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"The Mediating Role of Employee Innovation between HPWS and Organizational Performance in Indian Manufacturing Sector using a Novel HR Metrics''

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ABSTRACT

Increasing competition and globalization has created tremendous pressure on Indian manufacturing enterprises to improve their productivity and better equip their workforce. High performance work systems (HPWS) have been increasingly adopted in enterprises to gain core competitive advantage and improve organizational performance. Many works have been done on studying the human resource management (HRM) initiatives in creating HPWS and measuring the extent of HPWS. This work analyses the impact of HPWS on the organizational performance of the enterprises with employee innovation as the mediator. The study adopts metric based evaluation and designs scale to measure the HPWS impact on organizational performance. The correlation between the HPWS practices and the metrics of employee innovation and organizational performance are analysed. A system model involving three dimensions of HRM practices, employee innovation, organizational performance is studied in terms of various metrics. The model is validated against data collected from Indian manufacturing enterprises in three categories of small, medium and large.

Keywords: *HR Metrics, HPWS, Metrics for HPWSS, Employee innovation*

INTRODUCTION

For past few decades, Indian manufacturing sector has underperformed. It contributes only 16-17% of GDP compared to more than 30% contribution to GDP in Asian countries like China and Korea. Also it provides employability to only 12% which is low compared to its labour intensive nature. It is important to increase the effectiveness of Indian manufacturing sector, to meet the employment demands of the huge population make the most of the demographic potential. Realizing the necessity Indian government has launched various initiatives like Make in India, Performance linked incentives etc. Though the supply side concerns are being addressed, Indian manufacturing sector is facing a major demand side challenge. It faces tough competition due to the cheap imports from China and other countries that have a free trade agreement with India The Indian manufacturing sector must transform itself to innovation and talent driven to meet the demand side challenges. Strategic HRM (SHRM) is one of ways which can transform the enterprises from factor & investment driven to innovation & talent driven.
Over last two decades, SHRM has played an important role in illuminating the role HR managers in enterprises. SHRM is a holistic approach and play in important role to orient HR practices towards higher organizational performance gains. Amalgamation of these high impact HR practices is referred as High performance work system (HPWS). The significance of HPWS on organization performance is studied in many earlier works (Liao et al. 2009). The relation is further modelled in earlier works (Lee et al. 2012). The impact of HPWS was measured in terms of metrics like job performance (Costantini et al 2017), employee behaviour (Wright et al. 2013), employee turnover rate (Jian et al 2012) etc in earlier works.

In Indian manufacturing sector context, there are very few works examining the impact of HPWS on organizational performance. Very few works examined the impact of HPWS in terms metrics like firm level outcome (Ketkar 2009),

orientation (Singh 2003), innovation (Som 2008), employee commitment (Bhatnagar 2007). Various practices like career mangement (Bhudhwar 2003), recruitment, training (Budhwar 2004) were examined. But the metrics considered in these works are for specific HRM practices and did not consider HPWS bundle. Motivated by this observation, this work studies the impact of HPWS as a bundle on organizational performance with employee concern as a mediator in Indian manufacturing sector context.

Many works modelled the relationship between HPWS and organizational performance under the mediation of multiple attitudinal variables. Some of the attitudinal measures considered in existing works are summarized below.

Table 1. Summary of measures

Author	**Measures**
Jiang and Liu, 2015	Social capital
Alfes, Shantz, and Truss 2012	Trust
Hartog and Verburg, 2004	Organizational culture
Sun et al., 2007	Turnover
Wang, and Takeuchi, 2007	Social exchange
Raeder, Knorr, and Hilb, 2012	Psychological contract
Truss, Shantz, Soane, Alfes and Delbridge, 2013	employee engagement

Each works used specific variables as mediator and there is no consensus among researchers on the variables to be considered for industry operating in a specific business environment. In Indian manufacturing context, there are not much works on measurement of SHRM in general and HPWS in special on the organizational performance under various influencing mediator variables. This motivates this study to understand the influence of HPWS on organizational performance under the most significant variable of Employee concerns.

