

EXPLORING THE LINK BETWEEN HIGH-PERFORMANCE WORK PRACTICES AND INNOVATIVE WORK PERFORMANCE: THE MEDIATING EFFECT OF EMPLOYEE MOTIVATION

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Abstract

Background: High-Performance Work Practices (HPWPs) are widely recognized as strategic human resource practices that enhance employee capabilities, motivation, and organizational performance. However, limited research has examined how HPWPs influence employees' innovative work performance, particularly in Pakistan's manufacturing sector. Moreover, the underlying psychological mechanisms explaining this relationship remain insufficiently explored. This study investigates the impact of HPWPs on innovative work performance, focusing on the mediating role of employee motivation in selected sugar manufacturing companies of Khyber Pakhtunkhwa, Pakistan. **Methods:** The study adopted a positivist research philosophy and a quantitative survey design. Data were collected from employees working in various departments and job levels in selected sugar mills in Khyber Pakhtunkhwa. Stratified random sampling was used to ensure proportional representation of employee categories. Five High-Performance Work Practices were examined: recruitment and selection, performance appraisal, training and development, employee involvement, and compensation system. A structured questionnaire was used to collect primary data, and the responses were analyzed using Statistical Package for the service solutions (SPSS) version 21. **Results:** The findings revealed that all five High-Performance Work Practices had a significant positive relationship with employees' innovative work performance. The analysis further indicated that employee motivation significantly mediated the relationship between HPWPs and innovative work performance. This suggests that effective implementation of HR practices enhances innovation primarily by improving employees' motivation. **Conclusion:** The study concludes that High-Performance Work Practices play a crucial role in promoting innovative work performance through enhanced employee motivation. The findings contribute to the limited empirical literature on HRM practices and innovation in Pakistan's manufacturing sector, particularly the sugar industry, and provide practical implications for managers seeking to improve innovation through effective human resource strategies.

Keywords: High-Performance Work Practices, Employee Motivation, Innovative Work Performance, Human Resource Management, Sugar Industry, Pakistan.

Introduction

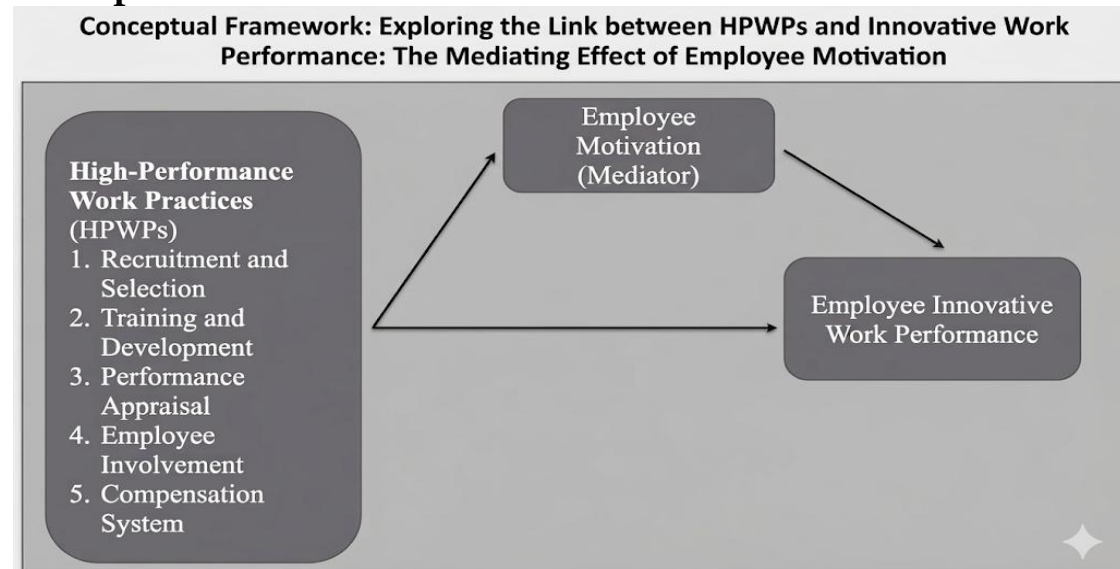
Increasing competition in local and international markets, rapid technological advancements, and rising customer expectations have compelled organizations to search for sustainable sources of competitive advantage (Abu Bakar, 2024). In this context, human resources have emerged as a critical strategic asset. Organizations are increasingly recognizing that effective management of employees can significantly influence productivity, innovation, and long-term performance. As a result, attention has shifted from traditional factors such as capital and technology toward human resource management practices that enhance employee capabilities and commitment (Aboramadan, 2022).

