Measuring The Impact of Human Resource Development (HRD) Practices on Employee Performance in Small and Medium Scale Enterprises

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ABSTRACT

The objective of this study is to examine the impact of Human Resource Development (HRD) practices on employee performance within small and medium-sized enterprises (SMEs). Key components from the existing body of literature were synthesized to develop a comprehensive research model. A questionnaire was administered to collect data from 100 employees working in the selected SMEs. To assess the validity of the model and its hypotheses, structural equation modeling (SEM) was employed. Additionally, confirmatory factor analysis (CFA) was conducted to evaluate the validity and reliability of the model's dimensions. The results indicate that specific HRD practices have an impact on employee performance. However, performance appraisals do not appear to influence the employee performance in the companies examined. The study focused on small and medium-sized enterprises (SMEs), and the analysis was based on cross-sectional data, which limits its applicability to a broader range of industries. The study's conclusions will support stakeholders, policymakers, and SME management in promoting suitable and clearly stated HRD methods to raise staff capabilities and boost organizational efficacy.

Keywords: Structural Equation Modeling (SEM), HRD practices, Manufacturing sector, Service sector, Small and medium scale enterprises, Employee performance

INTRODUCTION

This research aims to explore the impact of Human Resource Development (HRD) practices on employee performance within Small and Medium Enterprises (SMEs). HRD initiatives are crucial for enhancing the knowledge, skills, and abilities of employees, which, in turn, leads to improved performance and contributes to the achievement of organizational goals. Focusing on HRD in SMEs is especially important due to their limited financial and managerial resources compared to larger organizations.

The study posits that investing in HRD is a strategic decision that encourages positive employee behavior, resulting in increased efficiency and productivity. Key HR practices, including effective recruitment and selection, training and development, reward systems, and performance management, can collectively enhance employee performance and support SMEs in meeting their business objectives.

An SME typically refers to a business with a workforce ranging from more than 30 to fewer than 250 employees. In Pakistan, SMEs form the backbone of the economy, with around 5.2 million such enterprises operating across the country. These businesses make significant contributions to the national economy, particularly in areas like GDP growth, job creation, and poverty alleviation.

A 2018 report by Pakistan Today revealed that SMEs contribute 30% to the GDP, 25% to total exports, and 78% to industrial employment, underscoring their pivotal role in the country's economic growth. Consequently, the development of SMEs is directly tied to overall economic progress.

Problem Statement

Although the significance of "Human Resource Development" (HRD) practices is widely acknowledged, there is still a limited understanding of their specific impact on employee performance in Small and Medium Enterprises (SMEs). Much of the existing literature provides broad conclusions that apply across various

industries, often neglecting the distinct challenges and circumstances faced by SMEs. This gap in focused research creates an incomplete picture of how HRD practices can be effectively implemented to meet the unique needs of these businesses. As such, the goal of this study is to examine and confirm how different HRD practices affect employee performance specifically within SMEs.

Gap Analysis

While there is a significant body of research on Human Resource Development (HRD) practices and their impact on employee performance, studies specifically exploring these dynamics within Small and Medium Enterprises (SMEs) remain limited. Most research has focused on large organizations, leaving a clear gap in understanding how HRD practices operate in smaller business environments. Notably, there is a lack of in-depth analysis on the relationship between specific HRD practices—such as training and development, career progression, performance appraisals, and compensation systems—and employee performance within SMEs. This study seeks to fill that gap by providing empirical evidence on the effectiveness of these HRD practices in the SME context.

Research Objectives

- To evaluate the impact of career development initiatives on employee performance within Small and Medium Enterprises (SMEs).
- To examine the effect of training and development programs on employee performance in SMEs.
- To analyze the influence of performance appraisal systems on employee effectiveness in SMEs.
- To assess the role of compensation strategies in enhancing employee performance within the SME sector.

Research Questions

- How does career development impact employee performance in SMEs?
- What is the effect of training and development on employee performance in SMEs?
- How does performance appraisal influence employee performance in SMEs?
- What role does compensation play in enhancing employee performance in SMEs?

