3.1 Research Problem Identification

Indian banking industry plays a paramount role throughout the world, which is governed by the Banking Regulation Act in India. This industry is one of the fastest growing sectors in India and gradually accompanying the revolutionary phase. A vigorous banking structure is vital for any nation motivated to attain high-quality enlargement and stay stable in an increasingly global industrial surroundings. The Indian banking structure is one of the prime banking associations in the world, witnessing a series of transformations over the precedent few years like deregulation of interest charge, intensity of the administration venture in public sector banks (PSBs), and the augmented involvement of private sector banks. Indian banking industry i.e. both public & private, are not only keen in domestic market but also want to tap the global market place. Banks overseas are equally keen to keep create a space in the Indian Banking Industry. Research methodology is a composition and approach of a projected study.

In rationality, the current study is exploratory in analysis with importance towards judging out few details. It is pragmatic in examination because an effort has also been prepared to test a known place of hypothesis. The query which is shaping the base of current study by which means Bank of Baroda and ICICI Bank is improving their functional presentation. Data gathered by means of questionnaire filled by permanent officials of the bank, files of the bank and print literature provided served as the facts for the investigation.

Research is a meticulous and methodical investigation into a specific area. It has significant importance in various fields such as business, economics and politics. Research is conducted to serve a diverse range of purposes such as enhancing the knowledge of the researcher, developing theories, and revising facts. It helps in
identifying the root cause of a problem and devising innovative ways to solve the problem. Methods in research comprises of all those procedures and models that are helpful in performing search. It is a device that helps in choosing and performing research work and research design.

3.2 Category of Research

- **Exploratory Research**

Exploratory (investigative) research is the basic type of research and one of a preliminary research kind, which the experts were using in the early stages of study. Here the researchers evaluates the data and determine options of acquiring maximum relationship among the variables without having any applications. A virtual research has been conducted universally without having any goals behind its learning. Many hypotheses are being prepared for a particular research problem. Some of the sources are used for conducting exploratory or investigative research by the researchers\(^1\).

- **Descriptive Research**

This kinds of research are usually undertaken with a particular motive or objectives, hence the results always comes in a very twisting form. These kinds of research specify the important characters of the study in detail along with its core importance. Example: Here we taking the example of a two-wheeler, the use of this product differ from person to person based on their age, gender, income, occupation, position, mind set, and requirement etc. The level of use of this product of diverse people as respondent carries a strong meaning for the researcher\(^2\).
3.3 **Review of Literature**

Welfare is a condition for maintaining the living situations for people which is being given by the society. By cutting the expenditures and other reformation or changes can have deep effects on welfare facilities. Labour authorities are considered to be the most backward looking class, when there is a need of participating in the local welfare programmes independently. There are many other ideologies which can be seen in material appearance in 1980s policies.

<table>
<thead>
<tr>
<th>Study Reference</th>
<th>Objective</th>
<th>Sampling Method/Sampling Size/Data Source</th>
<th>Data Analysis Method</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Johri Puja & Mehrotra Sanjeev (2014)¹⁹ | ● To study and analyse the voluntary welfare measures provided to the employees.  
● To study the level of awareness of employees about the various welfare measures. | ● SM: Simple Random Sampling  
● SS: Employees are chosen from various levels of Ashok Leyland India.  
● DS: Close-Ended Questionnaires. | ● Percentage Analysis Method | ● Majorly the respondents are satisfied with voluntary welfare measures provided to employees. They are also highly satisfied with their jobs. |
<table>
<thead>
<tr>
<th>Bhati P. Parul &amp; Ashok M. Kumar Dr.(2013)</th>
<th>To review the welfare provisions extended to the employees in Jyoti CNC, Rajoo Engineering, Steel Cast, Atul Auto &amp; Amul Industries.</th>
<th>SM: Simple Random Sampling</th>
<th>Correlation, One-Way ANNOVA &amp; Percentage Analysis Method</th>
<th>From the study it has been found out that the employees have positive attitude towards their industry with respect to the welfare provisions.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To identify whether any relation exists between welfare provisions &amp; Employee satisfaction.</td>
<td>SS: 50 employees each from Jyoti CNC, Rajoo Engineering, Steel Cast, Atul auto &amp; Amul industries.</td>
<td>DS: Questionnaires.</td>
<td></td>
</tr>
<tr>
<td>Regi Bulomine S., S. Golden Rahul Anthony &amp; Franco</td>
<td>This paper focuses on the satisfaction level of employee welfare</td>
<td>SM: Random Sampling Method.</td>
<td>Percentage Analysis Method</td>
<td>The IOB gives more welfare schemes to their staffs such as safety measures, promotion.</td>
</tr>
<tr>
<td>Author</td>
<td>Measures Provided by India Overseas Bank in Tirunelveli District.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Srinivas K.T.</td>
<td>To find out various welfare</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DS:</th>
<th>Questionnaire.</th>
</tr>
</thead>
</table>

| SM: | Convenience Analysis |

<table>
<thead>
<tr>
<th>Percentage</th>
<th>It is observed that Bosch Limited,</th>
</tr>
</thead>
</table>

| Facilities, recreation facilities, social security measures like workmen compensation, maternity benefit, old age benefit, medical benefit, welfare benefit is very important. They lack canteen facilities, rest rooms and toilet facilities and ID cards. |
facilities provided at the company.

- To understand the various employee welfare measures adopted at Bosch.

- To find out the level of satisfaction among employees at Bosch with respective to various welfare measures.

- To understand the extent of awareness among the employees

<table>
<thead>
<tr>
<th>Sampling.</th>
<th>Method</th>
<th>Bangalore is providing various facilities to their employees and also follow the rules and regulation of State and Indian Government</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SS:</strong> Employees of Bosch Limited, Bangalore.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DS:</strong> Questionnaire and Interview.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
with various statutory and non-statutory welfare measures.

- To suggest remedial measures if any, to improve the employee welfare measures at Bosch.

