly Disagree (38.78%) and Disagree (43.78%)] managers disagreed that, Training for Knowledge workers is waste of time. Managers further stated that, it is very important to provide training to the knowledge workers. The knowledge workers are majorly working on the specialized areas which requires technical expertise and knowledge. Hence providing training to the knowledge workers for these areas is very important, so that the knowledge workers can perform in their job. Hence providing training to the knowledge workers is not at all a waste of time. Fair number (43.78%) of managers have rated this parameter in the category of “Disagree”.

## Chapter 8 : Conclusions & Suggestions

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## 8.1) Conclusions :

From the findings made by the researcher, researcher would like to conclude that :

1. Economic Reforms and LPG have made impact on the business environment leading to paradigm shift in the products, processes, manufacturing facilities, plant & machinery, technology.
2. In order to sustain and compete in the global market auto engineering industries in Chakan Industrial area have aligned their business processes, technology, product and processes, competence with the global requirements. Computer Driven Manufacturing Technology Processes, Automation, Semi-Automation, Modernization, Rationalization, Standardization, introduction of global concepts need to be implemented replacing the conventional skills, machines, practices, methods, resources.
3. Introduction of advance technology led to impact on competencies required especially at operative level.
4. Major change is that “knowledge” replaces the “conventional / manual skill” as the conventional machines and processes are replaced by the CNCs in the Computer Driven Technology Manufacturing Processes.
5. To take care of the global standards, requirements, to operate sophisticated auto lines, CNCs , knowledge is preferred. Hence, trend to engage Diploma, Science Graduates at operative level in the area of advanced technology preferred and adopted in auto engineering industries in Chakan Industrial Area.
6. Preference of knowledge workers are due to certain advantages. Knowledge workers are flexible for multi skilling operations and willing to learn, grasp new techniques, programmes, technology. Knowledge workers prefer to work independently. Take care of report preparation, presentations. They require less supervision.
7. They are interested in self-development on individual performance and not inclined to activities like union formation.
8. They take initiatives in the activities like Continuous Improvements, Kaizen, TS, TPM, TPS, ISO. Like to work as per the flow chart, SOPs, Work Instructions, Dos and Don'ts, at their own. Like autonomy and freedom.

9. Knowledge workers are interested to enhance their knowledge and with their learning attitude create a culture of Learning Organization.
10. There is a major issue of “hiring and retention” in case of knowledge workers as they are ready to switch over from their job to any other job, department, industry, location as the job opportunities for them are open in all the areas like BPO, IT, Telecom, Service Sector, Banking, Insurance, Public and Government sector.
11. Traditional workers are preferred in the hard, rough – and – touch processes, manual labor oriented jobs.
12. Traditional workers resist to learn new techniques, learning, multi skilling.
13. Traditional workers prefer the monotony, the defined job.
14. Traditional workers prefer to protect their job and terms of employment under the shelter of law and union.
15. There is no and low attrition in case of Traditional Workers as less scope for them.
16. Traditional workers have tendency to fight legally leading to IR issues.
17. Knowledge workers do not like hard, rough-tough jobs. Prefer to work in decent, neat work environment.
18. Knowledge workers have expectations of good treatment, pay package, environment, status.
19. Knowledge workers want fast growth.
20. Traditional Workers prefer their growth through collective bargaining.
21. Knowledge workers do not bother about the legal actions like warning, suspension, termination, dismissal. They are prepared to quit with or even without resignation, formalities.
22. Traditional and legal approach for managing knowledge requires change.
23. Competencies of supervisory and managerial staff handling knowledge workers need to be aligned with the changed requirements. Proper training to them will help to manage effectively knowledge workers and traditional workers.
24. Due to attrition, in case of knowledge workers, there is increase in work load in HR Dept especially in the area of recruitment, joining formalities, documentation like personal files, verification of the originals, induction, on job training, succession planning, performance management / skill

development, competency mapping, training, career planning, reward and recognition, welfare facilities, compensation management, benefits administration, time office activities, statutory compliances, full and final settlement activities.

25. Effort level should always be on to reduce attrition of the knowledge workers in the Organizations under study. Knowledge workers are found to be demanding about self-respect, career, self-growth, work environment, treatment, pay-package, status issues.
26. There should be caring, fair attitude while dealing with the female knowledge workers.
27. Gender ratio helps organization to maintain proper decorum.
28. Due to engagement of knowledge workers there is increase in work load of HR Department in all the area of the function eg. Recruitment, Induction, Training, Joining Formalities, Preparation of Personal Files, Documentation and verification, performance appraisals, preparation of appointment letters, certificates, statutory compliances, full and final settlements, welfare facilities, salary and wage administration, career planning, motivational activities, training and development, succession planning, employee social, hiring and retention.
29. Design, implementation, administration and monitoring of HR strategies if properly taken care of, will certainly reduce the issues of knowledge workers and lead to a resourceful work culture.

## 8.2) Suggestions

In the light of research study, for effective Human Resource Planning, researcher would like to suggest the following strategies:

### 8.2.1 Suggested HR Strategies :

| Sr. No. | HR Processes       | For KWs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | For TWs                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Man Power Planning | <p>Structured, Systematic, Ongoing Hiring Plan should be strategically designed as a system.</p> <p>Basis of which is :</p> <ul style="list-style-type: none"><li>- Process / Department / Job wise skill matrix.</li><li>- Close monitoring of man power requirements in consultation with User Departments.</li><li>- System of daily interactions with the User Departments for review of requirements in all the shifts based on business plan.</li><li>- Monitoring on drop outs, attrition.</li><li>- Potential sources for quick availability.</li><li>- Proactive planning</li></ul> | <p>Structured, systematic planning is based on Business Plan is to be prepared, basis of which is :</p> <ul style="list-style-type: none"><li>- Process / Department / job wise skill matrix.</li><li>- This requirement is normally fixed and effort level for getting and retaining is too less. Still plan should consider probable reasons for fulfilling the requirement.</li></ul> |

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|   |                    | <p>considering lead time for availability in time.</p> <ul style="list-style-type: none"> <li>- Proactive and advance planning in case of a) Increase in Business e.g. festivals b) Decrease in Business c) Expansion Plans d) probability of long absenteeism due to marriage season, vacation, preparation leave for examinations e) maternity leaves f) potential causes for attrition.</li> </ul>                                    |                                                                                                                                                                                                                                                                                                   |
| 2 | Talent Acquisition | <p>Needs interest, drive. Needs on-going “window shopping’ for getting right people at right time. Needs to be done in a professional, decent, structured, planned way. All the types of sources need to be tapped :</p> <ul style="list-style-type: none"> <li>a) Mouth Publicity</li> <li>b) Reference</li> <li>c) Internal circulation</li> <li>d) Recruiters</li> <li>e) Advertisements</li> <li>f) “Walk In” interviews.</li> </ul> | <p>For the required skill, the following sources need to be tapped :</p> <ul style="list-style-type: none"> <li>a) Mouth publicity</li> <li>b) Reference : data base</li> <li>c) Internal circulation</li> <li>d) Employment Exchange</li> <li>e) ITI / equivalent private institutes.</li> </ul> |

|   |                     |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|   |                     | <p>g) Tie-ups with Colleges within and outside Maharashtra.</p> <p>h) No limitations on the ground of region, language, caste, class, gender.</p> <p>i) Strong computerized data base and communication system.</p>                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3 | Recruitment Process | <p>a) Dedicated Team of HR.</p> <p>b) Constant, ongoing activity of identifying the candidates and keeping the same short listed.</p> <p>c) “Window Shopping” approach needs to be inculcated.</p> <p>d) Defined, clear criterion for requirement : e.g. Diploma, Science Graduate with minimum 50% marks.</p> <p>e) Quick methods for</p> | <p>a) Normally Time Office Team can take care of this requirement.</p> <p>b) Criterion : ITI / equivalent with required trade skill.</p> <p>c) Tie-ups with the it is/ equivalent Private Institutes, Employment Exchange is must.</p> <p>d) Delegation to the supervisory staff for conducting the trade test and interview.</p> <p>e) Physical fitness is must.</p> <p>f) Past record is to be checked in IR point of view.</p> |