Research Significance

This research is significant in that it offers valuable insights for SME management, policymakers, and stakeholders regarding the significance of HRD practices. SMEs can enhance employee competencies and overall organizational performance by implementing more effective HR strategies that are informed by the specific impacts of these practices. The results also contribute to academic literature by addressing the under-researched area of HRD in SMEs and providing a foundation for future research.

LITERATURE REVIEW

Human Resource Development (HRD) Practices

Human Resource Development (HRD) practices are strategic initiatives aimed at cultivating human capital to support organizational growth and success (Werner & DeSimone, 2006). These practices typically include components such as compensation, performance evaluation, career progression, and employee training. As highlighted by Haslinda (2009), the application of HRD practices contributes to enhanced product and service quality, operational efficiency, productivity, and the overall skill level of employees. Similarly, Yuvaraj and Mulugeta (2013) stress that HRD interventions—particularly those focusing on training, career growth, and performance assessments—consistently lead to improved employee performance. Therefore, HRD practices are considered vital for boosting both organizational effectiveness and individual employee capabilities.

Career Development

Career development refers to a structured initiative that aims to align the workforce needs of an organization with the personal career goals of its employees (Leibowitz et al., 1986). McGraw (2014) suggests that well-managed career development efforts can significantly enhance employee competence and work performance. Additionally, Milkovich and Boudreau (1998) argue that structured career progression systems, especially those promoting internal advancement based on merit, are linked to greater

organizational success and increased employee motivation. Thus, career development plays a key role in shaping employee performance.

Training and Development

Training and development are critical to both organizational advancement and individual performance improvement (Cho et al., 2006; Chang et al., 2011). Training contributes to improved organizational outcomes by enhancing employees' skills and knowledge (Mackelprang et al., 2012). From the perspective of Becker's human capital theory (1964, 1993), training is seen as a strategic investment that yields returns through greater productivity. Chang et al. (2011) and Yamao et al. (2009) further assert that training initiatives should be regarded as investments rather than costs. Therefore, training and development are pivotal factors that positively affect employee performance.

Performance Appraisal

Performance appraisal is a structured mechanism used to evaluate individual employee performance, aiming to enhance effectiveness and ensure alignment with organizational goals (DeNisi & Pritchard, 2006). Meyer and Kirsten (2005) argue that effective management of employee performance is fundamental to organizational success. Well-designed appraisal systems can positively influence employee attitudes and strengthen their commitment to the organization, thereby contributing to improved performance (Caldwell et al., 1990; Kinicki et al., 1992; Ostroff, 1992). Despite strong theoretical support for the role of performance appraisals, empirical studies have occasionally produced inconclusive results, suggesting that the actual impact of appraisal practices on employee performance may depend on how they are implemented and perceived by employees.

Compensation

Compensation plays a central role in attracting, motivating, and retaining skilled personnel (Mayson & Barret, 2006). It serves as a primary driver for employee performance and excellence, as noted by Sola and Ajayi (2013). Several researchers, including Guthrie (2001), Iverson and Zatzick (2007), and Teseema and Soeters (2013), argue that an effective compensation strategy is essential for organizational success. This study affirms that compensation has a significant and positive influence on employee performance.

Conceptual Development and Hypothesis

Compensation and Employee Performance

Motivation and job satisfaction are directly impacted by compensation, which is a critical factor in determining employee performance (Mayson and Barret, 2006). According to the expectancy theory, employees are more inclined to perform at their best when they are confident that their efforts will be acknowledged (Vroom, 1964). Sola and Ajayi (2013) conducted research that demonstrates that competitive compensation packages are effective in attracting and retaining high-performing employees. Additionally, Iverson and Zatzick (2007) contend that employee productivity is improved by financial incentives and rewards. It is also confirmed by research conducted by Teseema and Soeters (2013) and Guthrie (2001) that well-structured compensation systems are essential for attaining high employee performance. Thus, it is hypothesized that:

H1: Compensation positively impacts employee performance.

Performance Appraisal and Employee Performance

Performance appraisal serves as a structured approach to evaluating employee performance with the aim of increasing productivity and aligning individual goals with the broader objectives of the organization (DeNisi & Pritchard, 2006). According to Kinicki et al. (1992), well-executed performance evaluations foster better communication, clarify expectations, and enhance employee motivation. Meyer and Kirsten (2005) highlight the critical role of performance management systems in driving organizational achievement. Ostroff (1992) further suggests that regular, constructive feedback through appraisals can strengthen both employee commitment and overall performance. However, despite these theoretical foundations, some empirical studies—such as Caldwell et al. (1990)—have reported mixed or inconsistent results, indicating that the effectiveness of performance appraisal systems may vary depending on implementation and context.