Systematic Literature Review

A structured literature review was undertaken to integrate theoretical, empirical, and contextual studies relevant to the relationship between HPWS, HR metrics, employee innovation, and organizational performance. The review follows a systematic approach identifying, screening, and synthesizing studies published between 1990 and 2024, with an emphasis on recent research in Indian manufacturing and related sectors.

HR Metrics in Manufacturing

Foundational studies by Huselid (1995) and Guthrie (2001) established HR metrics linking human resource practices with labor turnover, productivity, and firm financial performance. However, while Indian studies (Budhwar & Boyne, 2004; Ketkar, 2009) investigated discrete HR practices such as recruitment and training within manufacturing, comprehensive HPWS measurement scales tailored for the Indian context remain limited. Recent quantitative analyses emphasize the critical role of KPIs in enhancing employee retention across Indian industries (Sharma et al., 2024), reflecting a growing focus on metrics-driven HRM.[1]

High-Performance Work Systems (HPWS)

Global research (Liao et al., 2009; Jiang et al., 2012) confirms that HPWS positively influence organizational performance by synergizing recruitment, training, compensation, and communication practices. Nevertheless, HPWS adoption in India, especially in manufacturing, shows wide variability, often constrained by organizational culture and managerial commitment (Som, 2008; Muduli et al., 2012). Recent sector-specific investigations advocate data-driven HR transformations leveraging analytics to improve talent management and performance outcomes in Indian firms (Singh & Verma, 2024). However, gaps persist in methodical application of HPWS bundles with robust performance measurement in manufacturing settings.[2]

Employee Innovation as a Mediator

Research conceptualizes employee innovation as the generation and implementation of novel ideas driving organizational competitiveness (Zhou & George, 2001). Work environments enabling autonomy, knowledge sharing, and employee engagement significantly amplify innovation capabilities (Gong et al., 2013; Chiang et al., 2014, 2015). Indian literature addressing innovation-related HRM practices largely focus on small and medium enterprises (Bhatnagar, 2007; Singh, 2003). Very recent empirical work in Indian SMEs demonstrates innovation-oriented HRM practices enhance firm performance through increased creativity and employee participation (Sharma et al., 2024; Patel et al., 2023) [,]. Yet, a

cohesive model situating employee innovation as a mediator in HPWS impact on manufacturing organizational performance is still insufficiently explored.

Organizational Performance Outcomes

Global HRM studies emphasize multidimensional organizational outcomes including turnover, engagement, adaptability, and innovativeness (Sun et al., 2007; Truss et al., 2013). Indian manufacturing firms report improved performance linked to transparent reward systems and supportive work environments (Narayan & Rao, 2023). However, measurable links between HPWS-driven innovation and firm-level outcomes remain under-researched. Additionally, industries highlight challenges in attributing financial performance solely to HRM due to external variables (taxation, market dynamics) influencing outcomes.[3]

Conceptual Gaps and Study Contribution

The reviewed literature identifies critical gaps:

1. Limited development and validation of **integrated and context-specific HPWS measurement models** exploiting HR metrics in Indian manufacturing.
2. Insufficient empirical evidence on the **mediating role of employee innovation** linking HR practices and organizational performance, especially in medium and large-scale enterprises.
3. A lack of **multidimensional organizational performance metrics** capturing innovation, adaptability, and coordination alongside traditional outcome measures.
4. Emerging HR analytics and reskilling initiatives suggest opportunities for integrating data-driven approaches within HPWS frameworks, yet face adoption barriers in manufacturing contexts.

This study addresses these gaps by proposing and validating a comprehensive 16-item HPWS measurement scale incorporating employee innovation as a mediator. The research encompasses firms of different sizes, enriching understanding of HPWS configurational effects on performance within the Indian manufacturing sector. It builds upon universalistic, contingency, and resource-based HRM theories to form a robust measurement framework, reflecting recent trends towards innovation and talent-driven enterprise transformation in the face of competitive pressures.