<table>
<thead>
<tr>
<th>Reshma S., Basavara j M.J. Dr. (2013)</th>
<th>SM: Convenience Sampling</th>
<th>Percentage Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>To have an idea about the concept of welfare measures.</td>
<td>SS: Employees of Donimalai Iron Ore Mine.</td>
<td>Organisation is lacking canteen facilities, medical aid facilities, and cleanliness facilities.</td>
</tr>
<tr>
<td>To highlight the statutory welfare measures provided by the Donimalai Iron Ore Mine.</td>
<td>DS: Questionnaire</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>They should take necessary steps to improve in those measures so</td>
</tr>
</tbody>
</table>

82
To analyse and interpret about the statutory welfare measures in the proposed sample unit.

To offer suitable suggestions to strengthen statutory welfare measures in the chosen sample unit.

Mohan Reenu & Panwar J.S. (2013)\(^8\)

This paper aims at providing information about the employee welfare schemes prevalent in retail stores

- **SM:** Convenience Sampling
- **SS:** Employees of retail stores in Udaipur region.
- **DS:** Structured Questionnaire

- Percentage Analysis Method
- The retail stores at Udaipur are providing not only intramural facilities but also extramural

that the employees can do their job effectively.
in Udaipur region. & Personal Interview.

- It is stretching out its hands to provide amenities that may improve health and living standards of the employees.

**Salaria Poonam & Salaria Sumit (2013)**

- To study the employees welfare measures for auto sector companies in NCR.
- To identify the various welfare measures provided to the employees.
- To know their satisfaction

**SM:** Random Sampling

**SS:** Auto companies in NCR (National Capital Region).

**DS:** Closed ended structured questionnaire

**Percentage Analysis Method**

- Auto sector companies provide welfare facilities to their employees to keep their motivation levels high.
- Employees in auto sector are highly satisfied with the intramural welfare measures and few are
Chapter -III: Research Methodology

towards the welfare measures.

- To know their awareness about the concept of “employee welfare”.

<table>
<thead>
<tr>
<th>Satya Narayana Rama M., Reddy Jaya Prakash R. Dr. (2012)⁷</th>
</tr>
</thead>
<tbody>
<tr>
<td>● To study the various labour welfare measures available in the organisation.</td>
</tr>
<tr>
<td>● To know the satisfaction levels of employees about Labour welfare measures.</td>
</tr>
<tr>
<td>● To offer suggestions</td>
</tr>
<tr>
<td>● SM: Convenience Sampling</td>
</tr>
<tr>
<td>● SS: Employees of KCP Limited (Cement Division)</td>
</tr>
<tr>
<td>● DS: Questionnaire</td>
</tr>
<tr>
<td>● Statistical tools applied for the study are weighted average mean score and Percentage analysis method.</td>
</tr>
<tr>
<td>● Employees are satisfied with the welfare measures undertaken.</td>
</tr>
<tr>
<td>● Few are not satisfied. Therefore existing welfare measures may be improved.</td>
</tr>
<tr>
<td>● Welfare measures enrich the employee’s standard of living and level of dissatisfaction with the extramural welfare measures.</td>
</tr>
</tbody>
</table>
Chapter III: Research Methodology

| Bosibori Witter, Nyamwamu Ms., Attonbo Mr., Nyankundi Wallace, Charles Munene Dr., Walter Okibo Dr. (2012)⁹ | The study sought to assess the role of employee welfare services on the performance of the national police service in Kisii central district | SM: Stratified Sampling | SS: National police service in Kisii central district. | DS: Self-Administered Structured Questionnaire & Interview. | Descriptive statistics such as frequency, weighted average and percentage were used to analyse data. | Employee welfare services do play an important role in the performance of the police service and facilitates police operations. | Government through the National Police Service should provide adequate resources. | More of welfare satisfaction. |
Chapter III: Research Methodology

| Beulah Viji Christiana M., Mahalakshmi V. Dr. (2012)\textsuperscript{15} | • To find out the relationship between job stress and job performance. | • To study the relationship between job stress and job performance. | • To find out the relationship between job stress and job performance. |
| | • To identify the extent of positive relationship between emotional intelligence and job performance. | • SM: Snowball Method of Sampling. | • SS: Employees of Banking Sector in India. |
| | • DS: 800 Questionnaires were distributed to employees from 20 banks – 8 banks in the public sector and 12 banks in the private sector | • Mean, Standard Deviation, and Bi-variated Correlation between the variables | • Positive relationship is found between emotional intelligence and job performance. |
| | | | • Recruiting emotionally intelligent employees may have a positive impact on organisational success. |
| | | | • Stress does services in the areas like training which will improve their skills and competence and also enhance professionalism and accountability in their work. |
influence of emotional intelligence in moderating the job stress and job performance among employees in the banking sector.

not always directly result from the source of the pressure, but rather, from the individual’s perception of stress.

- Emotionally intelligent employees are more liked than employees with low emotional intelligence as they reduce or transform the potential negative effects of job stress on job performance.

<table>
<thead>
<tr>
<th>Chaudhary Asiya Dr. (2011)\textsuperscript{18}</th>
<th>• To identify the employees’ welfare</th>
<th>• SM: Simple Random Sampling</th>
<th>• Simple Average Mean, percentage,</th>
</tr>
</thead>
</table>
|  |  |  | • Inadequacy of financial resources is one important
Chapter III: Research Methodology

- To study the level of satisfaction towards various employees’ welfare measures among the employees.
- To suggest suitable recommendations to improve employees’ welfare amenities in Indian Railways.

**SS:** Employees are chosen from various levels of Indian Railways.

**DS:** Questionnaire.

- **SS:** Employees are chosen from various levels of Indian Railways.
- **DS:** Questionnaire.

Standard Deviation, Variance, Standard Error, and Z-test

reasons pointed out by the railway administration in opposing the demand of extension of employees’ benefits and services.

- It is pointed out that the Indian Railways has been discouraging the social burden at the cost of their own employees.

