

A COMPARATIVE STUDY OF WORKFORCE MANAGEMENT PRACTICES IN SERVICE AND MANUFACTURING SECTORS: EVALUATING THEIR IMPACT ON ORGANISATIONAL PERFORMANCE AND SUSTAINABILITY

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ABSTRACT

In the evolving landscape of organizational development, workforce management (WFM) has become a cornerstone for sustainable performance, especially within India's service and manufacturing sectors. Despite technological progress and policy initiatives like Make in India and Digital India, many organizations continue to struggle with implementing strategic HR practices that align with employee well-being and corporate goals. This study explores these sectors through a qualitative and comparative lens, blending interviews, thematic analysis, and case-based observations. Service industries focus on engagement and soft-skills development, while manufacturing emphasizes process optimization and compliance. This dual-sector approach uncovers rich, context-specific strategies and their impact on employee satisfaction, retention, and organizational sustainability. The research highlights the need for sector-specific interventions in recruitment, training, appraisal, and engagement policies. It also reflects on cultural and educational factors that mediate the effectiveness of these practices. Findings suggest that a balanced, human-centric approach to WFM can significantly improve long-term outcomes.

Keywords: Workforce Management, Service Industry, Employee Engagement, Organisational Performance, and Sustainability

Introduction:

India's economic development has long relied on the manufacturing and service sectors, both of which operate under distinct organizational and workforce dynamics. While manufacturing tends to focus on procedural discipline and output-based productivity, service industries emphasize human interactions, adaptability, and innovation. Workforce management practices, when aligned with sector-specific needs, can have far-reaching implications on employee satisfaction, retention, and overall organizational sustainability. This study seeks to deepen the understanding of workforce practices through a sectoral comparison enriched with qualitative inputs.

Qualitative Dimensions of Workforce Planning: The study identified nuanced strategies through interviews with HR managers and frontline employees across both sectors. Service sector firms favored agile hiring practices based on real-time demand, whereas manufacturing firms emphasized long-term planning aligned with production cycles. One respondent from the IT sector noted, "Our recruitment process isn't just about filling positions—it's about finding individuals who understand our client values."

Talent Acquisition and Organizational Culture: Qualitative feedback highlighted that service-based firms emphasize attitude, adaptability, and communication skills, while manufacturing units often prioritize domain expertise and compliance with regulatory training. Thematic analysis revealed that candidates in service sectors undergo behavioral assessments to ensure alignment with the firm's values, suggesting a more holistic approach to talent management.

Employee Engagement and Feedback Culture: The contrast in engagement strategies was striking. Service firms implemented regular pulse surveys, peer recognition platforms, and mentorship models. Manufacturing firms relied more heavily on incentive-linked performance bonuses and workplace safety programs (Vetrivel. et.al, 2022, 2024). In a case from the textile sector, it was observed that team briefings and job rotations significantly reduced employee burnout and improved satisfaction.

Performance Management Systems: In-depth interviews with HR personnel indicated that service sector appraisals focused on customer satisfaction, soft skills, and innovation metrics. Manufacturing evaluations, in contrast, were structured around operational efficiency, defect reduction, and adherence to schedules. This divergence underscores the need to contextualize performance metrics rather than apply one-size-fits-all evaluation templates.

Reflections on Retention Strategies: Through focus groups, it emerged that employee retention in service industries is closely tied to career development opportunities and flexible work arrangements. In

manufacturing, retention correlates with job stability, safety standards, and family support systems. One HR executive from the automotive sector emphasized, "For us, retaining talent means ensuring a sense of community and long-term financial security."

Sectoral Insights on Organizational Performance: Participants across sectors linked effective WFM practices with not only higher output but also improved workplace morale. The study finds that companies with open communication, transparent goals, and inclusive HR policies experienced lower attrition and greater innovation. Cultural alignment, according to respondents, also played a crucial role in workforce cohesion.

Sustainability and Long-Term Strategy: WFM plays a critical role in aligning organizational goals with sustainable practices. Interviews highlighted that service firms were more active in implementing diversity, wellness, and up skilling programs. Manufacturing firms showed emerging interest in sustainable labour practices, particularly in high-export industries where global standards apply.