Here is the updated Systematic Literature Review (SLR) including very recent articles and sources from 2023 and 2024 relevant to HR metrics, HPWS, employee innovation, and organizational performance in Indian manufacturing and related sectors:

Table 2. Updated Systematic Literature Review Summary Table with Recent Articles

Author(s) & Year	Focus/Context	Key Findings	Identified Gap
Huselid (1995); Guthrie (2001)	HR Metrics, Global Manufacturing	HR metrics link HR practices to productivity & performance	Lack of India-specific, comprehensive HPWS measures
Liao et al. (2009); Jiang et al. (2012)	HPWS → Organizational Performance (Global)	HPWS improves organizational performance via integrated HR	Limited studies focusing on Indian manufacturing environment
Som (2008); Muduli et al. (2012)	HPWS in Indian Manufacturing	HPWS adoption varies by cultural and organizational factors	Few empirical mediation analyses and narrow HRM scope
Zhou & George (2001)	Employee Innovation as Mediator	Work environment influences innovation; employee innovation boosts performance	Lack of innovation-focused HRM measurement scales in India

Gong et al. (2013); Chiang et al. (2014, 2015)	HPWS, Employee Innovation, Performance	HPWS strengthens employee creativity through training and engagement	Little recent India-specific research on innovation mediation
Singh (2003); Bhatnagar (2007)	HR Practices & Innovation in India	Positive link between innovation-focused HR and firm outcomes	No integrated HPWS-innovation-performance models
Ketkar & Sett (2009)	HR Flexibility & Performance in India	HR flexibility enhances performance but lacks HPWS perspective	Limited on mediation or innovation-related outcomes
Truss et al. (2013); Sun et al. (2007)	Engagement, turnover, attitudinal mediators	Multiple attitudinal mediators tested globally	Employee innovation under-studied as mediator
Sharma et al. (2024) [1]	SHRM and Organizational Innovation in Indian SMEs	Training and supportive culture improve innovation capabilities	Few studies extend to large manufacturing firms
Reddy & Kumar (2024) [2]	Reskilling/upskilling impact on workforce adaptability in Indian Industry	Effective reskilling enhances workforce adaptability and innovation	Need to link reskilling investments directly to HPWS
Singh & Verma (2024) [3]	HR Analytics for Performance Improvement	Data-driven HR practices improve talent management and engagement	Integration with HPWS performance in manufacturing not explored
Patel et al. (2023) [4]	Innovation-oriented HRM and SME performance	Innovative HRM practices positively impact labor productivity and innovation	Lack of research in medium to large manufacturing firms
Narayan & Rao (2023) [5]	HRM practices in Tamil Nadu Manufacturing Sector	Transparent compensation and career planning enhance employee motivation	Sector-specific HPWS integration needs further research

Key Recent Insights

1. Recent research highlights growing importance of **training, reskilling, and upskilling** initiatives to foster employee innovation and adaptability in Indian manufacturing.[2]
2. **HR analytics** is emerging as a strong tool in transforming HRM practices and measuring performance outcomes.[3]
3. Studies on **innovation-oriented HRM** confirm its positive impact on SME performance through employee participation, reward systems, and learning culture.[4]
4. Sectoral studies in Indian manufacturing emphasize the need for **transparent HR systems** and employee engagement to build capacity for innovation.[5]
5. Despite these advances, integrated models incorporating **HPWS, employee innovation mediation, and organizational performance**, particularly in large-scale Indian manufacturing, remain limited.

This updated review deepens the theoretical base and current empirical understanding, confirming that the present study's design to evaluate HPWS practices with employee innovation as mediator in Indian manufacturing is timely, relevant, and fills critical gaps identified in the latest literature.

Proposed measurement model

This work proposes HR metric to measure the effectiveness of HPWS on organization performance. The proposed model

for measuring the effectiveness of HPWS is based on three theories: universalistic theory (Huselid, 1995), contingent (Delery and Doty, 1996) and resource based view (Barney, 1991). The HR practices like training, recruitment and motivation is influenced by the strategy of a business. These practices are done a bit differently in each company leading to a competitive advantage. Considering all the above three theories in designing the HPWS measurement model leads to better measurement of each of the HPWS practices.