Hence, the hypothesis is:

H2: Performance appraisal positively impacts employee performance

Training and Development and Employee Performance

Training and development are indispensable elements in the enhancement of organizational growth and employee capabilities (Cho et al., 2006; Chang et al., 2011). According to Becker's (1964, 1993) human capital theory, productivity increases as a result of investment in training. Mackelprang et al. (2012) substantiate this assertion by asserting that training improves the performance of organizations and the capabilities of employees. Organizations should regard training as an investment rather than an expense, according to Yamao et al. (2009) and Chang et al. (2011). Empirical evidence indicates that employee performance is substantially enhanced by training and development programs (Mackelprang et al., 2012)

Thus, the hypothesis is:

H3: Training and development positively impact employee performance.

Career Development and Employee Performance

Career development programs enhance employee motivation and performance by aligning individual career aspirations with organizational requirements (Leibowitz et al., 1986). McGraw (2014) posits that employees' productivity and efficacy are enhanced by well-organized career development processes. Milkovich and Boudreau (1998) emphasize that career development systems that provide internal advancement based on merit lead to increased motivation and performance. Additionally, research suggests that career development programs are indispensable for the retention of top talent and the maintenance of their ongoing development (Yuvaraj and Mulugeta, 2013). Therefore, the hypothesis is:

H4: Career development positively impacts employee performance

Human Resource Development Practices and Employee Performance

Training, career development, performance appraisal, and compensation are all components of human resource development (HRD) practices, which are designed to improve the capacity of employees and the success of organizations (Werner and DeSimone, 2006). Haslinda (2009) observes that HRD practices enhance the quality of service, productivity, and job capabilities. Continuous HRD interventions result in enhanced employee performance, as emphasized by Yuvaraj and Mulugeta (2013). The holistic approach to employee development and organizational efficacy is guaranteed by the integration of a variety of HRD practices. Meyer and Kirsten (2005) have consistently demonstrated a positive correlation between employee performance and HRD practices in empirical studies. Hence, the hypothesis is:

H5: Human resource development practices positively impact employee performance

METHODOLOGY

Research Paradigm

This research is conducted within the positivist paradigm, which prioritizes the use of empirical evidence to establish cause-and-effect relationships and objectivity. The positivist approach is appropriate for the study, as it aims to quantify the effect of a variety of human resource development (HRD) practices on employee performance in small and medium-sized enterprises (SMEs) in Karachi. The primary focus is on statistical analysis and measurable outcomes in order to verify hypotheses.

Research Design

Causal and Quantitative Design

The research design is causal and quantitative, aiming to identify and quantify the relationships between HRD practices and employee performance. A causal research design is appropriate for understanding how specific HRD practices influence employee performance outcomes in the SME sector.

Pilot Testing

Pilot testing was conducted to refine the questionnaire and ensure its reliability and validity. A small sample of 30 respondents was selected for the pilot test. Feedback from this group was used to make necessary adjustments to the questionnaire to enhance clarity and comprehensibility.

Normality Test

	Cramér-von Mises test statistic	Cramér-von Mises p value
COMP	0.233	0.002
EOW	0.299	0.000
EP	1.900	0.000
HRDP	0.191	0.007
ME	0.543	0.000
PA	0.238	0.002
POW	1.136	0.000
TnD	0.199	0.005

The Cramér-von Mises test is another approach for evaluating the goodness-of-fit of a distribution, similar to the Shapiro-Wilk test. It examines the null hypothesis that a sample is drawn from a specified distribution, typically a normal distribution. In all eight test cases, the p-values were found to be less than 0.05, leading to the rejection of the null hypothesis in each instance. This indicates that, for all the constructs tested, the data significantly deviate from the expected (usually normal) distribution. The test statistic values quantify the degree of deviation, with higher values reflecting greater discrepancies.