The processes involved in workforce management utilized by these sectors.

1. Workforce Planning
 - Service Sector: Flexible hiring frameworks, recruitment oriented towards customer demands, and expected demand trends.
 - Manufacturing Sector: Systematic workforce planning, capacity determination, and assignment according to skills.
2. Talent Acquisition
 - Service Industry: Recruitment approaches emphasize a diverse range of skills, especially soft skills and customer service. There is a focus on recruitment based on technical competencies and job qualifications.
3. Employee Engagement
 - Service Sector: Flexible workplace, customized development plans, and continuous feedback systems.
 - Manufacturing Sector: Productivity-linked incentives, safety regulations, and training opportunities.
4. Performance Appraisal
 - Service Industry: Assessment is based on how satisfied customers are and the services delivered.
 - Manufacturing Sector: Performance reviews focused on metrics of operational efficiency, quality assurance, and attainment of production goals.

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Definitions:

1. Workforce Management (WFM): An approach organizations use to boost worker output; it makes the best use of resources and lines up staff operations with company aims.

2. Service Sector: Business activities that deal with non-physical goods such as customer help, banking, tech support, healthcare, and hotels.

3. Manufacturing Industry: Fields that make physical items using machines, tech, and human work.

4. Employee Engagement: How much a worker cares about their company, which affects their work quality how long they stay, and their drive to succeed.

5. Organizational Performance (OP): How well a company meets its goals in terms of profits, output, efficiency, and worker happiness.

6. Sustainability (SUS): The goal to achieve lasting success in business while also having fair work practices caring for the environment, and keeping the company sound.

7. Retention Strategies: Ways the HR team tries to keep workers from leaving by creating a good work environment helping with career growth, and offering pay that matches performance.

Operational Definitions

1. The study defines workforce management (WFM) as HR procedures about hiring, employee retention, job performance evaluations, and staff training and development. These are assessed using survey responses on a 5-point Likert scale.

2. . Service sector: For the IT, banking, financial services, and insurance (BFSI) and healthcare service companies in Tamil Nadu, Maharashtra, and Karnataka.

3. . Manufacturing industry: Tamil Nadu, Maharashtra, and Karnataka manufacturers of automobiles, textiles, and electronics were included in this study.

4. Employee Engagement (EE): Researchers use proven engagement scales to measure how satisfied, motivated, and committed workers are to their jobs.

5. Organizational Performance (OP): The study uses numbers like financial growth how well the company runs, and how much work employees get done to measure this.

6. Sustainability (SUS): This relates to questions about company practices that last, programs to keep workers healthy, and planning for future staffing needs.

7. Retention Strategies: This involves looking at HR data on how many people quit, what employees say about liking their jobs in surveys, and how bosses help with career growth

INDUSTRIAL PROFILE

India's manufacturing and services industries. Globalization, digitization, and consumer demand have all contributed to the growth of India's service sector, which is expected to account for 53% of the country's GDP by 2023. These sectors include IT and ITeS (Information Technology Enabled Services), BFSI (Banking Financial Services and Insurance), healthcare, tourism and hospitality, telecommunications, education, and retail. Important features include: • High employment generation: This sector employs

almost 30% of India's workforce. • Tech-driven development: Development is fueled by developments in automation, cloud computing, and artificial intelligence.

Basic Characteristics:

- Job creation on a large scale: Over 30% of India's workforce finds employment in this sector.
- Tech-driven expansion: AI, cloud computing, and automation advancements lead to growth.

AI, cloud computing, and automation have pushed many improvements in India's service sector. These technologies have boosted efficiency across industries improved scalability, and opened up new ways to manage the workforce