High-Performance Work Practices (HPWPs) represent a set of integrated human resource practices designed to improve employee skills, motivation, and participation (Akomea et al., 2023). These practices typically include recruitment and selection, training and development, performance appraisal, employee involvement, and compensation systems. When implemented effectively, HPWPs can enhance employee attitudes and behaviors, ultimately leading to improved organizational outcomes (Zhu et al., 2023). However, the relationship between HPWPs and performance is not always direct, as employee perceptions and psychological responses play an important role in translating HR practices into performance outcomes (Abualigah et al., 2023).

Recent research suggests that employee-level mechanisms such as motivation and empowerment help explain how HPWPs influence performance (Chang et al., 2021). These personal factors shape how employees interpret HR practices and determine whether they respond with innovative behaviors (Al Daboub et al., 2024). Despite growing interest in this area, understanding of the mediating processes between HPWPs and innovative work performance remains limited. Scholars emphasize the need for studies that examine how employee motivation and empowerment contribute to transforming HR practices into innovative outcomes, particularly within specific industrial contexts (Deepa et al., 2025).

In developing countries like Pakistan, many traditional industries continue to face challenges related to outdated HR practices, rigid structures, and limited employee autonomy. The sugar manufacturing sector is one such industry where improving employee motivation and empowerment may enhance innovation and productivity. Therefore, examining the role of HPWPs in promoting innovative work performance through motivational mechanisms is both timely and relevant.

Conceptual Framework



Knowledge Gaps

A review of the literature on High-Performance Work Practices highlights several important gaps. First, although many studies examine the relationship between HPWPs and organizational performance, limited attention has been given to innovative work performance as a key outcome. Most research has relied on financial indicators, overlooking non-financial measures such as employee creativity and innovation.

Second, the mechanisms explaining how HPWPs influence employee outcomes remain insufficiently explored. This issue is often referred to as the “black box” problem in HRM research. Scholars suggest that employee-level variables such as motivation and empowerment may serve as important mediators and moderators, yet empirical evidence remains limited.

Third, the employee perspective is frequently neglected in HPWP research. Understanding how employees interpret and respond to HR practices is essential for explaining why similar practices produce different outcomes across organizations. Motivation and empowerment are particularly relevant psychological factors that may strengthen the relationship between HPWPs and innovative work performance.

Finally, there is a lack of empirical research examining these relationships in Pakistan’s manufacturing sector, especially in the sugar industry. This gap highlights the need for studies that investigate how HPWPs, employee motivation, and empowerment jointly influence innovative work performance in this specific context.

Research Methodology

This study was grounded in the positivist research paradigm, which assumes that social phenomena can be measured objectively and relationships among variables can be examined using statistical methods. The positivist approach

was considered appropriate because the study aimed to test the hypothesized relationships between High-Performance Work Practices, employee motivation, and innovative work performance. The research followed a deductive reasoning process in which theoretical assumptions derived from previous literature were empirically tested using quantitative data. This approach allowed the researcher to examine cause-and-effect relationships and generalize findings within similar organizational contexts.

The study adopted a positivist epistemology, as it focused on testing clearly defined variables and their relationships. The use of structured questionnaires and statistical analysis aligned with the assumption that knowledge can be generated through empirical observation and measurement. The research specifically examined how High-Performance Work Practices influence employees' innovative work performance and whether employee motivation mediates this relationship. This objective measurement of variables supported the selection of a quantitative methodology.