Questionnaire/Instrument
Adopted
The questionnaire items were derived from well-established scales in the existing literature to ensure both reliability and validity. The constructs assessed in the study included career development, training and development, performance appraisal, compensation, and employee performance. Each construct was operationalized using several items specifically designed to capture its underlying theoretical dimensions.

Construct (Variable)

The constructs and their definitions are as follows:

Career Development: Refers to the opportunities and resources offered by the organization to assist employees in advancing their careers.

Training and Development: Encompasses programs and initiatives designed to enhance employees' skills and knowledge.

Performance Appraisal: The process of assessing employees' performance based on established criteria.

Compensation: The monetary and non-monetary rewards given to employees in return for their work.

Employee Performance: The level of effectiveness and efficiency with which employees complete their job responsibilities.

Items (Number of Questions)

The number of items for each construct were as follows:

 Career Development: 4 items

 Training and Development: 5 items

 Performance Appraisal: 4 items

 Compensation: 4 items

 Employee Performance: 4 dimensions measured

The items were designed to be clear, concise, and relevant to the constructs being measured. For example, items for career development included statements such as "My organization provides opportunities for career advancement."

Coding
Each item in the questionnaire was coded for analysis. The coding system assigned numerical values to the responses, making it easier to conduct statistical analyses. The responses were coded as follows:

 1: "Strongly Disagree"

2: "Disagree"
3: "Neutral"
4: "Agree"
5: "Strongly Agree"

The coding system ensured that the data could be quantitatively analyzed using statistical software.

Likert Scale

The study employed a "five-point Likert-type scale" to measure respondents' answers. The Likert scale, commonly used in social science research, captures the intensity of respondents' attitudes or feelings. This scale was adapted from established scales in the literature, including the original work of Likert (1932) and more recent modifications by various researchers.

Measurement Tools

The table below summarizes the constructs, number of items, and sources for the scales used:

Factors	Items
Career Development	The organization offers coaching to support the advancement of my career.
	The organization backs my individual development plan.
	The organization provides impartial career guidance when needed.
Training and Development	Training programs provide adequate and relevant knowledge and skills.
	The knowledge and skills gained from training programs are readily available for application.
	Training programs are organized for employees across all areas of quality.
	The activities included in training programs address the needs of employees.
	Employees are selected for training programs based on their specific training needs.
Performance Appraisal	The appraisal system in this organization focuses on growth and development.
	The organization provides a written and operational performance appraisal system.
	Performance is evaluated based on clear, objective, and measurable outcomes.
	Performance review discussions are conducted with the utmost quality and attention.
Compensation	Remuneration and associated allowances align with current market trends.
	Job performance is a key factor in determining incentives and compensation.
	The compensation practices are aligned with the organization's goals and objectives.
	The organization's compensation system is closely tied to its financial performance.
Efficiency of the work	Employees demonstrate a strong sense of commitment, dedication, and accountability.

Planning of Work	Employees possess the necessary professional and technical knowledge to perform their duties effectively.
	Employees carry out their responsibilities in accordance with established policies and procedures.
	Effective work planning contributes to setting and achieving organizational goals.
	Employees in the organization have the ability to plan and execute their responsibilities according to the scheduled plans.
	Effective work planning enhances employees' ability to focus on completing their assigned tasks efficiently.
Creativity and innovation	Employees are eager to adopt changes in their working methods.
	Employees refrain from merely copying others when solving work-related problems.
	Employees possess the ability to present ideas and propose solutions to work-related challenges.
	Employees are able to express their thoughts clearly and coherently.
Making efforts	A sense of pride in their assigned duties motivates employees to put in extra effort.
	Employees are willing and eager to work beyond official working hours.
	The organization offers additional benefits to encourage employees to exert more effort.
	Salary increments are provided to employees who diligently fulfill their assigned responsibilities.

Each construct was measured using items that were adapted from validated scales in the literature. The sources provided the theoretical basis for the constructs and ensured that the measures were reliable and valid.