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|   |           | <p>interviews : Written Test.</p> <p>f) Delegation to the potential middle management / supervisory for conducting written tests, personal interviews.</p> <p>g) Personal interviews need to be short and specific to assess attitude and aptitude, desire to learn, convenience, retention and cultural issues if any. etc.</p> <p>h) Physical Fitness Test</p> <p>i) Recruitment process should be quick.</p> <p>j) Quick release of offer / appointment letters, joining formalities.</p> |                                                                                                                                                                                                            |
| I | Selection | <p>Competence requirement for selection should be defined : based on operational requirement.</p>                                                                                                                                                                                                                                                                                                                                                                                            | <p>Skill requirement for selection needs to be defined based on operational requirement.</p> <p>Personal interview is to assess the behavior style, approach, thinking, attitude, in IR point of view.</p> |

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|    |           | Similarly, convenience, cultural fit, economic fit, approach, aptitude, attitude, need to be taken into consideration.                                                                                                                                                                                                                            |                                                                                                                               |
| 5. | Placement | <p>Placement should not be the issue as there is expectations of multi skilling. However, in case of critical operations preference to the specific knowledge is must. Eg. In Electronic Division, Diploma / B.Sc. with Electronics background is more suitable.</p> <p>Placement of female KWs at appropriate jobs will deliver more output.</p> | Placement based on skill requirement.                                                                                         |
| 6  | Induction | Systematic, structured, touching all the information required to get the new entrant stabilized                                                                                                                                                                                                                                                   | A proper induction is to be done covering joining formalities, information about the welfare facilities, working hours, shift |

|   |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                            |
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|   |                 | <p>quickly, comfortably. Should cover the HR policies, Benefits, Welfare facilities, growth opportunities, work environment, discipline, code of conduct, safety, OD intervention. Calls for reaching the new entrants, ensuring their interest and involvement. Should be carried out smoothly, nicely with a proper style and tone.</p>                                                                                                                      | <p>working, attendance record, code of conduct, safety, discipline, cleanliness required.</p>                                                                                                                                              |
| 7 | On Job Training | <p>Should be planned, structured. Proper attention and time should be spared. Needs to be conducted seriously, under trained Supervisor.</p> <p>Should cover :</p> <p>Knowledge : product, process, input – process – output parameters, testing and quality norms, safety norms, other required documents and procedures.</p> <p>Demonstration of SOPs, Work Instructions, Flow Charts, Dos and DONTs, Tentative Standards, Poka Yoke, and other required</p> | <p>Should be planned, structured for the required period. Period of OJT in case of TWs is limited.</p> <p>The required training on SOPs, Work Instructions, Flow Chart, production and quality norms, safety is to be included in OJT.</p> |

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|   |                     | <p>reports.</p> <p>Trials : Trials should be conducted for practical training.</p> <p>OJT can be designed by HR and ensured by the concerned Supervisory / managerial staff.</p> <p>Assessment Report should be prepared in respect of learning and training.</p>                                                     |                                                                                                                                                                                                                                                                                                                                      |
| 8 | Joining Formalities | <p>Should be smooth with caring approach. Queries need to be answered and explained decently. Proper Identity Card, Canteen Pass, Transport Pass, appointment letters etc. should be issued on time, every time, in every one's case. Proper assistance to open Bank Account, ATM, PF formalities to be provided.</p> | <p>Should be smooth with caring approach. Queries to be answered and explained. Necessary Identity Card, Canteen Coupons, Transport Pass, if any, appointment letters to be given in time. Proper assistance for account opening, PF formalities to be given.</p> <p>In case of TWs, this activity is too less as low attrition.</p> |
| 9 | Succession Planning | <p>Is must. Hiring Plan should always be ready and adhered to. Dedicated team of HR should always be in touch with the User Heads and alert for manpower requirements. The concerned HR Team</p>                                                                                                                      | <p>Need to be need based.</p>                                                                                                                                                                                                                                                                                                        |

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|    |                   | should always consider all the pull and push factors affecting the requirements, attrition and prepare their succession plan or hiring plan. Needs to be ON GOING activity.                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                        |
| 10 | Employee Training | <p>Induction, OJT is the initial training.</p> <p>KWs like to learn and apply new things. Training needs need to be identified systematically based on individual, departmental, organization requirements and training calendar need to be prepared. Training need to be used as a Tool to keep KWs motivated and involved.</p> <p>Training for the Supervisory and Managerial Staff for managing KWs is also necessary which has to be imparted.</p> <p>Training on TPM, TPS, TS, ISO, KAIZEN, OHSAS, EMS, Product and Process Knowledge, Presentation, Safety needs,</p> | Induction, OJT, other trainings on product, process, safety, ISO, other as per the requirements of the Organization is to be included. |

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|    |                        | <p>POKA YOKE, Dos and DONTs, Tentative Standards, Off – Line maintenance, to be included in Training Calendar as it helps to creates culture.</p> <p>Efforts towards “Learning Organization” culture add value to the objectives of the Organization.</p>                                                                                                                                                  |                                                                                                                                                                                                                                                                                               |
| 11 | Performance Management | <p>Performance Management Tools need to be introduced like Competency Mapping, KPAs, KRAs, Skill Matrix.</p>                                                                                                                                                                                                                                                                                               | <p>Job Card, Production Report, Rejection Report, are the tools to measure performance.</p>                                                                                                                                                                                                   |
| 12 | Employee Benefits      | <p>Strategies for designing Employee Benefits should consider the changing trends in the market. Strategies should consider the cost-benefit analysis for attaining and retaining KWs. Benefits need to attract and retain the KWs, however, within the economic fit of the Organization. Need to be reviewed at least once in a year. Allowances like performance allowance, critical skill allowance</p> | <p>Normally through the wage settlements at par with the other industries in the same region. Normally based on the number of years of service as they prefer. Working out the norms through collective bargaining: fixed for a particular period. Review at the time of wage settlement.</p> |

|    |                         |                                                                                                                                                                                                                             |                                                                                                                                                                                                                      |
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|    |                         | need to be introduced.                                                                                                                                                                                                      |                                                                                                                                                                                                                      |
| 13 | Compensation Management | Needs to be on time, every time, all the times with a view to motivate them.                                                                                                                                                | On time, as per the prescribed date with a view to observe statutory compliance.                                                                                                                                     |
| 14 | Welfare Facilities      | Adequate welfare facilities will help to attract and retain KWs. Need to be administered with a proper touch. Facilities for female employees must be considered and administered in responsible manner.                    | As decided and finalized in the wage settlements. Similarly as required under the legal provisions.                                                                                                                  |
| 15 | Work Environment        | Unsafe, decent, clean and neat work environment helps to maintain KWs. Secured work environment is necessary for female KWs.<br><br>AC with PC environment helps to attract, retain KWs and effective deliveries from them. | Reasonable, hygienic. TWs are not keen on such type of demands.                                                                                                                                                      |
| 16 | Employee Motivation     | HR practices like increments, up gradation, promotion, reward and recognition, appreciation, pat on the back, contests and competitions help to motivate KWs. KWs are interested in freedom and                             | Motivation through workers participation in management: through various Committees like Canteen Committee, Safety Committee, Cultural Committee. Schemes for Non-Financial motivation : get together, family visits. |