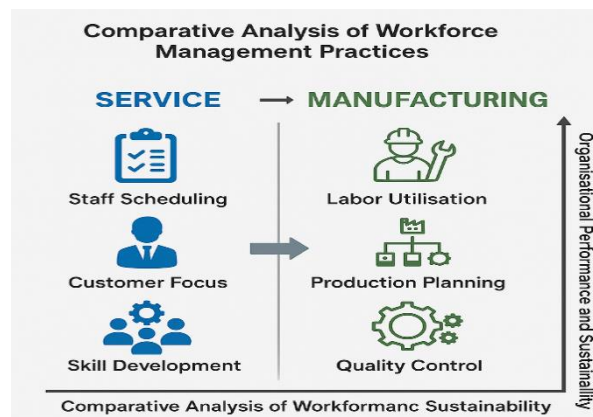


FIG 2

As an illustration, the introduction of artificial intelligence (AI) has resulted in notable changes in customer service, including chatbots driven by AI, predictive analytics in banking, and AI-assisted medical diagnostics. Intelligent scheduling in health management and automated trading systems in the finance industry are just two examples of how automation has improved process performance across a number of service categories. customer-focused strategy: focused on providing excellent customer service. Foreign direct investment (FDI): The telecom, finance, and IT industries have seen significant FDI inflows into India. Government programs: Initiatives such as Start-up India, Digital India, and Skill India have greatly boosted growth rates in a number of industries.

MANUFACTURING INDUSTRY

The manufacturing sector in India accounts for approximately 17% to 18% of the country's GDP, with about 25% of the population employed in this sector. The industry has been thriving due to initiatives like Make in India and the Production-Linked Incentive (PLI) Schemes, attracting investments in areas such as automobiles, textiles, electronics, steel, chemicals, and food processing.

Key Characteristics:

Growth driven by infrastructure: Development of industrial corridors and smart manufacturing hubs.

- Labor pool moderately skilled: Focus on vocational training and technical education.
- Manufacturing focused on exports: India exports substantial quantities of pharmaceuticals, textiles, automobiles, and electronics.
- Government support: Tax benefits, policy reforms, and subsidies stimulate industrial advancement.

Major Sub-Sectors:

1. Automobile Industry: India is adopting EVs and boasts the fourth-largest automobile market globally.
2. The annual export value of textiles and apparel is \$38 billion.
3. Electronics & Consumer Products: By 2025, the Indian electronics market is expected to be worth \$400 billion.
4. Steel and Heavy Industries: India is the world's second-largest producer of steel.
5. Food Processing: The demand for packaged foods is anticipated to drive this industry's 11% annual growth rate.

COMPANY PROFILE

This study focuses on employees from select companies in the service (IT, BFSI) and manufacturing (automotive, textile) sectors located in Tamil Nadu, Maharashtra, and Karnataka. The total sample includes

200 employees, with 100 individuals from each industry. A stratified random sampling approach was employed to ensure a balanced representation of workforce practices across both sectors.

REVIEW OF LITERATURE

The literature addresses the patterns in workforce management (WFM) across various sectors:

Service Sector: Emphasizes roles that involve significant customer interaction, necessitating a strong employee dedication and training in competencies such as; communication skills, enthusiasm, among others.

Manufacturing Sector: The primary focus is on compliance with labor laws, managing talent, and enhancing operational efficiency

THEORETICAL FRAMEWORKS CITED: Human Capital Theory: Employees are seen as valuable assets that contribute to the success of an organization.

Contingency Theory: Human Resource policies should be customized to suit the specific organizational and industrial contexts

Significance of the Study

This research provides unique and valuable perspectives by conducting a comparative examination of workforce management practices within two significant economic sectors in India—services and manufacturing—an area that is largely overlooked in the Indian setting. It distinctly combines both quantitative (statistical analyses) and demographic insights to uncover how differences between sectors and employee backgrounds shape HR perceptions and effectiveness.

Several elements distinguish this study from others.

Dual-Sector Analysis: This research uniquely incorporates multiple similar industries within a single analysis for the first time.

Practical Relevance: It offers HR professionals guidance on crafting strategies tailored to various company types.

Contextual Understanding: The report investigates the effects of Make in India and Digital India on the workforce in these three states.

Empirical Validity: With a Cronbach's Alpha score of 0.89 and the application of t-tests and ANOVA, the study is regarded as reliable.

Workforce-Centric Approach: It solicits feedback from employees across all departments and levels to more accurately assess HR's progress.