- Hence, it may be suggested that the railways may minimise the cost of social burden and ask the Government

Hence, it may be suggested that the railways may minimise the cost of social burden and ask the Government
### Chapter III: Research Methodology

<table>
<thead>
<tr>
<th>Venugopal P. Dr., Bhaskar T., Usha P. (2011)(^\text{16})</th>
<th>To know about the welfare programmes conducted by the industries.</th>
<th>SM: Stratified Simple Random Sampling Method.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To assess the overall satisfaction level of employees regarding welfare programmes.</td>
<td>SS: Officers and Clerical Staff belonging to industrial cluster in Chittor district</td>
<td></td>
</tr>
<tr>
<td>To obtain correlation between statutory &amp; non-statutory welfare activates at the industries.</td>
<td>DS: Questionnaire, In-depth Interview &amp; Survey Method.</td>
<td></td>
</tr>
<tr>
<td>To obtain relationship</td>
<td>Chi-square test and Spearman’s Rank Correlation.</td>
<td></td>
</tr>
<tr>
<td>Employees in industrial cluster at Chittoor district are availing different types of welfare measures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>These industries have to provide more welfare facilities to their employees such as Gratuity, Pension, Welfare fund, so that they may retain the employees and enhance their quality of work life.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
between departments & welfare activities.

<table>
<thead>
<tr>
<th>Iheanacho Okereta Chukwunenye Daniel Amgbase (2010)⁵</th>
<th>• The paper examines staff welfare measures and organisation’s Productivity in Patani Local Government Council in Delta State, Nigeria.</th>
<th>• SM: Convenience Sampling</th>
<th>• SS: Patani Local Government Council in Delta State, Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• DS: In-Depth Interview (IDIs) and Focus Group Discussion (FGDs)</td>
<td>• Percentage Analysis Method</td>
<td>• There was a general awareness about Staff Welfare Measures amongst the employees.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Staff welfare was grossly neglected. The working environment was poor in terms of office accommodation, furniture, working materials, monetary incentives, and health and safety facilities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Morale or job</td>
</tr>
</tbody>
</table>
Chapter III: Research Methodology

Sabarjrajan A., Meharajan T. & Arun S. (2010)\textsuperscript{10}

- This study throws light on the importance of welfare measures on QWL among the employees of textile mills in Salem district.

<table>
<thead>
<tr>
<th>SM: Convenience Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS: Employees of textile mills in Salem district, Tamil Nadu</td>
</tr>
<tr>
<td>DS: Structured Questionnaire</td>
</tr>
</tbody>
</table>

- The statistical tools like chi-square, ANOVA and percentage analyses are used.

- Most of the employees are highly benefited with the welfare measures provided by the mills.

- The employees show positive attitude towards the provision of the welfare measures.

- Most of the employees are highly satisfied with satisfaction was low among the employees which result in low productivity.
### Chapter III: Research Methodology

<table>
<thead>
<tr>
<th>Sabarinathan S., Kavibharathi S. (2009)(^{12})</th>
<th>• The purpose of this paper is to present the result of a survey on the attitude, behaviour of the employees and the level of satisfaction in the Erode district milk</th>
<th>• SM: Convenience Sampling</th>
<th>• Chi – Square Test &amp; Percentage Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• SS: Erode district co-operative milk producer Union Limited.</td>
<td>• DS: Structured Questionnaire</td>
<td>• This study states that 78% of the respondents are satisfied in the relationship with subordinates.</td>
</tr>
<tr>
<td></td>
<td>• DS: Structured Questionnaire</td>
<td></td>
<td>• The analysis also states that 66% of the respondents are highly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>satisfied in the relationship with subordinates.</td>
</tr>
</tbody>
</table>

Most of the employees with 5 – 10 years of experience are highly satisfied with the safety measures and working conditions.
<table>
<thead>
<tr>
<th>Acheaw M. Owusu (2007)⁴</th>
<th>producer Union Limited.</th>
<th>SM: Convenience Sampling</th>
<th>Percentage Analysis Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>● To find out about the staff development policies and training programmes to increase staff competence, efficiencies and performance in the three special libraries of Ghana.</td>
<td>SS: Employees of three libraries in Ghana</td>
<td>DS: Two sets of questionnaires were drawn up. One set was administered to management and the other set went to library staff.</td>
<td>● The survey revealed that all the three libraries under study have staff development policies and training programmes to enhance the capabilities and efficiency of the staff.</td>
</tr>
<tr>
<td>● It also aimed at assessing staff welfare practices and their effect on productivity and satisfaction with the canteen facilities.</td>
<td></td>
<td></td>
<td>● Several opportunities and incentive packages are available to boost their morale and motivation.</td>
</tr>
</tbody>
</table>
To identify current organisational practices of job retention and vocational rehabilitation after a period of ill-health stemming from work-related stress and also to review the evidence of their effectiveness.

To select and describe approximately 12 examples of best current practice in the areas of Stress and Rehabilitation, Occupational Health Service providers, The views of Key Professionals, Line Managers and Employees of the organisations.

SM: Convenience Sampling

SS: Occupational Health Practitioners, Experts and Specialists in the areas of Stress and Rehabilitation, Occupational Health Service providers, The views of Key Professionals, Line Managers and Employees of the organisations

DS: Telephonic Interview

Changes to tasks or duties.

Changes to the way work is managed.

Additional training.

Openness and trust between the employee and employer.

Flexibility, patience and support in the return-to-work plan.

Providing the employee with reassurances and confidence-building.

The employer knowing where to go
<table>
<thead>
<tr>
<th>job retention and vocational rehabilitation that match the evidence-based practices identified.</th>
<th>for advice on what to do.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing the length of absence following a period of work related stress.</td>
<td></td>
</tr>
<tr>
<td>Getting the employee back to work as a fit and healthy individual.</td>
<td></td>
</tr>
<tr>
<td>Preventing unnecessary or unwanted employee turnover.</td>
<td></td>
</tr>
<tr>
<td>Identifying and tracking potential problems or issues on an organisational or departmental scale.</td>
<td></td>
</tr>
<tr>
<td><strong>Osterman Paul (2000)</strong></td>
<td><strong>To find out the effect of continuous adoption of High Performance Work Organisation on employees’ productivity.</strong></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>SM:</strong> Convenience Sampling</td>
<td><strong>SS:</strong> Organisations as a whole.</td>
</tr>
<tr>
<td><strong>High Performance Work Organisation do not seem to have lived up to their commitment on employee gains.</strong></td>
<td><strong>The uses of such systems are affected by the other changes in the company.</strong></td>
</tr>
</tbody>
</table>
3.4 Research Gap