|    |                      |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|    |                      | <p>authority if assigned. KWs get motivated with freedom, challenges, authority, independent charge.</p> <p>KWs require basically :</p> <p>Financial Motivation : pay rise, incentives, promotions.</p> <p>Non-Financial Motivation : career planning, up-gradation, promotion, recognition, appreciation.</p> <p>Job Satisfaction: Challenging jobs, multi skilling jobs, variety in the job.</p> | <p>Financial Motivation : through collective bargaining, incentives, attendance bonus, loans and advances etc. TWs hesitate to take responsibility and authority in handling independently. They always prefer “suggestive” mode. Attitude is “to point out” and not to correct.</p> <p>Job Satisfaction : TWs prefer the monotony and the same job. Resists change in the job contents, place of work, change in process, process parameters. Hence, happy with the same job.</p> |
| 17 | Managem<br>ent Style | <p>Need to be participative, custodian, developing rather than controlling. Transparent, Bishoping, flexible, proactive, positive, attentive, vigilant, dynamic.</p>                                                                                                                                                                                                                               | <p>Administrative, controlling, preference to act within the frame work of law / no deviation from code of conduct, standing orders.</p>                                                                                                                                                                                                                                                                                                                                           |
| 18 | Treatment            | <p>KWs are very sensitive about the treatment issues. “Self-Respect” is always prestige issue for them. They need to be treated as “colleagues” rather than sub ordinates. Need to be</p>                                                                                                                                                                                                          | <p>Controlling, authoritative style is suitable.</p> <p>TWs prefer superior – sub ordinate relationship as lack of “self-starting” approach. Prefer to work as per the instructions as fear of “security”.</p>                                                                                                                                                                                                                                                                     |

|    |                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                |
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|    |                                                                                   | <p>nurtured carefully.</p> <p>No hard touch but light touch is required while handling KWs. The words, the tone, the style matter.</p> <p>They do respect expertise, knowledge of superiors.</p>                                                                                                                                                                                           |                                                                                                |
| 19 | Employee Development / Career Planning                                            | <p>KWs are interested in “self-development”.</p> <p>Hence,</p>                                                                                                                                                                                                                                                                                                                             | Need based in rare cases with proper thinking in potential TWs only.                           |
| 20 | Competency Mapping for HR and other functional managers in terms of managing KWs. | <p>Necessary to align people performance with the global environment, global objectives to withstand in the competitive global market. To lead and drive the new set of operators calls for different competencies and qualities. “Professionalism”, continuous journey towards “perfection” is the demand of the globalization. Hence, “Leadership” qualities play a very vital role.</p> | In case of TWs, practices of handling people performance may not call for much change.         |
| 21 | Competencies of HR profession                                                     | Competencies need to be innovative for getting and maintaining KWs. In the                                                                                                                                                                                                                                                                                                                 | <p>“Personnel” or “IR” oriented.</p> <p>Competencies within the legal framework preferred.</p> |

|    |                            |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                   |
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|    | als                        | <p>globalization HR has to play a role of a “Business Partner”.</p> <p>HR professional needs to be :</p> <ul style="list-style-type: none"> <li>a) Strategic</li> <li>b) All-round</li> <li>c) Analytical</li> <li>d) Should have sound knowledge of business, products, process, functions in the Organization.</li> <li>e) Fair, Positive, Transparent.</li> <li>f) Excellent communicator, mentor,</li> </ul> |                                                                                                   |
| 22 | Employee<br>nt<br>Branding | <p>“Employment Branding” is necessary and helps to get the KWs. “Employment Branding” can be done by strengthening and pleading the plus points of the Organization appealing to the KWs e.g. safe and secured work culture for female KWs, Light Work, Learning Opportunities, Career Plan available, Caring Approach.</p>                                                                                      | <p>May not be required. On the contrary may create issues like disproportionate expectations.</p> |
| 23 | Employee                   | For effective employee                                                                                                                                                                                                                                                                                                                                                                                           | Close supervision is necessary even if                                                            |

|    |                            |                                                                                                                                                                                                    |                                                                                                                                  |
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|    | Engagement                 | engagement need not have close supervision, monitoring.                                                                                                                                            | old set of people.                                                                                                               |
| 24 | Employee Social            | As per the current trends : quiz, competitions, dance and other cultural programme. Not interested in family-get-together.                                                                         | Traditional : Interested in family get-together.                                                                                 |
| 25 | HR Organization structure  | Dedicated and separate Teams for HR, PERSONNEL, ADMINISTRATION, WELFARE, SAFETY will be preferred as on going work pressure is there due to attrition issue of KWs. Ratio of HR : IR is 80% : 20%. | Dedicated team for PERSONNEL AND IR.<br><br>Ratio of HR : IR is 20% : 80%.                                                       |
| 26 | Approach while handling HR | Professional is necessary. Fair, positive, transparent, participative approach will give better results while managing KWs.                                                                        | Traditional approach is more suitable.                                                                                           |
| 27 | HR Tools, Initiatives.     | Need to be innovative, in line with the global environment.                                                                                                                                        | Traditional may work.                                                                                                            |
| 28 | Multi Skilling             | Must be introduced as KWs do not like monotony. Will help to keep them motivated and retained.                                                                                                     | Skill Development exercises to be introduced as TWs like the same defined job. Hence, skill in the same job need to be enhanced. |

|    |              |                                                                                                                                    |                                                                                                              |
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| 29 | Job Rotation | Can be resourceful for succession planning especially in critical skill required.                                                  | Not possible as tendency of TWs is to resist within the frame wok of law.                                    |
| 30 | Counseling   | In case of potential KWs for development, career planning. In case of low performers, will help to increase performance standards. | Counseling can be used as a tool to resolve issues like absenteeism, labor problems rather than development. |

Researcher also suggests that the competencies of HR Professionals needs to be aligned with the new business environment requirements.

#### **8.2.2) Changed Competencies of HR Professionals:**

1. Conceptual clarity.
2. Understanding pulse of the Organization, culture of the Organization, requirements of the Organization.
3. Competent to work as a business partner : general management perspective – awareness of need, importance, requirements of other functions, functional knowledge of other functions.
4. Speed.
5. Very very proactive, effective planning, quick sourcing.
6. Leadership : team building and aligning team efforts with the business requirements.
7. Art of “employment branding”.
8. Excellent communicator. Transparent, tactful, acceptable, positive, fair, confident, assertive.
9. Enterprising, thinker. Precise but attentive.
10. Generalist : Competence in all the areas HR, IR, Personnel, Administration, Welfare, Compensation Management, Benefits Administration.

11. Participative. Facilitator.
12. Deep knowledge of business strategies, business processes.
13. Capacity to raise spirit of work.
14. Situation handling leadership.
15. Quick, Sound Decision maker.
16. CHANGE AGENT.

Researcher would like to suggest that the expectations from HR from the various segments are changed.

### 8.2.3 Changed Expectations from HR :

| Top Management                                                                                                                                   | Managers                                                                                                                           | Workers                                                                                                                                                               | Trade Union                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <p>Development and implementation of HR Policies.</p> <p>Maintain Industrial Harmony.</p> <p>Bring attitudinal change amongst the employees.</p> | <p>Understanding business operations.</p> <p>Ability to anticipate problems.</p> <p>Provide timely support to meet objectives.</p> | <p>Facilitate the negotiation process.</p> <p>Create a work culture based on trust and quality.</p> <p>Provide good, congenial working conditions and atmosphere.</p> | <p>Facilitate fair hearing.</p> <p>Workers Participation in Management.</p> <p>Linkage between Top Management and Trade Union.</p> |

Considering all above, the researcher would like to suggest that the emerging role of HR Professional is as under :