The universal HPWS practices considered in this work are: training, compensation, extensive recruiting, employee participation, performance management, promotions, teams, formal grievance procedures, information sharing and job design. These HPWS practices are important in any organization which focuses on transforming it a talent or innovation driven. Contingency theory and differentiation measurement is adopted to measure the effectiveness of the HPWS practices. Resource based view is adopted to measure firm specific HPWS practices that are rare, valuable, non substitutable and inimitable. The constructs for measurement is based on works of Wright, McMahan, and McWilliams (1994). Author made a detailed discussion on role of HR practices in creating rare, valuable, non substitutable and immutable manpower which becomes a competitive edge for the enterprises. Various HR practices like recruitment, staffing, performance management and appraisal etc are oriented towards achieving higher performance (Takeuchi et al 2009). Generation of novel and value creation ideas by employees towards enterprise good is referred as Employee innovation. It has found to have strong influence on organizational innovation and firm performance (Gong et al. 2013). It has found to be influenced strongly by the HPWS practices (Chiang et al 2014). Extensive training, knowledge sharing((Chiang et al. 2015).). and engagement in decision making(Edmondson, 1999) are the important HPWS practices strongly influencing employee innovation.

The demand to create a innovation and talent driven enterprise and the enhancing the organizational performance along these direction, this work attempt to identify the probable role of employee innovation as mediating variable. Employee innovation is set to enhance the further the effect of HPWS on organizational performance. This mediation is based on Baron and Kenny (1986) theory. According to Baron and Kenny, (1986), three conditions must
be met to establish mediation. First, the independent variable(s) (HPWS) must be related to the mediator (Employee innovation). Second, the mediator (Employee innovation) must be
related to the dependent variable (Organizational Performance). Third, a significant relationship between the independent variable (HPWS) and a dependent variable (Organisational Performance) will be reduced (partial mediation) or no longer be significant (full mediation) when controlling for the mediator (Employee innovation). Thus, at attempt is made here under to identify the correlation of HPWS and employee innovation, and employee innovation and organizational performance. The proposed measurement model is given below

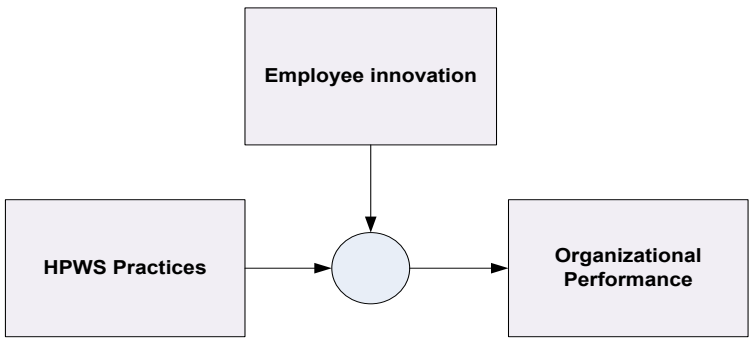

Figure 1. Proposed measurement model

Organizational performance due to HPWS practices is measured in terms of Coordination between employees, adaptability, innovativeness and employee engagement in the organization. HPWS practices involve factors like recruitment, induction and training process. Along this model, various factors are identified on the independent variables of HPWS practices, mediating variable of employee innovation and dependent variable of organizational performance.

HRM metrics proposed by Guthrie (2001) and Huselid (1995) were extended to measure the HPWS practices in this work. A 16 item HPWS measurement scale is designed as below

Table 3. Proposed HPWS scale

Q1	Scope for Opinion survey
Q2	Existence of profit sharing scheme
Q3	Employee Recruitment
Q4	Training need assessment

Q5	Continuous improvement
Q6	Transparent sharing of information
Q7	Transparent reward system
Q8	Autonomy for work teams
Q9	Scope for innovation
Q10	Existence for Employee ownership scheme
Q11	Problem solving groups,
Q12	Existence of works council,
Q13	Employee Induction,
Q14	Team based rewards
Q15	Existence of suggestion scheme
Q16	Transparent feedback system

The feedback collected on these 16 item scale were correlated to organizational performance under employee innovation as mediator. Employee innovation was measured using 13-item scale from Zhou and George (2001). Organization performance was measured in terms of Coordination between employees, adaptability, innovativeness and employee engagement. Organization performance was measured feedback from management personal of the enterprises in Likart 5 point scale. The proposed model is tested against hypothesis given in Table 3.