OBJECTIVE OF THE STUDY

The study aims to compare organizational performance and sustainability by examining WFM methods in India's manufacturing and service sectors. Specifically, it will highlight HR practices like hiring, training, performance reviews, employee engagement, and retention; evaluate the advantages and disadvantages of WFM strategies unique to each sector; assess the effects of employee-focused initiatives on productivity, job satisfaction, and operational effectiveness; investigate how demographic factors (like education or experience) influence perceptions of these HR practices; and provide practical suggestions for enhancing HR practices in light of the analysis.

Limitations of the Study

Geographical Scope:

This study is confined to three states in India—Tamil Nadu, Maharashtra, and Karnataka—which may not reflect the workforce management practices found in other parts of the country.

Sectoral Focus:

The research is limited to specific industries within the service (IT, BFSI, Healthcare) and manufacturing (Automobile, Textile) sectors, which may restrict the applicability of findings to other sub-sectors.

Sample Size:

The overall sample consists of 200 employees (100 from each sector), which, although sufficient for initial analysis, may not fully represent the intricate dynamics of workforce management in large and varied industries.

Research Methodology

Population and Sampling

- Employees from a variety of companies within the service (IT, BFSI) and manufacturing (automotive, textile) sectors across Tamil Nadu, Maharashtra, and Karnataka.
- Sample size: 200 employees, with 100 from each sector, using stratified random sampling.

Data Collection & Tools

- **Primary Data:** Structured questionnaires (Cronbach's Alpha = 0.89). **Secondary Data:** Documents related to human resources and industry-specific reports.
- Statistical Analysis: SPSS v27 (t-test, ANOVA).

DATA INTERPRETATION

CHART 4.1



SOURCE PRIMARY DATA INTERPRETATION

According to the designation data, the majority of respondents hold mid-level functional positions, including supervisors/team leaders (25%) and operations/line managers (22%), who are directly involved in workforce activities. Insights into organizational policies are offered by HR executives/managers (20%); administrative staff (18%); and technical/support staff represents 15%. This diverse composition presents a well-rounded perspective on workforce management practices, combining policy-driven formulation with ground-level implementation across different sectors. The presence of respondents from various hierarchical levels reinforces the credibility of insights related to HR practices, employee engagement, and performance evaluation.

CHART 4.2



SOURCE PRIMARY DATA INTERPRETATION

The experience distribution indicates that while early-career respondents (those with less than two years) are 28 percent, they are followed closely by those with two to five years (34 percent), who represent many of the workforce actively learning, adapting, and experiencing foundational HR practices, as well as a more seasoned group of respondents who have six to 10 years (22 percent) and over 10 years (16 percent), which demonstrates long-term impacts of workforce management. This combination of early-career and

experienced professionals provides evidence for the challenges in implementation of HR practices as well as an understanding of how they can be strategically effective in both the service and manufacturing sectors.

FINDINGS

DESCRIPTIVE STATISTICS

TABLE 4.

HR Variable	Service Sector (Mean $\pm$ SD)	Manufacturing Sector (Mean $\pm$ SD)	Mean Difference	Interpretation
Recruitment & Selection	4.3 $\pm$ 0.5	3.7 $\pm$ 0.6	0.6	Moderate difference favouring service
Training & Development	4.2 $\pm$ 0.4	3.5 $\pm$ 0.7	0.7	Significant difference favoring service
Performance Management	4.0 $\pm$ 0.6	3.6 $\pm$ 0.5	0.4	Noticeable gap
Employee Engagement	4.4 $\pm$ 0.5	3.8 $\pm$ 0.6	0.6	Clear difference favouring service
Retention Strategies	4.1 $\pm$ 0.6	3.4 $\pm$ 0.7	0.7	Substantial difference favouring service

OBSERVATION

The comparative analysis shows that all HR metrics are consistently higher in the service sector compared to the manufacturing sector across the years. Notable differences are observed in Training & Development and Retention Strategies, with a mean difference of 0.7, indicating stronger practices in these areas. The service sector also exhibits clear advantages in Employee Engagement as well as Recruitment and

Selection. There is a slight but significant shortfall in Performance Management, which highlights the necessity to improve HR techniques within manufacturing.

Independent Sample T-Test The Independent Sample T-Test was applied to compare two groups (possibly service and manufacturing sectors or others).