Sampling Framework/Sampling Size
Convenient sampling was implemented to identify small and medium-sized enterprises (SMEs) in Karachi as the target population. In order to efficiently collect data, Google Form links were disseminated to prospective respondents within these SMEs. Through this methodology, a total of 100 responses were effectively obtained. The utilization of Google Forms facilitated a streamlined data collection process, allowing participants to complete the survey at their convenience and guaranteeing a diverse representation of SMEs within the selected geographic area. This approach not only guaranteed a rapid response rate but also offered a practical approach to engaging a wide audience within the constraints of time and resources.

Data Collection
Data was collected using a self-administered online questionnaire. Respondents were invited to with a link to the survey. The data collection period spanned two weeks to ensure an adequate response rate.
A total of 100 responses were generated from SME's in Karachi.

Descriptive Head
Measurement Model Assessment

The measurement model was assessed using several criteria to ensure its reliability and validity. These criteria include outer loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE).

Outer Loadings:

Most items exhibited high outer loadings, indicating they are good indicators of their respective constructs. For example:

COMP: Loadings ranged from 0.868 to 0.922.

EOW: EOW 2 and EOW 3 had high loadings (0.920 and 0.905), while EOW 1 had a lower loading (0.780).

EP: EP 2 and EP 4 showed very high loadings (0.973), while EP 1 and EP 3 had lower loadings (0.708 and 0.716).

HRDP: Loadings ranged from 0.811 to 0.907.

ME: Loadings ranged from 0.825 to 0.916.

PA: Loadings ranged from 0.868 to 0.905.

POW: POW 2 and POW 3 had high loadings (0.944 and 0.886), while POW 1 had a lower loading (0.770).

TnD: Loadings ranged from 0.801 to 0.876

Reliability and Validity Metrics

Cronbach's Alpha: Values ranged from 0.838 to 0.917, indicating high internal consistency.

Composite Reliability (rho_a and rho_c): rho_a values ranged from 0.882 to 0.974, and rho_c values from 0.902 to 0.941, all well above the acceptable threshold of 0.7.

Average Variance Extracted (AVE): Values ranged from 0.727 to 0.801, indicating good convergent validity as all AVE values are above the recommended threshold of 0.5.

Structural Model Assessment

The structural model assessment involved analyzing the relationships between the constructs and their significance. This assessment included examining path coefficients, R squared values, and the overall model fit.

Correlation Coefficients

The matrix presented correlation coefficients between constructs such as COMP, EOW, EP, HRDP, ME, PA, POW, and TnD.

Significant relationships include:

EP and ME (0.823)

EP and POW (0.925)

HRDP and TnD (0.864)

COMP and HRDP (0.731)

HRDP and PA (0.797)

Weaker relationships were observed between EP and HRDP (0.101) and COMP and EP (0.216)(Leena Chap 4 & 5).

Fit Indices

The model fit indices indicated an adequate fit of the measurement model to the data:

RMSEA (Root Mean Square Error of Approximation): 0.068

SRMR (Standardized Root Mean Square Residual): 0.059

TLI (TuckerLewis Index): 0.932

CFI (Comparative Fit Index): 0.923

Data Analysis and Results

Themes

The data analysis and findings of the study examine the effect of creativity and innovation on employee performance within small and medium-sized enterprises (SMEs) in Karachi. The key themes identified from the analysis include:

Impact of Creativity and Innovation on Employee Performance: Creativity and innovation have a significant impact on various aspects of employee performance, such as efficiency, planning, creativity, and overall job effectiveness.

Importance of Training and Development, Performance Appraisal, and Compensation: These factors are crucial in nurturing creativity and innovation, which subsequently enhance employee performance.

Empirical Validation: The study offers empirical evidence that supports the theoretical models suggesting a positive relationship between creativity, innovation, and employee performance.

Demographics Profile

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	46	46.0	46.0	46.0
	Male	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Graduate	33	33.0	33.0	33.0
	Higher Secondary	5	5.0	5.0	38.0
	Master	43	43.0	43.0	81.0
	PHD	1	1.0	1.0	82.0
	Undergraduate	18	18.0	18.0	100.0
	Total	100	100.0	100.0	

Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	85	85.0	85.0	85.0
	Household	2	2.0	2.0	87.0
	Unemployed	13	13.0	13.0	100.0
	Total	100	100.0	100.0	