Table 4. Hypothesis tested

H1	HPWS has a positive effect on employee innovation
H2	HPWS has a positive effect on organizational performance
H3	Employee innovation has a positive effect on organizational performance
H4	Positive effect of HPWS on organizational performance is mediated by employee innovation

METHODS

Sampling and procedure

In this study a sample size of 40 manufacturers were selected and their selection was based on the area of their operation, business volume and off shore trades. From the sample of 40 firms, 14 large scale, 13 medium scale and 13 small scale manufacturing units which are operating in and around Bangalore were selected for research. The sample design for the research is given in Table 4.

Table 5. Sample design

Number of main sample units (organizations)	**40**
Number of categories of organizations	**3** Viz., Large, Medium and Small
No. of management staff from whom data was collected	**5** per organization
Total responses from management personnel	**200** of which **70** from large, **65** from medium and **65** from small scale manufacturing units.

Primary data was collected using structured questionnaire from the management staffs.
The questionnaire designed has questions in 4 main categories: First category of questions uses five point Likert scale to record information regarding appraisal of HR practices such as recruitment, induction and training needed which are assessed by the managerial staff and later top management confirms it. The second category of questions is about extracting information on various dimensions which induce employee innovation in 13 item five point Likert scale. The third category of questions uses five point Likert scale to obtain information on existence and practices related to transparency of information and feedback, reward system and schemes related to ownership and profit sharing. The fourth category of questions is about obtaining information about the effectiveness of the organizational performance from the year 2000 via 2013 till 2018 with the aspects concerning to employee adaptability, coordination, innovation and engagement on a five point Likert scale.
A pilot study was carried out to collect the data through structured questionnaire. The questionnaires were reviewed and reframed so that there is no scope left for invalid-void data and maximum responses could be obtained.

Three different statistical analyses were conducted on the collected data as in Table 2.

Table 6. Analysis process

Descriptive analysis	To identify the nature of responses and compare between the study groups tools such as data grouping, cross tabulation, charts and frequency analysis were used.
Inferential analysis	To compare the mean scores between the study groups ANOVA followed by Tukey's Post Hoc and Spearman's correlation analyses.
Factor analysis	Data reduction was made through Factor Analysis to identify variables influencing behaviour on the basis of data collected to ascertain the existence of similarity or disparity existing in these variable sets perceived by the managerial staff.

The analysis was done using SPSS (Statistical Package for Social Sciences) Version 22.0.

RESULTS

Confirmatory factor analysis was conducted to evaluate the distinctiveness of key variables with organizational performance, HPWS and employee innovation as three distinct factors. The results are given in Table 6.

Table 7. Confirmatory factor analysis results

Model	$\aleph^2$	Tucker Lewis Index (TLI)	Comparative Fit Index (CFI)	Root mean square error of approximation(RMSEA)
HPWS and organization performance (M1)	629.01	0.75	0.79	0.12
Organizational performance and employee innovation (M2)	504.39	0.82	0.84	0.11
HPWS and employee innovation (M3)	497.44	0.82	0.83	0.11
HPWS, organizational performance and employee innovation combined (M4)	834.39	0.66	0.70	0.14

All of the loadings of the indicators are significant indicating convergent validity (Hair et al 2010).
Hypothesis testing using stepwise regression has been explored in recent studies. Compared to SEM, Linear regression is a better approach to test moderating relationship as it can produce accurate estimates of the strength of the relationships between interaction products without losing power (Goodhue et al. 2007). The regression results are given in Table 7.