#### 8.2.4 Emerging Role of HR :

| Key Area             | Role                | Processes                                                                                                                                                               | Outcome                                                                                                              | Bottom Line                           |
|----------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| External Environment | Business Partnering | Inputs for policy decisions.<br><br>Active support to the Line Managers                                                                                                 | Organizational Development.                                                                                          | Market Place.                         |
|                      | Innovations         | Reengineering of HR processes.<br><br>Designing effective PMS.<br><br>Culture Building                                                                                  | Capability Development                                                                                               | Performance.                          |
|                      | Integration         | Match making : Employer – employee interface.<br><br>HR initiatives, forming committees (WPM).<br><br>Empowerment.<br><br>Career Planning.<br><br>Motivational Schemes. | Help Managers in recruitment, training & development, succession planning, grievance handling, employee development. | Conduct relevant training programmes. |
| Business Strategies  | Managing Change     | Challenging status-quo and mobilizing people for a change.                                                                                                              | Performance / Target / Task oriented culture.                                                                        | Top Quality People (TQP),             |

|                      |                                 |                                                                                                                                                                                       |                                           |                                                           |
|----------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------|
|                      |                                 |                                                                                                                                                                                       |                                           | Learning Organization.                                    |
|                      |                                 |                                                                                                                                                                                       |                                           | Continuous Improvement.                                   |
| Internal Environment | Information giver and receiver. | Passes information about management vision and understands, appreciates information given by the Line Managers about their perspective of the Department and Organization as a whole. | Excellent rapport with the Line Managers. | Top Management and Field Staff sharing management vision. |

### 8.3 Scope for the future research:

1. It would be very interesting to extend the present study on the knowledge workers for different industries as well as different segments like different engineering industries, chemical industries. This will provide more insights to the relationship between KWs and other variables. Further the present study has taken developed questionnaire, but other models can be used for assessing progress of knowledge workers.
2. This study is limited to the auto engineering industries in Chakan Industrial Area, Pune. It can be extended to the auto engineering industries at the other locations, in different regions.
3. The present study focuses on only managers. In future the study can be carried out on the managers as well as employees even. Further the study can be carried out on different levels of the employees. The perception difference will be measured. In future, the study can be carried out on number of organization at the same time for the same span of the time and compare the perception of the employees at the different levels.

4. Further various parameters like organizational vision; commitment and group behaviors can be measured from different organizations. Comparison of different sectors with knowledge workers of the organizations can be measured separately.
5. Since the knowledge workers are different for the different organizations, it can be aligned with the parameters like perception, attitude and motivational issues associated with employees falling in the category of knowledge workers. .
6. The industrial relation and allied issues are not considered in the present study. In future the study can be carried out to test the impact of knowledge workers on industrial issues. Role of communication in developing knowledge workers needs to be measured in the future. Further role of welfare facilities for these employees can be measured with respect of organizational aspects.
7. At present limited sample size was chosen by the researcher in case of managers. In future the sample size of the study needs to be changed as the state of knowledge workers of the different organizations need to assess at the same time. The sample size has to be increased substantially if researched could be carried out on number of organizations at the same time
8. At present random sampling has been used for the present study. In future the stratified sampling can also be used to get the data.
9. The impact of developing organizational culture with knowledge workers on occupational health, industrial safety and hygiene .In future there is strong need to perform the research in this area.

Research Student

Research Guide

Date : July, 2016

Date : July, 2016

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# Appendices

## INDEX

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## QUESTIONNAIRE FOR PILOT STUDY

**Organization : (Name and address)**

**Name of the respondent :**

**Department :**

**Designation :**

**Rating : 1: Strongly Disagree, 2: Disagree, 3 : Neutral, 4 : Agree, 5 : Strongly Agree**

| Sr no | particular                                                                                                                                                                                               | 1 | 2 | 3 | 4 | 5 |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1     | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                                                                                          |   |   |   |   |   |
| 2     | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced.                                                             |   |   |   |   |   |
| 3     | Most of the conventional machines, processes are replaced by CNCs.                                                                                                                                       |   |   |   |   |   |
| 4     | Global standards, concepts, practices, systems play significant role.                                                                                                                                    |   |   |   |   |   |
| 5     | With the technology advancement, “competence” requirement at operative level is changed.                                                                                                                 |   |   |   |   |   |
| 6     | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                                                                                           |   |   |   |   |   |
| 7     | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. |   |   |   |   |   |
| 8     | (Diploma/Degree Engineers/Science Graduates (KWs) are preferred for operating CNCs, automatic and semi automatic lines.                                                                                  |   |   |   |   |   |
| 9     | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs.                                                                                                    |   |   |   |   |   |
| 10    | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                         |   |   |   |   |   |
| 11    | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                        |   |   |   |   |   |
| 12    | Less supervision is required while managing the KWs.                                                                                                                                                     |   |   |   |   |   |
| Sr no | particular                                                                                                                                                                                               | 1 | 2 | 3 | 4 | 5 |

|              |                                                                                                                                                                                                                                                               |          |          |          |          |          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|
| 13           | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. |          |          |          |          |          |
| 14           | Performance of KW is all-round and quick.                                                                                                                                                                                                                     |          |          |          |          |          |
| 15           | KWs are not found suitable in rough – and – tough jobs and processes.                                                                                                                                                                                         |          |          |          |          |          |
| 16           | KWs do not like monotony in the jobs whereas TWs prefer the same.                                                                                                                                                                                             |          |          |          |          |          |
| 17           | TWs are suitable in the processes involving “skill” rather than “knowledge”.                                                                                                                                                                                  |          |          |          |          |          |
| 18           | TWs are rigid whereas KWs are flexible in multi skilling operations.                                                                                                                                                                                          |          |          |          |          |          |
| 19           | TWs are reluctant for learning new jobs, techniques, concepts, standards.                                                                                                                                                                                     |          |          |          |          |          |
| 20           | TWs always resist for “change” with the help of law and Union.                                                                                                                                                                                                |          |          |          |          |          |
| 21           | TWs are interested in “security”, hence, inclined to form Union.                                                                                                                                                                                              |          |          |          |          |          |
| 22           | IR issues are mostly created by the TWs.                                                                                                                                                                                                                      |          |          |          |          |          |
| 23           | TWs prefer their development through wage settlement.                                                                                                                                                                                                         |          |          |          |          |          |
| 24           | KWs are interested in self-development based on their performance.                                                                                                                                                                                            |          |          |          |          |          |
| 25           | KWs are least interested in forming Union.                                                                                                                                                                                                                    |          |          |          |          |          |
| 26           | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations.                                                                                  |          |          |          |          |          |
| 27           | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up.                                                                                                                                                       |          |          |          |          |          |
| 28           | KWs are found to be demanding about self-respect, self career, self growth, work environment, treatment, pay-package, Status issues.                                                                                                                          |          |          |          |          |          |
| 29           | There are retaining issues as regards the KWs are concerned as attrition level is quite high.                                                                                                                                                                 |          |          |          |          |          |
| 30           | There is no attrition issue as regards the TWs.                                                                                                                                                                                                               |          |          |          |          |          |
| <b>Sr no</b> | <b>particular</b>                                                                                                                                                                                                                                             | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |

|    |                                                                                                                               |  |  |  |  |  |
|----|-------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| 31 | Association and consistency in TWs is quite good.                                                                             |  |  |  |  |  |
| 32 | HR processes, policies, practices designed and implemented are based on traditional and legal approach.                       |  |  |  |  |  |
| 33 | Traditional and legal approach for managing the operators requires change.                                                    |  |  |  |  |  |
| 34 | In respect of TWs, these policies can be suitable .                                                                           |  |  |  |  |  |
| 35 | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.                         |  |  |  |  |  |
| 36 | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. |  |  |  |  |  |
| 37 | There is a need to impart proper training to the supervisory and managerial staff for handling KWs.                           |  |  |  |  |  |
| 38 | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs.  |  |  |  |  |  |
| 39 | KWs are ready to switch over to any kind of job, if the opportunity is good.                                                  |  |  |  |  |  |
| 40 | There are limitations for the TWs as regards the job opportunities are concerned.                                             |  |  |  |  |  |
| 41 | TWs are interested to protect their existing job.                                                                             |  |  |  |  |  |
| 42 | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                        |  |  |  |  |  |
| 43 | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                           |  |  |  |  |  |
| 44 | Observed that KWs believe in their individual performance for the economic growth.                                            |  |  |  |  |  |
| 45 | TWs believe in collective bargaining for their economic growth.                                                               |  |  |  |  |  |
| 46 | There is a trend to engage KWs at operative level especially in the advance technology area.                                  |  |  |  |  |  |
| 47 | User Heads are finding ease to deal with the KWs.                                                                             |  |  |  |  |  |
| 48 | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                    |  |  |  |  |  |
| 49 | HR policies especially attaining and maintaining KWs must be innovative.                                                      |  |  |  |  |  |
| 50 | KWs want to be on the fast track.                                                                                             |  |  |  |  |  |
| 51 | Existing strategies for hiring KWs are adequate.                                                                              |  |  |  |  |  |
| 52 | Strategies for hiring KWs needs drive and innovation.                                                                         |  |  |  |  |  |
| 53 | There need to be constant on going initiatives to motivate and retain KWs.                                                    |  |  |  |  |  |