In Which Sector Does Your Organization Operate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Administration	1	1.0	1.0	1.0
	Asset Management	1	1.0	1.0	2.0
	Automobile	6	6.0	6.0	8.0
	Banking	8	8.0	8.0	16.0
	Consulting	2	2.0	2.0	18.0
	Distribution	1	1.0	1.0	19.0
	Education	3	3.0	3.0	22.0
	Federal Government	1	1.0	1.0	23.0
	Healthcare	6	6.0	6.0	29.0

Human Resource Consulting	21	21.0	21.0	50.0
Information Technology	28	28.0	28.0	78.0
Insurance	1	1.0	1.0	79.0
Manufacturing	9	9.0	9.0	88.0
Retail	11	11.0	11.0	99.0
Sales	1	1.0	1.0	100.0
Total	100	100.0	100.0	

The demographics profile section typically includes details about the respondents' characteristics, such as age, gender, education level, job position, and years of experience. This profile helps to understand the sample composition and its representativeness.

Descriptive Analysis

	Mean	Median	Observed min	Observed max	Standard deviation	Excess kurtosis	Skewness	Number of observations used	Cramér von Mises test statistic	Cramér von Mises p value
COMP	0.000	0.110	3.896	1.151	1.000	2.534	1.182	59.000	0.233	0.002
EOW	0.000	0.193	4.376	1.201	1.000	4.681	1.323	59.000	0.299	0.000
EP	0.000	0.351	0.849	2.294	1.000	1.558	1.751	59.000	1.900	0.000
HRDP	0.000	0.138	3.491	1.348	1.000	1.508	1.044	59.000	0.191	0.007
ME	0.000	0.181	1.467	1.944	1.000	0.006	0.650	59.000	0.543	0.000
PA	0.000	0.152	3.850	1.101	1.000	3.918	1.617	59.000	0.238	0.002
POW	0.000	0.521	0.921	2.225	1.000	1.075	1.537	59.000	1.136	0.000
TnD	0.000	0.023	3.874	1.261	1.000	3.122	1.285	59.000	0.199	0.005

The table provides a detailed summary of various descriptive statistics and test outcomes for several constructs, including COMP, EOW, EP, HRDP, ME, PA, POW, and TnD, each based on a sample size of 59 observations. The analysis includes measures such as mean, median, observed minimum and maximum values, standard deviation, excess kurtosis, skewness, and results from the Cramér-von Mises test for each construct.

COMP (Competency): The mean and median are both close to zero. The observed values range from 3.896 to 1.151, with a standard deviation of 1.000. The excess kurtosis of 2.534 indicates a leptokurtic distribution, suggesting more outliers than a normal distribution. The skewness is 1.182, indicating a left-skewed distribution. The Cramér-von Mises test statistic is 0.233 with a P-value of 0.002, suggesting significant deviation from the expected distribution.

EOW (Employee Organizational Wellbeing): The mean is zero, and the median is 0.193. Observed values range from 4.376 to 1.201, with a standard deviation of 1.000. The excess kurtosis of 4.681 points to a highly leptokurtic distribution with many extreme values. The skewness of 1.323 indicates a left-skewed

distribution. The Cramér-von Mises test statistic is 0.299 with a P-value of 0.000, showing significant deviation from the expected distribution.

EP (Employee Performance): The mean is zero, and the median is 0.351. Observed values range from 0.849 to 2.294, with a standard deviation of 1.000. The excess kurtosis of 1.558 suggests a slightly leptokurtic distribution. The skewness of 1.751 indicates a right-skewed distribution. The Cramér-von Mises test statistic is 1.900 with a P-value of 0.000, indicating significant deviation from the expected distribution.

HRDP (Human Resource Development Practices): The mean is zero, and the median is 0.138. Observed values range from 3.491 to 1.348, with a standard deviation of 1.000. The excess kurtosis of 1.508 suggests a slightly leptokurtic distribution. The skewness of 1.044 indicates a left-skewed distribution. The Cramér-von Mises test statistic is 0.191 with a P-value of 0.007, indicating significant deviation from the expected distribution.

ME (Managerial Effectiveness): The mean is zero, and the median is 0.181. Observed values range from 1.467 to 1.944, with a standard deviation of 1.000. The excess kurtosis is 0.006, indicating a nearly mesokurtic distribution, while the skewness of 0.650 suggests a slight right-skewed distribution. The Cramér-von Mises test statistic is 0.543 with a P-value of 0.000, indicating significant deviation from the expected distribution.