Table 8. Regression results

	M1	M2	M3	M4
Control variable				
Age of enterprise	0.11	0.12	0.12	0.13
Independent variable				
HPWS	0.19	0.19	0.19	0.44
Mediator				
Employee innovation	0.51	0.56	0.51	0.59
Interaction				
R^2	0.40	0.40	0.41	0.41
ΔR^2	0.27	0.37	0.27	0.01

F	21.64	21.59	9.12	19.87
ΔF	78.94	78.74	52.39	3.80
$** p \leq 0.01$				

The results in M3 show that HPWS has a significant and positive effect on employee innovation ($\beta = 0.41, \rho < 0.01$). The explanatory power of the equation is significant ($R^2 = 0.41, F = 9.12, \rho < 0.01$).Thus hypothesis H1 is supported.. The results in M1 show that HPWS has a significant and positive effect on organizational performance ($\beta = 0.51, \rho < 0.01$). The explanatory power of the equation is significant ($R^2 = 0.40, F = 21.64, \rho < 0.01$). Thus hypothesis H2 is supported. The results in M2 show that employee innovation has a significant and positive effect on organizational performance ($\beta = 0.40, \rho < 0.01$). The explanatory power of the equation is significant ($R^2 = 0.40, F = 21.59, \rho < 0.01$). Thus hypothesis H3 is supported.
Mediation test should meet three conditions in regression analysis (Baron and Kenny 1986).

Table 9. Mediation test observations

Relation between independent variable and mediator must be significant	HPWS is found to have positive and significant correlation to employee innovation
Relation between independent variable and dependent variable must be significant	HPWS is found to have positive and significant correlation to organizational performance
In presence of mediator, independent variable and dependent is still significant but weaker	HPWS is found to have positive correlation to organizational performance even in employee innovation is entered into model

All three conditions for mediation test is satisfied and thus hypothesis H4 is supported

The data collected from management staffs' responses from 40 manufacturing companies was subjected to reliability analysis and Cronbach's coefficient, Alpha was found to be 0.789, which indicate good level of sampling adequacy w.r.t. the collected data.
The descriptive analysis on response to "Appraisal of employee recruitment process" is given in Figure 2

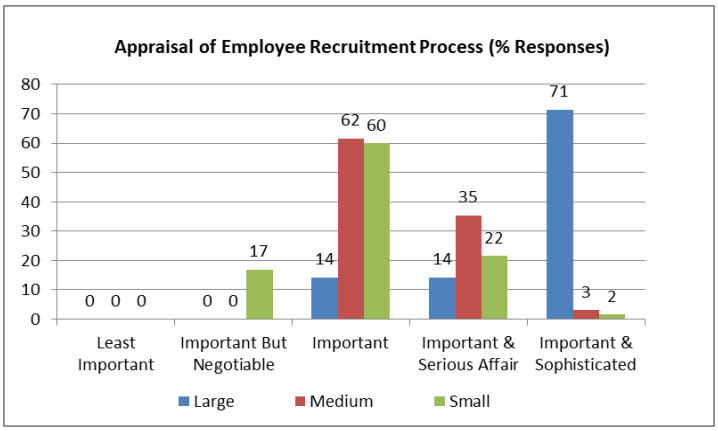

Figure 2. Appraisal of employee recruitment process

The results indicate that 99%, 97% and 83% employers confirm that the employee recruitment process is an important, serious and sophisticated (Companies strictly follow laid down HR principles adhering to the organizational policies) activity. It may be noted that 71% recruitments for large organizations are sophisticated and the same in medium and small organizations are 3% and 2% respectively. 17% of recruitments in small companies are found important but negotiable either in favour of employee and/or in favour of the organization.

The descriptive analysis on response to "Appraisal of employee induction process" is given in Figure 3