| Sr no | particular                                                                                                                                                                           | 1 | 2 | 3 | 4 | 5 |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 54    | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        |   |   |   |   |   |
| 55    | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. |   |   |   |   |   |
| 56    | There is a lack of attention in designing the policies.                                                                                                                              |   |   |   |   |   |
| 57    | There is a lack of drive in implementation of policies.                                                                                                                              |   |   |   |   |   |
| 58    | Policies are there but not implemented with a proper and natural style.                                                                                                              |   |   |   |   |   |
| 59    | Competencies of HR and other Managers are required to be aligned with the global requirements.                                                                                       |   |   |   |   |   |
| 60    | KWs also include female employees                                                                                                                                                    |   |   |   |   |   |
| 61    | Gender ratio in KWs helps to maintain proper decorum                                                                                                                                 |   |   |   |   |   |
| 62    | Gender ration is observed to create better results and HR climate.                                                                                                                   |   |   |   |   |   |
| 63    | HR strategies need to consider the requisite requirements of female KWs.                                                                                                             |   |   |   |   |   |
| 64    | There should be caring, fair and responsible attitude while dealing with female KWs.                                                                                                 |   |   |   |   |   |
| 65    | Gender ratio helps to minimize issues related to discipline                                                                                                                          |   |   |   |   |   |
| 66    | Employment of KWs saves energy of the supervisory staff.                                                                                                                             |   |   |   |   |   |
| 67    | KWs have better thinking and can add value to the processes.                                                                                                                         |   |   |   |   |   |
| 68    | Employment of KWs creates work load and work pressure especially in HR Department in the following areas :                                                                           |   |   |   |   |   |
|       | a) Recruitment                                                                                                                                                                       |   |   |   |   |   |
|       | b) Joining formalities                                                                                                                                                               |   |   |   |   |   |
|       | c) Documentation : personal file etc.                                                                                                                                                |   |   |   |   |   |
|       | d) Induction                                                                                                                                                                         |   |   |   |   |   |
|       | e) On Job Training (OJT)                                                                                                                                                             |   |   |   |   |   |
|       | f) Succession Planning                                                                                                                                                               |   |   |   |   |   |
|       | g) Performance Management / Skill Development                                                                                                                                        |   |   |   |   |   |
|       | h) Competency Mapping                                                                                                                                                                |   |   |   |   |   |
|       | i) Training                                                                                                                                                                          |   |   |   |   |   |
|       | j) Career Planning                                                                                                                                                                   |   |   |   |   |   |
|       | k) Reward & Recognition                                                                                                                                                              |   |   |   |   |   |
|       | l) Welfare activities                                                                                                                                                                |   |   |   |   |   |
|       | m) Benefits administration                                                                                                                                                           |   |   |   |   |   |
|       | n) Compensation Management                                                                                                                                                           |   |   |   |   |   |
|       | o) Time Office activities                                                                                                                                                            |   |   |   |   |   |
|       | p) Statutory compliances                                                                                                                                                             |   |   |   |   |   |

| Sr no | particular                                                                                                                                      | 1 | 2 | 3 | 4 | 5 |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
|       | q) Full and final settlement activities                                                                                                         |   |   |   |   |   |
| 69    | The present HR strategies seem to be traditional.                                                                                               |   |   |   |   |   |
| 70    | All the above HR activities need structured and systematic guide line.                                                                          |   |   |   |   |   |
| 71    | Employment of female KWs proved to be useful.                                                                                                   |   |   |   |   |   |
| 72    | Organization gets good supervisory staff from the potential KWs.                                                                                |   |   |   |   |   |
| 73    | KWs can off load work load of supervisory staff                                                                                                 |   |   |   |   |   |
| 74    | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law     |   |   |   |   |   |
| 75    | TWs always try to take shelter of law and union.                                                                                                |   |   |   |   |   |
| 76    | In case of knowledge workers, Management prefers the legal base rather than the logical base.                                                   |   |   |   |   |   |
| 77    | There is a need to create logical, rational policies without deviating the legal provisions.                                                    |   |   |   |   |   |
| 78    | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives. |   |   |   |   |   |
| 79    | Competencies of HR Managers and other Managers must be reviewed for the changed requirements.                                                   |   |   |   |   |   |

Place :

Date :

Signature of the respondent

## QUESTIONNAIRE

**Organization : (Name and address)**

**Name of the respondent :**

**Department :**

**Designation :**

**Rating : 1: Strongly Disagree, 2: Disagree, 3 : Neutral, 4 : Agree, 5 : Strongly Agree**

| Sr no        | Particular                                                                                                                                                                                               | 1        | 2        | 3        | 4        | 5        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|
| 1            | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                                                                                          |          |          |          |          |          |
| 2            | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced.                                                             |          |          |          |          |          |
| 3            | Most of the conventional machines, processes are replaced by CNCs.                                                                                                                                       |          |          |          |          |          |
| 4            | Global standards, concepts, practices, systems play significant role.                                                                                                                                    |          |          |          |          |          |
| 5            | With the technology advancement, “competence” requirement at operative level is changed.                                                                                                                 |          |          |          |          |          |
| 6            | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                                                                                           |          |          |          |          |          |
| 7            | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. |          |          |          |          |          |
| 8            | (Diploma/Degree Engineers/Science Graduates (KWs) are preferred for operating CNCs, automatic and semi automatic lines.                                                                                  |          |          |          |          |          |
| 9            | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs.                                                                                                    |          |          |          |          |          |
| 10           | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                         |          |          |          |          |          |
| 11           | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                        |          |          |          |          |          |
| 12           | Less supervision is required while managing the KWs.                                                                                                                                                     |          |          |          |          |          |
| <b>Sr no</b> | <b>Particular</b>                                                                                                                                                                                        | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |

|              |                                                                                                                                                                                                                                                               |          |          |          |          |          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|
| 13           | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. |          |          |          |          |          |
| 14           | Performance of KW is all-round and quick.                                                                                                                                                                                                                     |          |          |          |          |          |
| 15           | KWs are not found suitable in rough – and – tough jobs and processes.                                                                                                                                                                                         |          |          |          |          |          |
| 16           | KWs do not like monotony in the jobs whereas TWs prefer the same.                                                                                                                                                                                             |          |          |          |          |          |
| 17           | TWs are suitable in the processes involving “skill” rather than “knowledge”.                                                                                                                                                                                  |          |          |          |          |          |
| 18           | TWs are rigid whereas KWs are flexible in multi skilling operations.                                                                                                                                                                                          |          |          |          |          |          |
| 19           | TWs are reluctant for learning new jobs, techniques, concepts, standards.                                                                                                                                                                                     |          |          |          |          |          |
| 20           | TWs always resist for “change” with the help of law and Union.                                                                                                                                                                                                |          |          |          |          |          |
| 21           | TWs are interested in “security”, hence, inclined to form Union.                                                                                                                                                                                              |          |          |          |          |          |
| 22           | IR issues are mostly created by the TWs.                                                                                                                                                                                                                      |          |          |          |          |          |
| 23           | TWs prefer their development through wage settlement.                                                                                                                                                                                                         |          |          |          |          |          |
| 24           | KWs are interested in self-development based on their performance.                                                                                                                                                                                            |          |          |          |          |          |
| 25           | KWs are least interested in forming Union.                                                                                                                                                                                                                    |          |          |          |          |          |
| 26           | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations.                                                                                  |          |          |          |          |          |
| 27           | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up.                                                                                                                                                       |          |          |          |          |          |
| 28           | KWs are found to be demanding about self-respect, self career, self growth, work environment, treatment, pay-package, Status issues.                                                                                                                          |          |          |          |          |          |
| 29           | There are retaining issues as regards the KWs are concerned as attrition level is quite high.                                                                                                                                                                 |          |          |          |          |          |
| 30           | There is no attrition issue as regards the TWs.                                                                                                                                                                                                               |          |          |          |          |          |
| <b>Sr no</b> | <b>Particular</b>                                                                                                                                                                                                                                             | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |

|    |                                                                                                                               |  |  |  |  |  |
|----|-------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| 31 | Association and consistency in TWs is quite good.                                                                             |  |  |  |  |  |
| 32 | HR processes, policies, practices designed and implemented are based on traditional and legal approach.                       |  |  |  |  |  |
| 33 | Traditional and legal approach for managing the operators requires change.                                                    |  |  |  |  |  |
| 34 | In respect of TWs, these policies can be suitable .                                                                           |  |  |  |  |  |
| 35 | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.                         |  |  |  |  |  |
| 36 | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. |  |  |  |  |  |
| 37 | There is a need to impart proper training to the supervisory and managerial staff for handling KWs.                           |  |  |  |  |  |
| 38 | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs.  |  |  |  |  |  |
| 39 | KWs are ready to switch over to any kind of job, if the opportunity is good.                                                  |  |  |  |  |  |
| 40 | There are limitations for the TWs as regards the job opportunities are concerned.                                             |  |  |  |  |  |
| 41 | TWs are interested to protect their existing job.                                                                             |  |  |  |  |  |
| 42 | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                        |  |  |  |  |  |
| 43 | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                           |  |  |  |  |  |
| 44 | Observed that KWs believe in their individual performance for the economic growth.                                            |  |  |  |  |  |
| 45 | TWs believe in collective bargaining for their economic growth.                                                               |  |  |  |  |  |
| 46 | There is a trend to engage KWs at operative level especially in the advance technology area.                                  |  |  |  |  |  |
| 47 | User Heads are finding ease to deal with the KWs.                                                                             |  |  |  |  |  |
| 48 | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                    |  |  |  |  |  |
| 49 | HR policies especially attaining and maintaining KWs must be innovative.                                                      |  |  |  |  |  |
| 50 | KWs want to be on the fast track.                                                                                             |  |  |  |  |  |
| 51 | Existing strategies for hiring KWs are adequate.                                                                              |  |  |  |  |  |
| 52 | Strategies for hiring KWs needs drive and innovation.                                                                         |  |  |  |  |  |
| 53 | There need to be constant on going initiatives to motivate and retain KWs.                                                    |  |  |  |  |  |

| Sr no | Particular                                                                                                                                                                           | 1 | 2 | 3 | 4 | 5 |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 54    | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        |   |   |   |   |   |
| 55    | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. |   |   |   |   |   |
| 56    | There is a lack of attention in designing the policies.                                                                                                                              |   |   |   |   |   |
| 57    | There is a lack of drive in implementation of policies.                                                                                                                              |   |   |   |   |   |
| 58    | Policies are there but not implemented with a proper and natural style.                                                                                                              |   |   |   |   |   |
| 59    | Competencies of HR and other Managers are required to be aligned with the global requirements.                                                                                       |   |   |   |   |   |
| 60    | KWs also include female employees                                                                                                                                                    |   |   |   |   |   |
| 61    | Gender ratio in KWs helps to maintain proper decorum                                                                                                                                 |   |   |   |   |   |
| 62    | Gender ration is observed to create better results and HR climate.                                                                                                                   |   |   |   |   |   |
| 63    | HR strategies need to consider the requisite requirements of female KWs.                                                                                                             |   |   |   |   |   |
| 64    | There should be caring, fair and responsible attitude while dealing with female KWs.                                                                                                 |   |   |   |   |   |
| 65    | Gender ratio helps to minimize issues related to discipline                                                                                                                          |   |   |   |   |   |
| 66    | Employment of KWs saves energy of the supervisory staff.                                                                                                                             |   |   |   |   |   |
| 67    | KWs have better thinking and can add value to the processes.                                                                                                                         |   |   |   |   |   |
| 68    | Employment of KWs creates work load and work pressure especially in HR Department in the following areas :                                                                           |   |   |   |   |   |
|       | a) Recruitment                                                                                                                                                                       |   |   |   |   |   |
|       | b) Joining formalities                                                                                                                                                               |   |   |   |   |   |
|       | c) Documentation : personal file etc.                                                                                                                                                |   |   |   |   |   |
|       | d) Induction                                                                                                                                                                         |   |   |   |   |   |
|       | e) On Job Training (OJT)                                                                                                                                                             |   |   |   |   |   |
|       | f) Succession Planning                                                                                                                                                               |   |   |   |   |   |
|       | g) Performance Management / Skill Development                                                                                                                                        |   |   |   |   |   |
|       | h) Competency Mapping                                                                                                                                                                |   |   |   |   |   |
|       | i) Training                                                                                                                                                                          |   |   |   |   |   |
|       | j) Career Planning                                                                                                                                                                   |   |   |   |   |   |
|       | k) Reward & Recognition                                                                                                                                                              |   |   |   |   |   |
|       | l) Welfare activities                                                                                                                                                                |   |   |   |   |   |
|       | m) Benefits administration                                                                                                                                                           |   |   |   |   |   |
|       | n) Compensation Management                                                                                                                                                           |   |   |   |   |   |
|       | o) Time Office activities                                                                                                                                                            |   |   |   |   |   |

| Sr no | Particular                                                                                                                                      | 1 | 2 | 3 | 4 | 5 |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
|       | p) Statutory compliances                                                                                                                        |   |   |   |   |   |
|       | q) Full and final settlement activities                                                                                                         |   |   |   |   |   |
| 69    | The present HR strategies seem to be traditional.                                                                                               |   |   |   |   |   |
| 70    | All the above HR activities need structured and systematic guide line.                                                                          |   |   |   |   |   |
| 71    | Employment of female KWs proved to be useful.                                                                                                   |   |   |   |   |   |
| 72    | Organization gets good supervisory staff from the potential KWs.                                                                                |   |   |   |   |   |
| 73    | KWs can off load work load of supervisory staff                                                                                                 |   |   |   |   |   |
| 74    | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law     |   |   |   |   |   |
| 75    | TWs always try to take shelter of law and union.                                                                                                |   |   |   |   |   |
| 76    | In case of knowledge workers, Management prefers the legal base rather than the logical base.                                                   |   |   |   |   |   |
| 77    | There is a need to create logical, rational policies without deviating the legal provisions.                                                    |   |   |   |   |   |
| 78    | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives. |   |   |   |   |   |
| 79    | Competencies of HR Managers and other Managers must be reviewed for the changed requirements.                                                   |   |   |   |   |   |
| 80    | In today's context "Hiring and Retention of KWs" is the KRA of HR Department.                                                                   |   |   |   |   |   |
| 81    | Hiring activity for KWs calls for constant on - going efforts                                                                                   |   |   |   |   |   |
| 82    | A systematic Training Calendar covering on-going training programmes for KWs is the requirement.                                                |   |   |   |   |   |
| 83    | Training helps to create a culture of Learning Organization.                                                                                    |   |   |   |   |   |
| 84    | Training for KWs is a waste of time.                                                                                                            |   |   |   |   |   |