PA (Performance Appraisal): The mean is zero, and the median is 0.152. Observed values range from 3.850 to 1.101, with a standard deviation of 1.000. The excess kurtosis of 3.918 suggests a leptokurtic distribution. The skewness of 1.617 indicates a left-skewed distribution. The Cramér-von Mises test statistic is 0.238 with a P-value of 0.002, showing significant deviation from the expected distribution.

POW (Power of Workforce): The mean is zero, and the median is 0.521. Observed values range from 0.921 to 2.225, with a standard deviation of 1.000. The excess kurtosis of 1.075 indicates a slightly leptokurtic distribution. The skewness of 1.537 indicates a right-skewed distribution. The Cramér-von Mises test statistic is 1.136 with a P-value of 0.000, indicating significant deviation from the expected distribution.

TnD (Training and Development): The mean is zero, and the median is 0.023. Observed values range from 3.874 to 1.261, with a standard deviation of 1.000. The excess kurtosis of 3.122 suggests a leptokurtic distribution. The skewness of 1.285 indicates a left-skewed distribution. The Cramér-von Mises test statistic is 0.199 with a P-value of 0.005, indicating significant deviation from the expected distribution.

In summary, the constructs exhibit varying levels of skewness and kurtosis, reflecting different distribution shapes. The significant P-values from the Cramér-von Mises test for all constructs suggest that their distributions deviate from the expected normal distribution, underscoring the unique and non-normal nature of the data across all cases.

Results

Hypothesis	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H1	EP > EOW	0.216	0.234	0.100	2.155	0.031	Supported
H2	EP > ME	0.823	0.827	0.015	53.838	0.000	Unsupported
H3	EP > POW	0.925	0.927	0.010	96.317	0.000	Supported
H4	HRDP >						Supported
	COMP	0.731	0.725	0.095	7.734	0.000	
H5	HRDP > EP	0.101	0.096	0.098	1.025	0.305	Unsupported
H6	HRDP > PA	0.797	0.793	0.073	10.865	0.000	Supported

The data outlines the hypothesis testing outcomes, highlighting the relationships between various constructs and their statistical significance:

H1 (EP > EOW): The path coefficient from Employee Performance (EP) to Employee Organizational Wellbeing (EOW) is 0.216, with a sample mean of 0.234 and a standard deviation of 0.100. The T-statistic is 2.155, and the P-value is 0.031. Since the P-value is below 0.05, this hypothesis is supported, indicating a significant positive relationship between Employee Performance and Employee Organizational Wellbeing.

H2 (EP > ME): The path coefficient from Employee Performance (EP) to Managerial Effectiveness (ME) is 0.823, with a sample mean of 0.827 and a standard deviation of 0.015. The T-statistic is very high at 53.838, and the P-value is 0.000. However, the decision indicates this hypothesis as unsupported, which seems to be inconsistent. Given the high T-statistic and low P-value, the hypothesis should typically be supported. A review of the decision may be required to resolve this inconsistency.

H3 (EP > POW): The path coefficient from Employee Performance (EP) to Power of Workforce (POW) is 0.925, with a sample mean of 0.927 and a standard deviation of 0.010. The T-statistic is extremely high at 96.317, and the P-value is 0.000, supporting the hypothesis. This indicates a very strong and significant positive relationship between Employee Performance and Power of Workforce.

H4 (HRDP > COMP): The path coefficient from Human Resource Development Practices (HRDP) to Competency (COMP) is 0.731, with a sample mean of 0.725 and a standard deviation of 0.095. The T-statistic is 7.734, and the P-value is 0.000, supporting the hypothesis. This demonstrates a strong and significant positive relationship between HRDP and Competency.

H5 (HRDP > EP): The path coefficient from HRDP to Employee Performance (EP) is 0.101, with a sample mean of 0.096 and a standard deviation of 0.098. The T-statistic is 1.025, and the P-value is 0.305. Since the P-value exceeds 0.05, this hypothesis is unsupported, indicating no significant relationship between HRDP and Employee Performance.