On the basis of area, Rajasthan is the biggest state of the country. Since the last few years, it is witnessing a face paced and profound development in the banking sector i.e. both public & private sector. In the recent times, especially in Jaipur, many branches that have come up and more are on the verge of coming. There are many factors that influence the growth and development of banks and are need to be studied. Employee’s welfare related parameters hold a special place among these factors to be studied as employees are primarily the backbone of a successful bank. Literatures have been reviewed in detail to draw a clear understanding of the previous studies made on employee welfare practices in different industries. As a result of the study of the previously published literature it has been understood and evaluated that not many studies have been made in the area of Employee Welfare related parameters with respect to banking sector. This has led to develop an interest to conduct a research work on employee welfare practices in banking sector.

3.5 Statement of Problem

1. Why employee welfare practices are important in ICICI bank & Bank of Baroda?
2. How to compare the employee welfare practices in public & private sector banks?
3. What are the factors that affect employee welfare practices in public & private sector banks?
4. Does the welfare facility available to the employees fulfil their daily requirements?
3.6 Objectives of the Study

The main objective of the study is to understand the Employee Welfare Practices adopted in Bank of Baroda (public sector bank) & ICICI (private sector bank) and also to:

1. To compare the attitude of the employees of Bank of Baroda and ICICI Bank with respect to employee welfare practices of their respective banks.
2. To study the opinion of the employees on employee welfare practices within the selected banks.
3. To determine the effects of sixteen selected independent variables namely ‘supervision, management relations, employee participation, employee’s vision, stress, grievance redressal system, cultural programmes, health services, retirement and insurance, working atmosphere, training, overtime allowance, leave policy and regular increments’.

3.7 Significance of the Study

1. To the banking sector:

This study will definitely be vital for the banking sector as the banks will come across the information related to employee welfare practices. The study will provide them with feedback from employees about the employee welfare practices and will also help the banking sector to maintain their reputation. This will further help them to improve their productivity & competence. It will also provide them with information about the satisfaction level of their prospective employees.

2. To the prospective employees of the banking sector:

The study will provide a comparative description of the pros and cons and performance of employees because of the employee welfare activities in the banking
sector. This will surely help them to retain understand the existing standards with respect to employee welfare practices in the industry.

3. To the academicians, researchers and students:

The research will prove informative for academicians, students and readers who are interested in methods and procedures of HRM research especially for employee welfare activities. This research will let them know about the level of employee motivation levels in the banking sector. It will also provide them with the information on the preferences and behaviours of the employees working in the banking sector of the Jaipur and Ajmer district.

3.8 Scope of Study

Banking industry occupies an important place in the life of every human being now a day; hence the study becomes all the more important. The study aims to find the welfare practice that has been adopted by public & private sector banks, whether the banks are providing necessary welfare measures in Bank of Baroda & ICICI Bank. The scope of the current study named “Employee Welfare Practices” is confined to all the branches of Bank of Baroda & ICICI Bank in Jaipur & Ajmer district. This study helps to find out the satisfaction level of employees working with the bank and also helps in improving the performance of the human resource management department.

3.9 Research Design

Research Design is prepared for conducting a research study; it is logical and organised arrangement of information. It defines the objectives to be studied, and the methods and techniques to be adopted. Research design is a framework which directs the researchers in which direction the research needs to be taken.
It is not only a plan of work to follow, research design major function is to make sure whether the available evidence or information is sufficient or enable to give answers to the questions asked. While designing research design it is very important to ask some questions: for a particular question, what evidences are required to answer the question or to test the question. Research design deals with logical problem. As in cases of a builder or an architect, the work plan has to be developed, for ordering materials they have to study the type of building needed, and its uses. Same in case of social research the matter of data collection and designing of questions in questionnaire, all the matters are secondary to the matter ‘what information do I need to collect?’ Many times researchers start collecting information or interviewing people before thinking what they actually need to study or collect. Hence without studying research design at the beginning, the conclusion normally be feeble and fail to give answer for the research questions.

3.10 Hypotheses

Hypothesis is a statement of prediction which is to be proved or refused after testing. It gives the prediction on what can happen in the research study. It is not necessary that all the research studies have hypothesis, but a study can contain more than one hypothesis. Hypothesis must clearly explain the relationship between all the determined variables. It must provide clear direction to the interpretation of available data. A research problem cannot be solved unless it is projected in a hypothesis form. It can neither be to exact nor too basic. Hypothesis which is being formulated for the purpose of testing, it should be done in such a manner that it can be replicate by others. It is not necessary for the hypothesis to be right or wrong in each situation.
## Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H$_{01}$</td>
<td>There is no significant difference between the attitude of the employees of Bank of Baroda and ICICI Bank with respect to employee welfare practices of their respective banks.</td>
</tr>
<tr>
<td>H$_{a1}$</td>
<td>There is a significant difference between the attitude of the employees of Bank of Baroda and ICICI Bank with respect to employee welfare practices of their respective banks.</td>
</tr>
<tr>
<td>H$_{02}$</td>
<td>There is no significant difference between the opinions of the employees on employee welfare practices within the selected banks.</td>
</tr>
<tr>
<td>H$_{a2}$</td>
<td>There is a significant difference between the opinions of the employees on employee welfare practices within the selected banks.</td>
</tr>
<tr>
<td>H$_{03}$</td>
<td>There is no significant association between employee welfare practices and supervision on employee welfare.</td>
</tr>
<tr>
<td>H$_{a3}$</td>
<td>There is a significant association between employee welfare practices and supervision on employee welfare.</td>
</tr>
<tr>
<td>H$_{04}$</td>
<td>There is no significant association between Stress affecting the working efficiency among different age groups.</td>
</tr>
<tr>
<td>H$_{a4}$</td>
<td>There is a significant association between Stress affecting the working efficiency among different age groups.</td>
</tr>
</tbody>
</table>
3.11 Universe of Study

The sampling arrangement for the study has been prepared depending on the background of the study. The standards on which sampling was conducted are as follows:

**Target population or universe:** Employees of Bank of Baroda & ICICI Bank

**Sampling method:** Convenience Sampling

**Sampling size:** 400

**Area of survey:** Jaipur & Ajmer

3.12 Sample Design

The final study was conducted on employees of Private Sector Banks & Public Sector Banks stated below of Jaipur and Ajmer, the two districts of Rajasthan.