The research was conducted in selected private-sector sugar manufacturing companies located in Khyber Pakhtunkhwa, Pakistan. These organizations were chosen because limited empirical evidence exists regarding the relationship between High-Performance Work Practices and innovative work performance within this industrial context. A quantitative cross-sectional survey design was employed to collect data from employees working at different organizational levels. This design was appropriate for examining relationships among variables and testing the proposed hypotheses.

The study examined High-Performance Work Practices as the independent variable, employee motivation as the mediating variable, and employees' innovative work performance as the dependent variable. High-Performance Work Practices included recruitment and selection, performance appraisal, training and development, employee involvement, and compensation system. These variables were measured using structured questionnaire items adapted from previous studies.

The target population consisted of employees working in private-sector sugar manufacturing companies in Khyber Pakhtunkhwa. Stratified random sampling was used to ensure representation of different employee categories, including administrative staff, supervisors, and operational employees. The population was divided into strata based on job levels, and respondents were randomly selected from each group to improve accuracy and representativeness.

Table 1: List of Sugar Mills from KP

S. No	Name of Sugar Mill	Location	Population Size
01	Al-Moiz Industrial Ltd	D.I.Khan	540
02	Chashma- 1 Sugar Mills Ltd	D.I.Khan	956
03	Chashma- 2 Sugar Mills Ltd	D.I.Khan	794
04	Tandlianwala Sugar Mills Ltd	D.I.Khan	751
05	Khazana Sugar Mills Limited	Peshawar	649
06	Premier Sugar Mills Limited	Mardan	548
07	Bannu Sugar Mills Limited	Bannu	367
Total			4605

Table 2: Sample Size Distribution

T. No	Name of Sugar Mill	Location	Population Size	Sample Size
01	Al-Moiz Industrial Ltd	D.I.Khan	540	43
02	Chashma- 1 Sugar Mills Ltd	D.I.Khan	956	76
03	Chashma- 1 Sugar Mills Ltd	D.I.Khan	794	64
04	Tandlianwala Sugar Mills Ltd	D.I.Khan	751	60
05	Khazana Sugar Mills Limited	Peshawar	649	52
06	Premier Sugar Mills Limited	Mardan	548	44
07	Bannu Sugar Mills Limited	Bannu	367	29
Total			4605	368

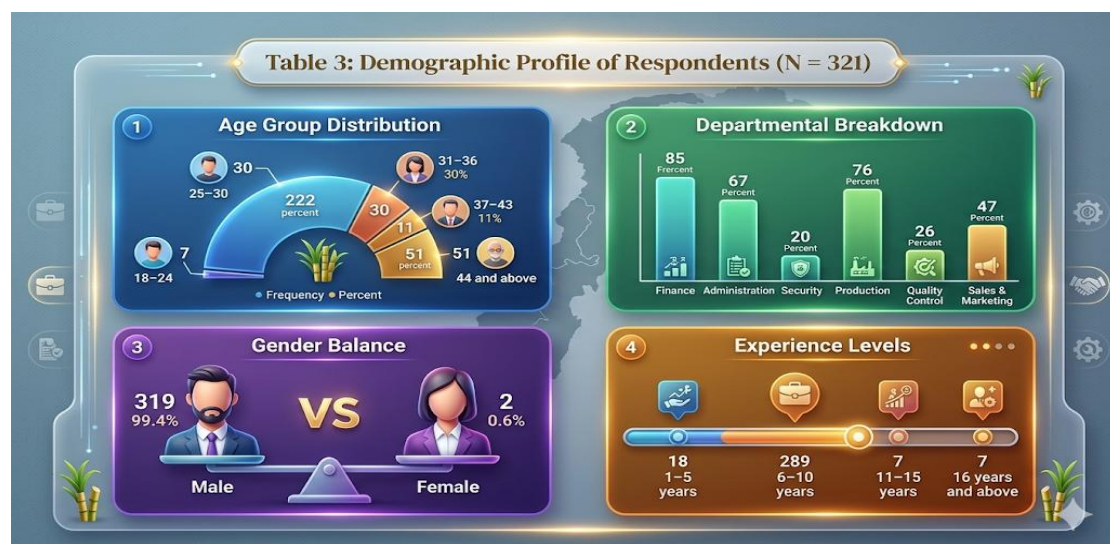
Primary data were collected using a structured questionnaire. After obtaining permission from management, questionnaires were distributed directly to employees using a drop-off and pick-up method. This approach allowed respondents to complete the questionnaire at their convenience and minimized response bias. The study followed a cross-sectional design, as data were collected at a single point in time.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics such as mean and standard deviation were used to summarize the data, while inferential statistics were applied to test the hypotheses. Correlation analysis examined relationships among variables, and mediation analysis was conducted to assess the mediating role of employee motivation between High-Performance Work Practices and employees' innovative work performance.