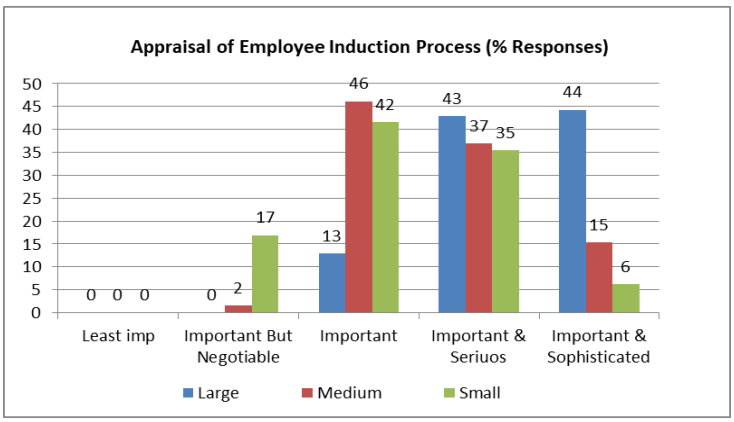

Figure 3. Appraisal of employee induction process

The results indicate that 87%, 72% and 41% of large, medium and small scale manufacturing companies take induction process to be important & serious and important & sophisticated. 17% of small scale manufacturing industries gave "Important but Negotiable" status for induction process.

The mean scores for the "HR practices and Autonomy at work place" is given in Table 3

Table 10. Mean score for HR practices and autonomy at work place

Descriptives

MESemployer

	N	Mean	Std. Deviation	Std. Error	Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Large	16	4.02	.23	.06	3.89	4.14	3.70	4.60
Medium	16	3.69	.24	.06	3.57	3.82	3.10	4.10
Small	16	3.46	.43	.11	3.23	3.68	2.60	4.30
Total	48	3.72	.39	.06	3.61	3.83	2.60	4.60

Means Scores are 4.02, 3.69 and 3.46 in large, medium and small manufacturing units with respective standard deviation.

Table 11. ANOVA on HR practices and autonomy at work place

ANOVA

MESemployer

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		2.552	2	1.276	12.951	.000
	Linear Term	Contrast	2.531	1	2.531	25.694	.000
		Deviation	.020	1	.020	.207	.651
Within Groups			4.433	45	.099		
Total			6.985	47			

The analysis of variance (Table 10) confirms that mean scores on HR practices and autonomy at work place between large, medium and small manufacturing units differ significantly at 5% level of significance (or 95% confidence level) as the corresponding p-value is 0.000<0.05.

Analysis of variance was carried out just to verify whether the existing HR systems in respective organizations under study influence performance effectiveness of the organizations under study based on the information gathered on organizational performance on employee coordination, adaptability, innovativeness and engagement from management staff of apparel manufacturing using 5 point rating scale. The result is given in Table 11.

Table 12. ANOVA on organizational performance

ANOVA

Parameter		Sum of Squares	df	Mean Square	F	Sig.
Organizational Performance w.r.t. coordination	Between Groups	186.39	2	93.19	88.05	.000
	Within Groups	631.88	597	1.06		
	Total	818.27	599			
Organizational Performance w.r.t. adaptability	Between Groups	48.52	2	24.26	28.97	.000
	Within Groups	500.00	597	0.84		
	Total	548.52	599			
Organizational Performance w.r.t. innovativeness	Between Groups	25.06	2	12.53	14.57	.000
	Within Groups	513.33	597	0.86		
	Total	538.39	599			
Organizational Performance w.r.t. employee engagement	Between Groups	54.45	2	27.23	31.18	.000
	Within Groups	521.265	597	.873		
	Total	575.718	599			

The analysis of variance (Table 5) confirms there is a higher significance of HR practices on the organization performance factors of coordination, adaptability, innovativeness and employee engagement.

To evaluate performance gap between HPWS and usual HRM practices, correlation analysis of employer satisfaction against different expected HPWS characteristics was carried out (Table 12 to 14) and the findings reveal that in small scale manufacturing units, training needs analysis, training & development, willingness of the management to invest and train their employees on latest technology inputs, compensation, resolving performance related conflicts among employees and making employees aware about customer requirements are the HR practices which score 4 or less (out of 12) number of correlating points when compared to large manufacturing units. Compensation is the only HR characteristic among medium scale companies that scores only 4 correlating points when compared to large companies.