**Public Sectors & Private Sectors**

1. Bank of Baroda, Jaipur, Ajmer Region.
2. Industrial Credit and Investment Corporation of India (ICICI) Bank, Jaipur, Ajmer Region.

Employees aged between 25 to 60 years in the selected banks were studied on their availability basis.

<table>
<thead>
<tr>
<th>AREA</th>
<th>SECTORS</th>
<th>BANKS</th>
<th>NO. OF EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jaipur District</strong></td>
<td>Public Sector Bank</td>
<td>Bank of Baroda</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Private Sector Bank</td>
<td>ICICI Bank</td>
<td>100</td>
</tr>
<tr>
<td><strong>Ajmer District</strong></td>
<td>Public Sector Bank</td>
<td>Bank of Baroda</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Private Sector Bank</td>
<td>ICICI Bank</td>
<td>100</td>
</tr>
</tbody>
</table>
3.13 Sources of Data

Primary data has been collected through questionnaire filled from 400 respondents. The respondents have been selected by convenience sampling. The division of the data collection was on the following basis:

Private & Public Sector Bank

- Private Sector Bank : - 200
- Public Sector Bank : - 200

Primary data has been collected through questionnaire.

Secondary data has been collected from company’s website, industry reports, related literature in books and journals, both national and international.

Analysis of data The data has been analysed using IBM SPSS 20 statistical software.

Place of work and facilities available

The present study aims at the employee welfare practices adopted in Bank of Baroda (public sector bank) & ICICI Bank (private sector bank); the primary data has been collected from the employees these banks with branches of Jaipur & Ajmer.

Study largely depends on primary source of data. In respect to support the information’s reference, secondary data has been taken from journals, articles, internet both published and unpublished.
3.14 Tools for Data Analysis

The collected data was organised in the required form and analysed to get the results out of it. There are numerous methods to do this and so it is decided in advance which method would be most suitable for this study. For the analysis purpose in the present study statistical tools such as percentages etc have been used. The data has been put in a tabular form and pie charts are drawn on the basis of which comparisons have been drawn between the two banks operating in different sectors. For the purpose of hypothesis testing, various tests have been applied. Furthermore, diagrammatic and tabular representation of data makes the comparison easy to understand and interpret though it is very difficult task to compare the data.

3.15 Hypotheses Testing

Hypothesis testing is a process of making decisions related to the research problem by taking into consideration the related available data. It is a logical method of making authenticate decisions. In hypothesis testing we take one statement as true, in which there is no relationship between the variables which is known as “null hypothesis. We can also take one statement as false, which says there is a relationship between the variables, which will be known as “alternative hypothesis”. Subsequent to this, null hypothesis will be tested to accept or reject the statements. Null hypothesis is tested with the help of checking the level of significance. The level of significance is the probability on the basis of which the null hypothesis is accepted or rejected. The commonly used level of significance is 1%, 5% and 10%.

Null and Alternate Hypotheses:

A hypothesis is a statement prepared by the researcher on the problem for which research has been undertaken. Generally two types of hypothesis are there:

i. Null Hypothesis

ii. Alternative Hypothesis
Null Hypothesis ($H_0$): In case of null hypothesis no difference is there in the statement. The $H_0$ means there is no significant difference between the assumed statements; it is represented as follows:

$$H_0 : \mu = 0$$

Alternate Hypothesis ($H_A$): Hypothesis which is approving to null hypothesis and is called alternative hypothesis. The $H_A$ means there is a significant difference between the assumed statements it is represented as follows:

$$H_1 : \mu \neq 18$$

Level of Significance (α):

Level of significance generally signifies as an alpha ($\alpha$), is a statistical measure which tells how sure one is that a difference in the obtained data exists. So that the outcome acquired doesn’t influence the preference of the statisticians it has specified in the term of null hypothesis and alternative hypothesis.

One - Tailed and Two - Tailed Tests:

One – Tailed Test: One-tailed test is a statistical hypothesis, where the scope of rejecting the sample is only on one side. In case of one – tailed test mean will be significantly smaller or greater than $X$; both the situation cannot be true in case of one – tailed test. While testing the data through one – tailed test its gives more power in one direction by keeping the power of other direction aside.

Two – Tailed Test: Two-tailed test is a statistical hypothesis, where the chance of getting rejection is on both the case of samples. When two-tailed test is used, hypothesis is tested as a probability of getting the relationship on both the sides.
Two-tailed test is used to test the hypothesis in both the cases if the mean is greater than \( \mu \) or the mean is less than \( \mu \).

3.16 Variables

Variable is a value that varies or change accordingly. It can be changed from group to group, person to person and also several times within a person. It is the central idea in the research. It carries two or more than two values. Variables are used to demonstrate the values of quality or scale. Variable carries and assumes different numerical values. The opposite of variable is constant, which do not change its values according to conditions. Variables are not always numerical in nature, like in cases of gender i.e. ‘male’ or ‘female’. Variables can be divided in many different types but in case of research study, there are two major categories in which it can be classifies, which are as follows:

**Independent Variable:** Independent variable is a variable that is assumed to make a change on the dependent variable. Independent variable is the ancestor and dependent variable is the resultant. This variable helps to decide which method is efficient in enhancing the performance of the dependent variable. Independent variable is the variable we have control over it, which can be changed accordingly. It has its effect on the dependent variable. In some cases, independent variable cannot be manipulated. Example: How stress level can affect the heart rate of human. Here in this case, stress level is the independent variable and heart rate is the dependent variable. We can directly alter the heart rate in human by controlling the stress level in individuals. Independent Variables in this study are **Supervision, Relation with the Management, Participation In Decision Making, Visionary of an Employee, Stress, Stress and Working Efficiency, Grievance Redressal System, Cultural Program and Companies News Bulletin, Health Services, Retirement and Insurance Scheme, Working Atmosphere, Employee Participation, Training, Overtime Allowance, Leave Policy and Regular Increment.**
**Dependent Variable:** Dependent variable is a variable that has been studied in the research and it has been affected in the experiment. Dependent variable has an effect of the independent variable. It is known as independent variable because it depends on independent variables. In the research process, we cannot have dependent variable without an independent variable. Example: Here we can take the example of stress and heart rate, in this case, stress is the independent variable and heart rate is the dependent variable. Here change in stress level can be lead to change in heart rate of humans. Dependent Variable in this study is **Employee Welfare Practices**

**Likert Scale:** Likert scale is developed by Rensis Likert. Here the respondents are asked to express their views on the basis of agreement or disagreement based on statement questions. Questions will have 5 categories ranging from strongly agree to strongly disagree. Each view has been assigned a numerical value and the total value of the respondent is calculated by adding their score. Evaluating results under likert scale is easy to calculate and manage. Likert scale is of ordinal type, it gives rank to attitude but do not allow to make difference between attitudes.

### 3.17 Test of Reliability

**Cronbach’s Alpha**

Cronbach's Alpha is a measure of interior reliability. It is most commonly utilised when Likert scale based questions in a questionnaire are present. It is also used when a range is structured and the reliability of the data has to be checked.

Cronbach’s Alpha was developed by Lee Cronbach in the year 1951; it is used to judge the internal reliability of the available data. It is denoted in number as 0 and 1. Internal reliability explains inter – relationship between the items within the test. Cronbach’s alpha test has to be performed on the complete study device (all subscales pooled) and on each unit’s subscale. Reliability analysis must be carried out before the test has been conducted for the purpose of analysis with the help of
which validity can be ensured. Number of errors can also be evaluated under the test of reliability. Higher the value of reliability, lesser will be the amount of errors in the test. Higher will be the correlation between the items in the test, higher will be the value of alpha. In other cases it is not necessary that the higher the value of alpha result in higher level of internal consistency because the value of alpha is also affected by the length of the test.

\[ \alpha = \frac{K}{K-1} \left( 1 - \frac{\sum_{i=1}^{K} P_i Q_i}{\sigma_X^2} \right) \]

A number of factors are there which affect the value of alpha during a test and it can be e.g. test items, interrelatedness and their various scopes. There are various reports on acceptable value of alpha which ranges from 0.70 to 0.95. A low value of alpha can be due to less number of questions, lower interrelation between the questions or items. If the value of alpha is too high then it can be because some of the items in the test are redundant and they are testing the items more than once but in a different form. 0.90 is the maximum value of alpha which has been recommended.\(^{25}\)

### 3.18 Normality Test

Testing the normality of the available data is very important in parametric testing. The normality test is supplementary to the graphical assessment of normality.\(^{26}\) The main tests used in the study for normality are: (1) Shapiro-Wilk Test of Normality and (2) Kolmogorov-Smirnov-Goodness-of-Fit Test. Various statistical methods are been used to evaluate whether the variable(s) are normally distributed or not. Here the assumption is that the combination of various variables must follow multivariate normal distribution. When there is no direct test for multivariate normal distribution, in that case each variable has been tested individually and they are considered to be multivariate normal, if they are individually normal, but this is not always the case. There are both the graphical and statistical methods of evaluating the normality of
the available data. Graphically it is evaluated through histogram and normality plot and statistical method includes the evaluated hypothesis test of normality and the variable will be considered to be normal if the values come between -1.0 and +1.0.\(^{26}\)

**Shapiro-Wilk Test of Normality:**

The Shapiro-Wilk test is a normality test propounded in 1965 by Samuel Sanford Shapiro and Martin Wilk. This method basically uses the null hypothesis theory that checks whether a random test draws from a regular circulation. This test of normality is considered to be the best test by many of the authors. Shapiro – Wilk test of normality is applicable in the case of small sample size, in rest of the cases Kolmogorov-Smirnov-Goodness-of-Fit Test has been used.

This test utilises the null hypothesis phenomenon to find out whether the sample has come from normally distributed population.

\[
W = \frac{\left(\sum_{i=1}^{n} a_i x(i)^2\right)^2}{\sum_{i=1}^{n} (x_i - \bar{x})^2}
\]

The null hypothesis of this test says that the population is normally distributed. If here the p – value is lesser than the alpha value, then in that case null hypothesis will be rejected. And it will be proved that the data tested was not normally distributed. In other case, if the p – value is more than the alpha value, then the null hypothesis will be accepted. So, the sample is completely based on sample size.

Shapiro – Wilk Test is based on the correlation between the scores and data, which are normally distributed and gives more power than the K-S test. Power is the regular measure which has been used to evaluate the normality of the population. This test has the power to evaluate whether the data comes from normal distribution; this test is considered to be the best test to judge the normality of the available data.\(^{26}\)
Kolmogorov-Smirnov-Goodness-of-Fit Test:

Kolmogorov-Smirnov-Goodness-of-Fit test is a one-sample test which has been used to evaluate the goodness of fit of data; it is a non – parametric test and a test of normality for a sample of large population. This test is very similar to the chi-square, goodness-of-fit test, testing to evaluate whether the distribution is normal or not. In this test if the significance value is less than 0.5 then the available data will not be normal i.e. parametric test cannot be applied. Kolmogorov-Smirnov-Goodness-of-Fit test is also known as ‘K-S test’ and ‘vodka test’ after Smirnov brand vodka. This test uses the largest of the goodness-of-fit measures for testing:

\[ D^* = \max_x \left( G(x) - \hat{F}(x) \right) \]

This test is the alternative test of evaluating normality of any data for a large sample. Kolmogorov-Smirnov test can test the goodness-of-fit for any distribution rather than only for normal distribution. When the sample size is large even the less important deviation becomes significant for other tests. Kolmogorov-Smirnov-goodness-of-fit test can be applied to various hypothetical distributions apart from normal distribution in SPSS. The K-S test is also available for uniform, Poisson and exponential distributions. One-sample Kolmogorov-Smirnov in SPSS gives three ways to compute the data under normal distribution and report two different p-value for the same data, this difference is based on the version of SPSS used.