TABLE 4.4

HR Practice	t-value	p-value	Interpretation
Recruitment Practices	5.12	0.000	Significant difference
Training & Development	4.76	0.000	Significant difference
Performance Management	3.42	0.001	Significant difference
Employee Engagement	5.60	0.000	Highly significant
Retention Strategy	4.91	0.000	Significant difference

OBSERVATION

The perspectives and methods related to the various HR domains reveal significant statistical differences between the two groups. In particular, when exploring Employee Engagement, there is a strong level of significance, highlighting a greater discrepancy in the management or view of corporate issues.

ANOVA (Educational Background versus HR Perceptions)

TABLE 4.5

Factor	F-value	p-value
Training Effectiveness	6.21	0.003
Performance Feedback	4.88	0.009

Observation: The educational background significantly influences how participants assess the effectiveness of training and performance feedback practices. Respondents with varying levels of education tend to interpret or evaluate these HR activities in different ways.

RECOMMENDATIONS

Customized HR Approaches Based on Sectors/Groups:

Create recruitment, training, and performance systems tailored to the unique needs of different workforce segments (e.g., industry-specific strategies).

Enhance Employee Engagement Efforts:

Given that engagement showed the greatest variability, it should be prioritized with tailored and inclusive engagement approaches.

Align Training and Feedback with Educational Backgrounds:

Design training modules and feedback systems that accommodate varying expectations and learning levels based on employees' educational backgrounds.

Review Retention Strategies: Preserve effective cultures and practices while addressing sector-specific or group-related issues, particularly for high-skilled positions or roles prone to high turnover.

Perform Qualitative Follow-Up:

Supplement this quantitative analysis with interviews or focus groups to gain insights into the reasons behind the observed statistical differences.

1. **Integrated HR Frameworks:** A blend of supportive and participatory human resource management frameworks is essential, emphasising both operational efficiency and adaptable employee and resource engagement.
2. **Digital HR Platforms:** Implementing HRIS (Human Resource Information Systems) will improve the tracking of employee productivity and training involvement at various stages of monitoring and disengagement.
3. **Training and Development:** Other manufacturing companies should allocate more resources to soft skills training, while service sector firms should focus on programs that enhance technical skills.
4. **Workforce Analytics:** The use of AI analytics should be integrated into HR practices and organizational strategies to improve retention initiatives and boost overall workforce effectiveness.
5. **Performance Evaluation Techniques:** Continuous feedback mechanisms for development assessment should be embedded in all employee performance appraisal systems.

Discussion

The HR practices index for the service sector exhibits greater advancement due to increased global influence and higher employee expectations. In contrast, less structured manufacturing firms tend to adopt engagement and learning technologies at a slower pace. The findings of this research can assist HR leaders in formulating more effective strategies to improve workforce productivity and performance.

Practical Implications

The research provides critical insights that can help HR managers and policy developers develop strategies specific to workforces and organizational goals in both service and manufacturing industries. Encouraging businesses to invest more in engagement, recognition, and professional development programs: The findings underline the importance of focusing on employees for service sector companies. Enhancing workforce planning and performance management: The research underscores the need for improved structured workforce planning and performance assessment frameworks within manufacturing companies so that they are able to operate more efficiently. HR Perceptions Differ by Education Level: According to ANOVA results, HR perceptions are influenced by educational level, which may lead to organizations customizing communication and training methods according to employee qualifications. Respondents from a variety of ranks and experience levels are included in the study, which gives HR departments information they can use to create policies that cater to managers and frontline staff alike. Future Research Directions: Future longitudinal studies, industry-specific inquiries, and examinations of the ways in which HR practices have changed since the pandemic are made possible by the comparative framework and demographic analysis.

Social Implications

Improved sophistication in staff management across both sectors leads to decreased turnover, which bolsters the employer's brand. A balance in employee policies contributes to economy's resilience in the face of challenges, among other benefits.

Conclusion: This study, through its qualitative lens, uncovers rich insights into workforce management practices across India's service and manufacturing sectors. It underscores the importance of designing HR strategies that reflect sectoral needs, employee demographics, and evolving labor expectations. The findings advocate for an integrated WFM framework that combines structure with empathy, thereby ensuring organizational performance and long-term sustainability.

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