Place :

Date :

Signature of the respondent

## RESPONSE STATEMENT

**Likert Scale :**

**1 : Strongly Dis agree   2 : Dis agree   3 : Neutral   4 : Agree   5 : Strongly Agree**

| <b>Sr no</b> | <b>particular</b>                                                                                                                            | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 1            | Due to impact of Economic Reforms, there is paradigm shift in product and process requirements.                                              | 0        | 0        | 12       | 72       | 816      | 900          |
| 2            | To withstand in the Global Market technology changes like automation, semi automation, modernization, rationalization need to be introduced. | 0        | 6        | 11       | 82       | 801      | 900          |
| 3            | Most of the conventional machines, processes are replaced by CNCs.                                                                           | 2        | 14       | 6        | 251      | 627      | 900          |
| 4            | Global standards, concepts, practices, systems play significant role.                                                                        | 7        | 8        | 2        | 381      | 502      | 900          |
| 5            | With the technology advancement, “competence” requirement at operative level is changed.                                                     | 0        | 12       | 3        | 484      | 401      | 900          |
| 6            | At operative level, due to automation, “skill” is replaced by the “knowledge”.                                                               | 4        | 8        | 11       | 467      | 410      | 900          |

| <b>Sr</b> | <b>particular</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|-----------|-------------------|----------|----------|----------|----------|----------|--------------|
|-----------|-------------------|----------|----------|----------|----------|----------|--------------|

| <b>no</b> |                                                                                                                                                                                                          |    |    |    |     |     |     |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----|-----|-----|
| 7         | There are certain rough and tough processes and jobs available in the Organization as a part of manufacturing process like powder coating, varnishing, painting, packing and few conventional practices. | 0  | 0  | 0  | 388 | 512 | 900 |
| 8         | (Diploma/Degree Engineers/Science Graduates (KWs) are preferred for operating CNCs, automatic and semi automatic lines.                                                                                  | 0  | 14 | 15 | 370 | 501 | 900 |
| 9         | ITI/equivalent/less educated (TWs) are preferred for the manual skill oriented, rough and tough jobs.                                                                                                    | 0  | 0  | 10 | 504 | 386 | 900 |
| 10        | KWs are observed to be competent to learn and grasp new techniques, concepts, standards quickly.                                                                                                         | 12 | 11 | 21 | 335 | 521 | 900 |
| 11        | KWs are willing to adopt new set of knowledge and apply the same.                                                                                                                                        | 0  | 12 | 0  | 481 | 407 | 900 |
| 12        | Less supervision is required while managing the KWs.                                                                                                                                                     | 16 | 21 | 8  | 397 | 458 | 900 |

| <b>Sr</b> | <b>particular</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|-----------|-------------------|----------|----------|----------|----------|----------|--------------|
|-----------|-------------------|----------|----------|----------|----------|----------|--------------|

| no |                                                                                                                                                                                                                                                               |    |    |    |     |     |     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----|-----|-----|
| 13 | KWs take initiative in the activities like Kaizen, ISO, 5S, TPM, TPS, TS, Continuous Improvement, SOPs, Work Instructions, Flow Chart, various Reports, Audit preparation and presentation; face to face inter action with the auditors, customers, visitors. | 24 | 38 | 0  | 486 | 352 | 900 |
| 14 | Performance of KW is all-round and quick.                                                                                                                                                                                                                     | 21 | 24 | 21 | 511 | 323 | 900 |
| 15 | KWs are not found suitable in rough – and – tough jobs and processes.                                                                                                                                                                                         | 0  | 0  | 0  | 299 | 601 | 900 |
| 16 | KWs do not like monotony in the jobs whereas TWs prefer the same.                                                                                                                                                                                             | 10 | 41 | 19 | 381 | 449 | 900 |
| 17 | TWs are suitable in the processes involving “skill” rather than “knowledge”.                                                                                                                                                                                  | 0  | 26 | 16 | 447 | 411 | 900 |
| 18 | TWs are rigid whereas KWs are flexible in multi skilling operations.                                                                                                                                                                                          | 36 | 46 | 0  | 312 | 506 | 900 |
| 19 | TWs are reluctant for learning new jobs, techniques, concepts, standards.                                                                                                                                                                                     | 21 | 62 | 10 | 371 | 436 | 900 |
| 20 | TWs always resist for “change” with the help of law and Union.                                                                                                                                                                                                | 0  | 16 | 0  | 272 | 612 | 900 |