Results

Table 3: Demographic Profile of Respondents (N = 321)

Variable	Category	Frequency	Percent
Age Group	18–24	7	2.2%
	25–30	222	69.2%
	31–36	30	9.3%
	37–43	11	3.4%
	44 and above	51	15.9%
	Department	Finance Section	85
Administration Section		67	20.9%
Security Section		20	6.2%
Production Section		76	23.7%
Quality Control Section		26	8.1%
Sales & Marketing Section		47	14.6%
Gender	Male	319	99.4%
	Female	2	0.6%
Experience	1–5 years	18	5.6%
	6–10 years	289	90.0%
	11–15 years	7	2.2%
	16 years and above	7	2.2%



The demographic analysis indicates that the majority of respondents were aged between 25–30 years (69.2%), followed by employees aged 44 years and above (15.9%), suggesting a predominantly young workforce with some experienced senior employees. Regarding departmental representation, the

largest proportion of respondents belonged to the Finance Section (26.5%) and Production Section (23.7%), followed by Administration (20.9%), indicating balanced participation across operational and administrative units. The gender distribution shows a highly male-dominated workforce, with 99.4% male and only 0.6% female respondents, reflecting the traditional employment pattern in the sugar industry. In terms of organizational experience, most employees (90.0%) had 6–10 years of experience, indicating a relatively stable and moderately experienced workforce. Overall, the sample represents employees who are primarily young, male, moderately experienced, and distributed across key functional departments of the sugar manufacturing companies.

Table 4: Reliability Analysis of Study Variables

Variable	Cronbach's Alpha	No. of Items	Level of Reliability
High-Performance Work Practices	0.915	31	Excellent
Employee Motivation	0.772	12	Acceptable
Employee Innovative Work Performance	0.818	12	Good

Reliability analysis was conducted to assess the internal consistency of the measurement scales used in the study. The results show that High-Performance Work Practices demonstrated excellent reliability with a Cronbach's alpha value of 0.915 across 31 items, indicating a high level of internal consistency. Employee Motivation showed a Cronbach's alpha of 0.772 for 12 items, which falls within the acceptable range, suggesting that the scale reliably measures the construct. Similarly, Employee Innovative Work Performance yielded a Cronbach's alpha value of 0.818 across 12 items, indicating good reliability. Overall, all variables exceeded the commonly accepted threshold of 0.70, confirming that the measurement instruments used in this study were reliable and suitable for further statistical analysis.

Correlational Analysis

H1: There is a significant association between High-Performance Work Practices, Employee Motivation, and Employee Innovative Work Performance.