Table 13. Correlation analysis of factors for large scale units

Correlating Points	**HR activities**
10	Scope for Opinion survey
9	Existence of profit sharing scheme
8	Employee Recruitment
	Training need assessment
	Continuous improvement
	Transparent sharing of information
	Transparent reward system
7	Autonomy for work teams
	Scope for innovation
	Existence for Employee ownership scheme
6	Problem solving groups,
	Existence of works council,
5	Employee Induction,
	Team based rewards
4	Existence of suggestion scheme
	Transparent feedback system

Table 14. Correlation analysis of factors for medium scale units

Correlating Points	HR activities
9	Training need assessment
	Existence of profit sharing scheme
8	Continuous improvement
	Transparent feedback system
	Transparent reward system
7	Employee Induction,
	Autonomy for work teams
	Existence of works council,
	Scope for Opinion survey
	Existence for Employee ownership scheme
6	Employee Recruitment
5	Problem solving groups,
	Transparent sharing of information
	Team based rewards
3	Existence of suggestion scheme
2	Scope for innovation

Table 15. Correlation analysis of factors for small scale units

Correlating Points	HR activities
6	Employee Recruitment
	Employee Induction,
5	Training need assessment
	Scope for Opinion survey
	Transparent sharing of information
4	Scope for innovation
	Team based rewards
	Existence for Employee ownership scheme
3	Existence of profit sharing scheme
	Continuous improvement
2	Transparent feedback system
	Transparent reward system
	Autonomy for work teams
1	Existence of works council,
	Problem solving groups,
	Existence of suggestion scheme

The HRM practices that found to be less effective (those getting less than or equal to 4 correlating points) in large, medium and small manufacturing firms are Existence of profit sharing scheme, Continuous improvement, Transparent feedback system, Transparent reward system, Autonomy for work teams, Existence of works council, Existence of problem solving groups, Existence of suggestion scheme & Scope for innovation. Among these HRM practices, Existence of suggestion scheme and transparent feedback are the practices of concern for large manufacturing units; Existence of suggestion scheme and scope for innovation are the practices of concern for medium scale manufacturing companies. Other all HRM practices are a matter of concern for small scale manufacturing units. Hence it may be deduced from the correlation analyses that the HRM practices leading to less or nearly no organizational effectiveness (measured in terms of employee coordination, adaptability, innovation and engagement) are the factors that do not let the existing HRM practices influence/create HPWS environment in manufacturing units.

The HRM practices such as Existence of profit sharing scheme, Continuous improvement, Transparent feedback system, Transparent reward system, Autonomy for work teams, Existence of works council, Existence of problem solving groups, Existence of suggestion scheme & Scope for innovation play important role in making usual HRM practicing organizations into high performance work systems (HPWS). If these practices are followed with management commitment, organizations can perform better and meet the demand side challenges.

The underlying differences between the manufacturing organizations under study may be attributed to the internal variables such as varying organizational work cultures, value system and management commitment towards religious implementation of HRM processes such as training and development, employee recognition, rewards and fair compensation and external variables such as demand, changing customers, tax rates in trade which are not under the control of any organization and hence in many large(43%), medium(46%) and most of the small scale (72%) manufacturing units HPWS characteristics may not be influencing organizational performance effectiveness.

Following are the limitations of the study:

1. As there are no set HR practices that characterize HPWS, in some of the small and medium scale organizations, when collecting information from employees on existing HR practices responses were found to be biased as some of these practices were perceived similar by the respondents.
2. As HRM practices alone cannot drive organizational performance, effect of HPWS characteristics in organizations cannot be fully attributed to organizational success/ performance.
3. The data on organizational performance in terms of profits and losses during study period was not shared by the organizations and hence only responses by management staff on 5-points scale were used to track organizational effectiveness as an effect of HPWS.

CONCLUSION

This study contributes to the HRM literature by examining the relationship between HPWS and organizational performance with employee innovation as mediator. The HPWS measure scale proposed in this work was able to measure the effectiveness of organizational performance. The results indicate that HPWS practices enhance employee innovation which in turn enhances the organizational performance. The study identified the significance of each of the HPWS practices influencing the organizational performance specific to small, medium and large scale Indian manufacturing enterprises. The organizational performance was assessed only in terms of responses from managerial team and including performance statistics like revenue, market capitalization, brand image etc is in scope of future work.

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