| <b>Sr no</b> | <b>particular</b>                                                                                                                                                            | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 21           | TWs are interested in “security”, hence, inclined to form Union.                                                                                                             | 0        | 14       | 16       | 292      | 578      | 900          |
| 22           | IR issues are mostly created by the TWs.                                                                                                                                     | 14       | 24       | 28       | 481      | 353      | 900          |
| 23           | TWs prefer their development through wage settlement.                                                                                                                        | 0        | 11       | 0        | 271      | 618      | 900          |
| 24           | KWs are interested in self-development based on their performance.                                                                                                           | 21       | 24       | 6        | 471      | 378      | 900          |
| 25           | KWs are least interested in forming Union.                                                                                                                                   | 26       | 71       | 0        | 402      | 401      | 900          |
| 26           | KWs are least bothered about the legal actions like warnings, show cause, terminations, dismissal, court matters, as prepared to leave the job with or without resignations. | 0        | 26       | 6        | 354      | 514      | 900          |
| 27           | KWs have flexibility, hence, can work anywhere on the basis of their knowledge and educational back up.                                                                      | 0        | 0        | 18       | 479      | 403      | 900          |
| 28           | KWs are found to be demanding about self-respect, self career, self growth, work environment, treatment, pay-package, Status issues.                                         | 6        | 31       | 11       | 436      | 416      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                                                                             | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|-------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 29           | There are retaining issues as regards the KWs are concerned as attrition level is quite high.                                 | 0        | 0        | 41       | 333      | 526      | 900          |
| 30           | There is no attrition issue as regards the TWs.                                                                               | 0        | 0        | 0        | 452      | 448      | 900          |
| 31           | Association and consistency in TWs is quite good.                                                                             | 0        | 0        | 0        | 388      | 512      | 900          |
| 32           | HR processes, policies, practices designed and implemented are based on traditional and legal approach.                       | 41       | 52       | 22       | 451      | 334      | 900          |
| 33           | Traditional and legal approach for managing the operators requires change.                                                    | 0        | 12       | 23       | 412      | 453      | 900          |
| 34           | In respect of TWs, these policies can be suitable .                                                                           | 31       | 35       | 0        | 383      | 451      | 900          |
| 35           | For engaging and managing KWS, these policies, practices, systems need to be reviewed for innovation.                         | 32       | 35       | 8        | 383      | 442      | 900          |
| 36           | A systematic succession planning, career planning and training is the essence for effective engagement and management of KWs. | 0        | 32       | 18       | 350      | 500      | 900          |
| 37           | There is a need to impart proper training to the supervisory and managerial staff for handling KWs.                           | 0        | 46       | 22       | 401      | 431      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                                                                            | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 38           | There are ample job opportunities available for KW such as telecom, IT, Service Sector, Banking, Insurance, BPOs, Govt jobs. | 0        | 0        | 52       | 301      | 547      | 900          |
| 39           | KWs are ready to switch over to any kind of job, if the opportunity is good.                                                 | 0        | 0        | 46       | 308      | 546      |              |
| 40           | There are limitations for the TWs as regards the job opportunities are concerned.                                            | 0        | 41       | 50       | 411      | 398      | 900          |
| 41           | TWs are interested to protect their existing job.                                                                            | 0        | 26       | 0        | 501      | 373      | 900          |
| 42           | TWs are ready to fight legally for the sake of job whereas KWs do not prefer the same.                                       | 0        | 0        | 8        | 379      | 513      | 900          |
| 43           | Proportion of legal matters, if any, in case of KWs is very low as compared to TWs.                                          | 0        | 26       | 19       | 347      | 508      | 900          |
| 44           | Observed that KWs believe in their individual performance for the economic growth.                                           | 24       | 42       | 11       | 310      | 513      | 900          |
| 45           | TWs believe in collective bargaining for their economic growth.                                                              | 12       | 19       | 18       | 450      | 401      | 900          |
| 46           | There is a trend to engage KWs at operative level especially in the advance technology area.                                 | 0        | 67       | 0        | 302      | 531      | 900          |
| 47           | User Heads are finding ease to deal with the KWs.                                                                            | 18       | 51       | 11       | 389      | 431      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                                                                                                                                    | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 48           | Issues regarding engagement and management of KWs are being addressed in a traditional style and approach.                                                                           | 25       | 55       | 41       | 371      | 408      | 900          |
| 49           | HR policies especially attaining and maintaining KWs must be innovative.                                                                                                             | 0        | 0        | 52       | 335      | 513      | 900          |
| 50           | KWs want to be on the fast track.                                                                                                                                                    | 8        | 11       | 12       | 366      | 503      | 900          |
| 51           | Existing strategies for hiring KWs are adequate.                                                                                                                                     | 351      | 485      | 7        | 50       | 7        | 900          |
| 52           | Strategies for hiring KWs needs drive and innovation.                                                                                                                                | 15       | 52       | 12       | 436      | 385      | 900          |
| 53           | There need to be constant on going initiatives to motivate and retain KWs.                                                                                                           | 0        | 20       | 0        | 398      | 482      | 900          |
| 54           | Review of issues and problems due to engagement and management of KWs is properly and periodically conducted.                                                                        | 328      | 396      | 68       | 78       | 30       | 900          |
| 55           | For effective engagement and management of KWs there need to be proper strategies for hiring, training, motivation, performance management, reward and recognition, career planning. | 35       | 65       | 0        | 375      | 425      | 900          |
| 56           | There is a lack of attention in designing the policies.                                                                                                                              | 0        | 0        | 45       | 412      | 443      | 900          |
| 57           | There is a lack of drive in implementation of policies.                                                                                                                              | 16       | 23       | 47       | 415      | 399      | 900          |
| 58           | Policies are there but not implemented with a proper and natural style.                                                                                                              | 6        | 42       | 42       | 416      | 394      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                                                          | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 59           | Competencies of HR and other Managers are required to be aligned with the global requirements.             | 31       | 36       | 11       | 431      | 391      | 900          |
| 60           | KWs also include female employees                                                                          | 0        | 0        | 0        | 551      | 349      | 900          |
| 61           | Gender ratio in KWs helps to maintain proper decorum                                                       | 0        | 42       | 46       | 394      | 418      | 900          |
| 62           | Gender ration is observed to create better results and HR climate.                                         | 0        | 22       | 41       | 420      | 417      | 900          |
| 63           | HR strategies need to consider the requisite requirements of female KWs.                                   | 0        | 0        | 0        | 388      | 512      | 900          |
| 64           | There should be caring, fair and responsible attitude while dealing with female KWs.                       | 0        | 0        | 0        | 395      | 505      | 900          |
| 65           | Gender ratio helps to minimize issues related to discipline                                                | 45       | 61       | 41       | 382      | 371      | 900          |
| 66           | Employment of KWs saves energy of the supervisory staff.                                                   | 42       | 47       |          | 413      | 398      | 900          |
| 67           | KWs have better thinking and can add value to the processes.                                               | 24       | 51       | 46       | 394      | 385      | 900          |
| 68           | Employment of KWs creates work load and work pressure especially in HR Department in the following areas : |          |          |          |          |          |              |
|              | a) Recruitment                                                                                             | 0        | 38       | 49       | 401      | 412      | 900          |
|              | b) Joining formalities                                                                                     | 0        | 34       | 51       | 417      | 398      | 900          |
|              | c) Documentation :<br>personal file etc.                                                                   | 0        | 31       | 43       | 323      | 503      | 900          |
|              | d) Induction                                                                                               | 0        | 42       | 52       | 406      | 400      | 900          |
|              | e) On Job Training (OJT)                                                                                   | 0        | 51       | 35       | 416      | 398      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                      | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
|              | f) Succession Planning                                                 | 0        | 40       | 55       | 411      | 394      | 900          |
|              | g) Performance Management / Skill Development                          | 0        | 66       | 60       | 460      | 314      | 900          |
|              | h) Competency Mapping                                                  | 0        | 45       | 54       | 485      | 316      | 900          |
|              | i) Training                                                            | 0        | 34       | 55       | 300      | 511      | 900          |
|              | j) Career Planning                                                     | 10       | 35       | 42       | 501      | 312      | 900          |
|              | k) Reward & Recognition                                                | 59       | 100      | 35       | 490      | 216      | 900          |
|              | l) Welfare activities                                                  | 0        | 46       | 43       | 420      | 391      | 900          |
|              | m) Benefits administration                                             | 10       | 25       | 42       | 498      | 325      | 900          |
|              | n) Compensation Management                                             | 0        | 16       | 61       | 495      | 328      | 900          |
|              | o) Time Office activities                                              | 5        | 60       | 12       | 498      | 325      | 900          |
|              | p) Statutory compliances                                               | 8        | 31       | 26       | 412      | 423      | 900          |
|              | q) Full and final settlement activities                                | 9        | 30       | 51       | 508      | 302      | 900          |
| 69           | The present HR strategies seem to be traditional.                      | 11       | 18       | 26       | 350      | 495      | 900          |
| 70           | All the above HR activities need structured and systematic guide line. | 6        | 10       | 11       | 381      | 492      | 900          |
| 71           | Employment of female KWs proved to be useful.                          | 0        | 16       | 10       | 351      | 523      | 900          |
| 72           | Organization gets good supervisory staff from the potential KWs.       | 11       | 45       | 20       | 481      | 343      | 900          |
| 73           | KWs can off load work load of supervisory staff                        | 0        | 48       | 0        | 476      | 376      | 900          |

| <b>Sr no</b> | <b>particular</b>                                                                                                                               | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Total</b> |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|--------------|
| 74           | The present HR strategies, procedures, policies, code of conduct have been designed and implemented with an attitude to take shelter of law     | 0        | 50       | 18       | 381      | 451      | 900          |
| 75           | TWs always try to take shelter of law and union.                                                                                                | 0        | 7        | 26       | 351      | 516      | 900          |
| 76           | Management prefers the legal base rather than the logical base.                                                                                 | 18       | 25       | 51       | 395      | 411      | 900          |
| 77           | There is a need to create logical, rational policies without deviating the legal provisions.                                                    | 0        | 10       | 17       | 481      | 392      | 900          |
| 78           | Competencies and qualities of the managing staff from HR / Technical functions need to be changed to align with the global business objectives. | 26       | 41       | 38       | 374      | 421      | 900          |
| 79           | Competencies of HR Managers and other Managers must be reviewed for the changed requirements.                                                   | 0        | 11       | 51       | 326      | 512      | 900          |
| 80           | In today's context "Hiring and Retention of KWs" is the KRA of HR Department.                                                                   | 0        | 45       | 18       | 376      | 461      | 900          |
| 81           | Hiring activity for KWs calls for constant on - going efforts                                                                                   | 18       | 52       | 22       | 372      | 436      | 900          |
| 82           | A systematic Training Calendar covering on-going training programmes for KWs is the requirement.                                                | 16       | 52       | 21       | 426      | 385      | 900          |
| 83           | Training helps to create a culture of Learning Organization.                                                                                    | 24       | 69       | 26       | 389      | 392      | 900          |
| 84           | Training for KWs is a waste of time.                                                                                                            | 349      | 394      | 19       | 82       | 56       | 900          |