Table 5: Correlations Matrix

Variables	High-Performance Work Practices	Employee Motivation	Employee Innovative Work Performance
High-Performance Work Practices	1	.909**	.957**

Variables	High-Performance Work Practices	Employee Motivation	Employee Innovative Work Performance
Sig. (2-tailed)		.000	.000
N	321	321	321
Employee Motivation	.909**	1	.893**
Sig. (2-tailed)	.000		.000
N	321	321	321
Employee Innovative Work Performance	.957**	.893**	1
Sig. (2-tailed)	.000	.000	
N	321	321	321

Note: Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis shows very strong positive relationships among the three variables. High-Performance Work Practices are strongly associated with Employee Motivation ($r = .909$, $p < .01$) and Employee Innovative Work Performance ($r = .957$, $p < .01$), indicating that effective HR practices are closely linked to both motivated employees and higher innovation at work. Employee Motivation also shows a strong positive correlation with Employee Innovative Work Performance ($r = .893$, $p < .01$), suggesting that more motivated employees tend to exhibit higher innovative behaviors. All correlations are statistically significant at the 0.01 level, confirming that the observed relationships are unlikely to be due to chance. These findings support the hypothesis that HPWPs and motivation are positively associated with innovative work performance in the selected sugar manufacturing companies.

Mediation Analysis

H2: "There is a mediating influence of Employee Motivation in the relationship between High Work Performance Practices (HPWPs), and Employee innovative work performance."

"High-Performance Work Practices > Employees Motivation > Employee Innovative Work Performance"

Table 6: Model Summary

R	R ²	MSE	F	Df1	Df2	p
.9582	.9182	.0088	1784.5948	2.0000	318.0000	.0000

Table 7: Path Coefficient

Path	Coefficient	p value
High-Performance Work Practices> Employee Motivation	.9190	.0000
Employees Motivation>Employee Innovative Work Performance (b1)	.8660	.0000
High-Performance Work Practices> Employee Motivation>Employee Innovative Work Performance (c)	.1338	.0000
High-Performance Work Practices>Employee Innovative Work Performance (c)	.9296	.0000

Table 7: Summary of Direct, Indirect, and Total Effect by Hayes model 04.

Relationships	Total effect	Direct Effect	Indirect Effect	Confidence Interval Lower Bounded	Upper Bounded	Conclusion
High-Performance Work Practices > Employee Motivation > Employee Innovative Work Performance	.9296 (.000)	.7958 (.000)	.1338 (.000)	.0607 .1925		– Partially mediated

The tables present the results of a statistical analysis, likely a mediation analysis using Hayes' PROCESS model, to test the hypothesis that Employee Motivation mediates the relationship between High-Performance Work Practices (HPWPs) and Employee innovative work performance. The first table, Table Model Summary, provides an overview of the overall model fit. The R-squared value of 0.9182 indicates that approximately 91.82% of the variance in the dependent variable (Employee innovative work performance) is explained by the model, which is a very strong fit. The F-statistic of 1784.5948 and p-value of .0000 confirm that the model is statistically significant. A common rule of thumb is that a p-value less than 0.05 indicates statistical significance. The second table, Table Path Coefficient, shows the direct relationships between the variables. The coefficient of .9190 for the path from High-Performance Work Practices to Employee Motivation and the p-value of .0000 indicate a strong, statistically significant positive relationship. Similarly, the coefficient (.8660) for the path from Motivation to innovative work performance, with a p=.0000, point a strong, and significant

relationship. The third table, Table 4.16 Summary of Direct, Indirect, and Total Effect relationships. The Indirect value of .133 founds significant, as (.0607 to .1925) does not cross the zero. This is a key rule of thumb for mediation: if the confidence interval for the indirect effect does not include zero, the effect is considered statistically significant. The Direct Effect of .7958 is also significant. Since both the direct and indirect effects are significant, the conclusion is Partially mediated, meaning that while employee motivation does play a significant role in the relationship, HPWPs still have a direct effect on innovative work performance.