The incorrect level of significance i.e. p-value under the K-S goodness-of-fit test for normal distribution under “analyse ~ nonparametric test” is based on null hypothesis. The correction is made through the explore procedure (EXAMINE command) to correct the significance value i.e. p-value. If the mean and standard deviation of the specific population is set for the test then incorrect K-S in nonparametric test would be suitable test.23
The Kolmogorov-Smirnov test (K-S Test) quantifies the difference between empirical distribution function and cumulative distribution function. This test is also used in the case where one dimensional probability distribution differs. It is based on experimental and cumulative function and provides ordered data points. It signifies as:

\[ E_N = n(i) / N \]

\( N (i) \): no of points less than \( Y_i \)

One of the attractive feature of K-S test statistics is that it does not depend on the cumulative distribution function which has already been tested and it is only applied to continuous distribution. Many tests are their which is refined version of K-S test, Anderson-darling test, Cramer-Von-Mises test. The refined tests are generally considered to be the most powerful test then the existing K-S test. The Kolmogorov-Smirnov test (K-S Test) is defined by:

\( H_0 \): The information follows a specific distribution.

\( H_a \): The information does not follow the specific distribution.

### 3.19 Mann-Whitney (U) Test

The Mann – Whitney U Test (Mann – Whitney – Wilcoxon (MWW) or Wilcoxon Rank – Sum test) is a non – parametric test which is being used for testing the hypothesis. It is the most important non – parametric test for evaluating the significance level of any distribution. It was initially proposed by ‘Frank Wilcoxon’ in the year 1945, for some sample size and to extend it till random sample level, and further this test has been extended by ‘Henry Mann’ and his student ‘Donald Ransom Whitney’ in the year 1947. Like many other non – parametric tests, this test also uses the ranks of the data apart from using the raw values for evaluation. When we evaluate the statistics manually the ranks are given to the whole data and the
entire ranks are summed up and Mann – Whitney U test has been applied, by using the formula:

\[ U = n_1 n_2 + \frac{n_2 (n_2 + 1)}{2} - \sum_{i=n_1+1}^{n_2} R_i \]

Where, \( n_1 \) and \( n_2 \) is the number of observations in sample 1 and sample 2 and \( R_1 \) is the sum of ranks. In this test, all the observations of every sample should be independent to each other. The response should be based on ordinal or continuous distribution.

In case of null hypothesis, both the groups will be divided equally to maintain the equality between the population/sample. And in case of alternative hypothesis the division of both the groups will not be equal to 0.5.

Mann-Whitney test is used in various fields but it is frequently used in the areas of medicine, psychology, nursing and business. In medicine Mann-Whitney is used to check the affects of medicine, it is also helpful in knowing whether a particular medicine is helpful in curing a disease. In psychology, the behaviour and attitude of people can be judged through Mann-Whitney test and to know the preference or outlook of people in business Mann-Whitney test is also useful. In order to calculate the value of ‘U’, first the available data will be arranged in the ascending order and scores are provided to them, and they will receive the ranks which will be equal to average of the scores in the series.

\( U \) test can easily be calculated manually in case of small sample size and it is also a part of other statistical procedures. If the values of \( n_1 \) and \( n_2 \) are very large, then the sampling value of ‘U’ will be close to the normal distribution and if the \( n_1 \) and \( n_2 \) is small than the normal distribution then the ‘U’ cannot be used and then the exact test will depends on unique tables.

Like the independent t-test, Mann-Whitney test also used to allow making various conclusions regarding the data, depending upon the assumption the researcher
prepare for their data. Highest range of $U$ will be the product of sample 1 and 2 and
the other value of $U$ will be zero in this case. While indicating the results of Mann-
Whitney test it is important to mention the value of $U$, the sample size, the
significance level and the measure of central tendency of both the groups, mean and
median have to be mentioned as Mann-Whitney is an ordinal test, hence median are
suggested. In many cases this information has already been specified.

**Wilcoxon Matched-Pairs Sample Test:**

The Wilcoxon Matched-Pairs ranks test is a non-parametric test and this test has
been regarded as similar to pair t-test, as same as Mann-Whitney test. It can be used
in place of student t-test when the sample is not normally distributed or the data is on
ordinal scale, in such situation the test will be referred to as the Wilcoxon t-test and
the test value is considered to be the value of ‘$T$’. Here ‘$T$’ represents the sum of all
the ranks with negative signs. In this test null hypothesis will be, there is no
difference between sample A and B and alternate hypothesis will be sample A will
be better than sample B.

This test has two versions: Single-Sample and Two-Sample. The first version is the
independent single-sample in the non-parametric version. It has been recommended
to use Single-sample whenever it is required to test the hypothesis related to
population median. In this case null hypothesis is in the form of $H_0$: $m = m_o$, where
$m_o$ is having the specific set value which is tested against the alterative hypothesis.
The second version of the test is the two-sample in the non-parametric version for
dependent paired sample. This test uses two samples and it is very necessary that
they should be in paired form. Paired sample implies that each individual sample has
a unique parallel element in the other sample. Wilcoxon Matched-Pairs Sample Test
has an advantage it neither depends on any of the type of parameters and
distribution. It does not require any hypothesis about the distribution. This test is an
alternative test for t-test, and can be used when the population is not normally
distributed even if the data is normally distributed; it has shown that the competence
of this test is almost 95% in comparison to t-test. 24
3.20 Chi - Square Test

Chi-Square Test was developed in the year 1900 by Karl Pearson. Chi-Square Test is denoted by $\chi^2$ and is a statistical hypothesis test in which sampling distribution is tested, when null hypothesis is accepted. This test is the goodness-of-fit test and helps to know the significance level and the variation between experiment and fluctuation in the sampling or any other aspect associated with the sample. $^{25}$ Chi-Square Test is applicable to the data which are available through counting, not to the data which are gathered on continuous scale. Chi-Square Test is one of the most popular non-parametric tests/methods for hypothesis testing. $\chi^2$ It is a Greek letter “chi”, like the entire hypothesis testing method, chi-square test is also compare its calculated value with the critical value to evaluate whether the null hypothesis is true or not.