Discussion

The first hypothesis of this study proposed a significant association between High-Performance Work Practices (HPWPs), Employee Motivation, and Employee Innovative Work Performance. The correlation analysis strongly supports this hypothesis. Pearson correlation coefficients ranged from .731 to .957, all indicating strong positive relationships between variables, while the p-values were all .000, confirming statistical significance at the 0.01 level. For instance, the correlation between HPWPs and Employee Innovative Work Performance was exceptionally strong ($r = .957$), suggesting that improvements in HR practices are closely linked to higher innovative output among employees. Similarly, Employee Motivation showed strong positive correlations with both HPWPs ($r = .909$) and Employee Innovative Work Performance ($r = .893$), highlighting the critical role of motivation in driving innovative behavior. These results are consistent with previous research emphasizing that effective HR practices, coupled with employee motivation, positively influence work performance and innovation (Al-Daboub et al., 2024; Deepa et al., 2025; Akomea et al., 2023).

The second hypothesis tested whether Employee Motivation mediates the relationship between HPWPs and Employee Innovative Work Performance. The mediation analysis, conducted using Hayes' PROCESS model, indicated a robust model fit with an R^2 of 0.9182, explaining approximately 91.82% of the variance in innovative work performance. Both direct ($\beta = .7958$, $p < .001$) and indirect effects ($\beta = .1338$, 95% CI [.0607, .1925]) were statistically significant, suggesting a partial mediation effect. In other words, while HPWPs directly impact innovative work performance, Employee Motivation also plays a significant mediating role, amplifying the effect of HR practices on employee innovation. This finding aligns with social exchange theory and resource-based perspectives, which posit that investments in HR practices foster motivation, which in turn enhances organizational outcomes (Abu Bakar, 2024; Aboramadan, 2022; Zhu et al., 2023). The results emphasize that motivated employees are more likely to utilize HR resources effectively, leading to improved innovative performance.

In conclusion, the study provides compelling empirical evidence that HPWPs significantly enhance Employee Innovative Work Performance both directly and indirectly through Employee Motivation. These findings highlight the importance of designing and implementing effective HR strategies that foster employee motivation to achieve higher levels of creativity and innovation in organizational settings.

Contributions of the Study

- **Theoretical Contributions:** This study extends understanding of how High-Performance Work Practices (HPWPs) influence employees' innovative work performance in the sugar industry of Khyber Pakhtunkhwa. It highlights the mediating role of employee motivation and provides evidence from an under-researched context. The findings confirm that strategic HR practices are positively associated with innovative outcomes, reinforcing existing HRM literature and offering insights specific to multi-project and emerging provincial settings.
- **Practical Contributions:** The research identifies gaps in the implementation of HPWPs despite relatively high innovative performance. It suggests that managers should strengthen HR policies, including training and development, recruitment and selection, performance appraisal, and compensation systems, to improve employee motivation and innovation. By applying these practices, organizations can better leverage human capital to enhance productivity and innovation.
- **Methodological Contributions:** The study demonstrates the utility of a quantitative, explanatory research design using structured questionnaires and statistical techniques such as correlation analysis. This approach provides reliable, objective findings and a replicable model for examining the relationships between HPWPs, motivation, and innovative work performance in organizational settings.

Limitations and Suggestions for Future Research

The study is limited by its focus on a subset of sugar mills, a relatively small sample, and contextual factors that may restrict generalizability. Future research could include other industries, expand the sample size, and explore additional HPWPs, such as opportunity-enhancing practices like teamwork, information sharing, and decentralized decision-making. Cross-cultural studies could further validate the applicability of these findings.

Recommendations

- **Institutionalization of Training and Development:** Organizations should implement effective training programs tailored to evolving machinery, technology, and operational processes to improve employee skills and innovative performance.

- **Staffing and Recruitment:** Managers should ensure appropriate personnel placement by matching employee skills with project requirements to optimize performance and innovation outcomes.
- **Reward Systems:** Well-designed compensation and incentive mechanisms should be aligned with both individual and team performance to encourage higher motivation and innovation.
- **Resource Allocation and Management Support:** Management should provide structured frameworks for performance assessment and incentives, actively driving innovation rather than playing a passive role, to strengthen the impact of HPWPs on innovative work performance.

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