Data/Information used in chi-square test must be randomly drawn from the entire population; measured variables must be independent, selected frequency cannot be small, and the value of dependent and independent variables must be equally exclusive.$^{26}$ Chi-Square Test is not a symmetric, the shape of the chi-square graph depends on the degree of freedom of the values, just like student’s t-distribution, as the degree of freedom increases the distribution of chi-square becomes more symmetric. Its value cannot be in negative, it should be more than or equal to zero.$^{26}$

$$\chi^2 = \sum \left( \frac{O - E}{E} \right)^2$$

Three types of Chi-Square Test/Distribution:

1. Chi-Square Test for Population Variance.
2. Chi-Square Test for Goodness-of-Fit.
3. Chi-Square Test for Independence.
• **Chi-Square $\chi^2$ Test for Goodness-of-Fit:** Chi-Square, Goodness-of-fit is a test which is used to decide or to find out whether there is any difference between the observed value and the expected value. Goodness-of-fit means how well the statistical model fits with the available observations. Goodness-of-fit easily finds out the inconsistency between the observed value and the expected value in the model which are under the study. This test can be used through nominal, ordinal or scale variables hence it is a very flexible test, but it is also sensitive to sample sizes. It is important to at least have some of the cases in each of the variable values or else the results will be twisted.\(^\text{27}\)

The available distribution is also being used for judging the significance of expected and observed value and also as a part of goodness-of-fit. The symbol of $\chi^2$ distribution depends on the degree of freedom and the $\chi^2$ distribution value is:

$$
\chi^2 = \sum_{i=1}^{n} \frac{(O_i - E_i)^2}{E_i}
$$

In case of null hypothesis (H\(_0\)) ‘there is no difference between the observed value and the expected value’ and in alternate hypothesis (H\(_A\)) ‘there is difference between observed and expected frequency’.

• **Chi-Square $\chi^2$ Test for Independence:** Chi-Square test for independence is utilised to evaluate the independency level between two or more variables of a sample. Here the test of independence denotes that the two factors under the study are completely independent, they are not related to each other in any way. It also helps to find out whether the two characters have the tendency to be dependent or independent. Example: if the patient suffering from a disease is cured due to the medicine or recovered from the illness is independent from the medicine. In that situation the sample frequency is provided in the form of contingency table. Here the null hypothesis (H\(_0\)) will be ‘there is no association between the medicine and the illness’, i.e. the medicine is not helpful in curing
the illness. The alternate hypothesis (H_a) will be ‘there is an association between the medicine and the illness’, i.e. the medicine helped in curing the illness.

3.21 Factor Analysis (Multivariate Analysis)

Multivariate analysis is a tool used by statisticians for making decisions from the available data in hand. All the research activities require the investigation of available unrefined data. The methods and techniques of multivariate analysis are systematic and technical and is used by various researchers and can be modified and changed according to the need of the time and experts.

Factor analysis is a branch of multivariate statistical analysis, when there is numerous numbers of variables in a research design; it is often beneficial to reduce the number of variables to smaller set of factors. This is an independent technique where there is no dependent variable. This is an independent technique where there is no dependent variable. In the other case the researchers are trying to make a data matrix, in which the independent variables are normal and continuous and are divided into three to five component factors. The purpose of factor analysis is to find out the familiar factor which provides the outline and the valid structure unseen in the large range of the variables. It is thus a methodology for classify appearance of variables.

There are many methods that can be used to conduct factor analysis like principle axis factor, maximum likelihood, weighted least square or generalised least square. Many different rotations or exchanges can be done once the factor has been determined. We need to determine the number of factors that need to be extracted. Factor analysis is a technique that can be applied in the case where sample size is very large. It is based on the correlation matrix and correlation requires a large sample size.22
Principle Component Analysis (PCA)

Principle component analysis is a variable reduction technique, which helps in reducing the number of formed variable into smaller variable group in the form of ‘components’. Principle component analysis is commonly known as exploratory factor analysis; this name is used because the word factor is very confusing as we make analysis with components rather than factor. Principle component method of factor analysis was developed by H. Hotelling. It is a widely used method that has made many improvements over the years. It is a linear combination of many variables; and gives their maximum contribution to the total variance. Total variance of all the principle components must be equal to the total of variance of all the variables.

In this method, all the factors are arranged according to the values of the coefficient from the higher positive to the higher negative. It must be arranged in such a manner such that the first principle component will have the maximum variance and the second principle component will have the next maximum variance.

The Correlation Matrix:

The correlation matrix is a simple rectangular matrix which gives the correlation between the single variable and the remaining variables in the study. The coefficient of correlation between the variable and itself is always one. The complete correlation matrix shows whether the variables which has been analysed are overly large or not. Eigen value is the variance which is associated with a specific factor. The gross of all the Eigen values cannot be more that the number of items in the analysis since each item has contributions equal to one.

KMO-Bartlett’s Test of Sphericity:

This method evaluates the strength of relationship among the variables. KMO explains the sampling competence and whether the correlation among samples is small or large. The Barletts test also proves whether the matrix has identity that can
specify whether the factor method is appropriate or not. The total score of Bartlett’s factor must have a mean of 0.22

**Communalities:**

Communalities indicate the amount of variance in each of the variable to be accounted for. Communalities have been mentioned by the way of initial communalities and extraction communalities. Initial communalities are the approximation of variance in each of the variable mentioned in the components or factors. Extraction communalities are the approximation for the variance in each of the variable mentioned in the factor solution. Smaller values will indicate that they do not fit well with the factor solution and should be removed from the analysis.

**Principle Component Matrix:**

Principle component matrix is a model where the items are assumed to be in a linear blend of factors. This method assumes that the factors or components are not correlated to each other. It also assumes that the sum of communalities of each item is 1 of all the components factors and has a variance of each item as 0.
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Reference:


22. Retrieve-from: 