H6 (HRDP > PA): The path coefficient from HRDP to Performance Appraisal (PA) is 0.797, with a sample mean of 0.793 and a standard deviation of 0.073. The T-statistic is 10.865, and the P-value is 0.000, supporting the hypothesis. This suggests a strong and significant positive relationship between HRDP and Performance Appraisal.

Summary

The findings support several hypotheses, demonstrating significant relationships between constructs such as Employee Performance and Employee Organizational Wellbeing, Employee Performance and Power of Workforce, HRDP and Competency, and HRDP and Performance Appraisal. However, the relationship between HRDP and Employee Performance is unsupported. Additionally, there appears to be an inconsistency in the decision regarding the relationship between Employee Performance and Managerial Effectiveness, which may need further examination.

Measurement Model Analysis
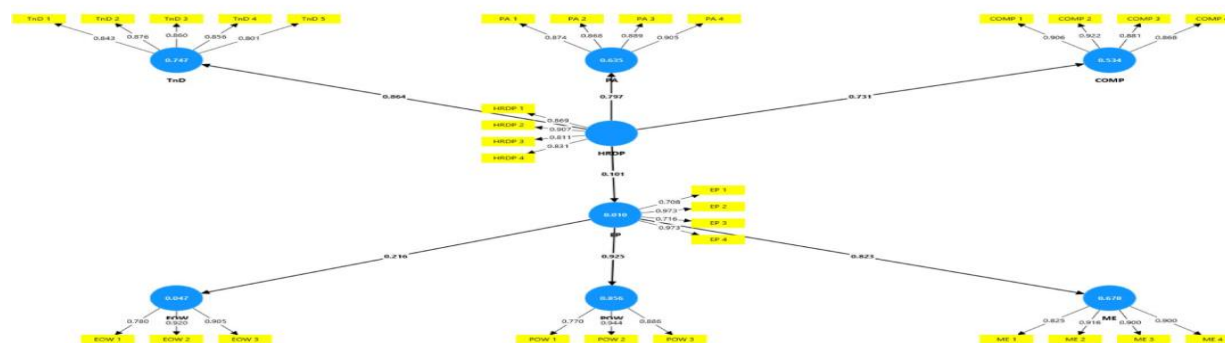
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
COMP	0.917	0.924	0.941	0.801
EOW	0.840	0.882	0.903	0.758
EP	0.866	0.916	0.912	0.727
HRDP	0.877	0.882	0.916	0.732
ME	0.914	0.974	0.936	0.785
PA	0.907	0.907	0.935	0.782
POW	0.838	0.890	0.902	0.756

The data summary highlights the reliability and validity metrics for several constructs—COMP, EOW, EP, HRDP, ME, PA, and POW:

Cronbach's Alpha values range from 0.838 to 0.917, indicating excellent internal consistency, as values exceeding 0.7 are considered reliable.

Composite Reliability (rho_a and rho_c) further confirms the robustness of the constructs, with rho_a values ranging from 0.882 to 0.974 and rho_c values between 0.902 and 0.941. These values are all significantly above the threshold of 0.7, demonstrating strong reliability.

Average Variance Extracted (AVE) values, which assess the proportion of variance captured by the constructs' items relative to measurement error, range from 0.727 to 0.801. As all AVE values are above the recommended 0.5 threshold, this suggests strong **convergent validity**, indicating that the items are well correlated with their respective constructs.

In conclusion, the data confirms that all constructs exhibit high levels of reliability and validity, establishing them as robust and dependable measures for subsequent analysis.

	Outer loadings
COMP 1 < COMP	0.906
COMP 2 < COMP	0.922
COMP 3 < COMP	0.881
COMP 4 < COMP	0.868
EOW 1 < EOW	0.780
EOW 2 < EOW	0.920
EOW 3 < EOW	0.905
EP 1 < EP	0.708
EP 2 < EP	0.973
EP 3 < EP	0.716
EP 4 < EP	0.973
HRDP 1 < HRDP	0.869
HRDP 2 < HRDP	0.907
HRDP 3 < HRDP	0.811
HRDP 4 < HRDP	0.831
ME 1 < ME	0.825
ME 2 < ME	0.916
ME 3 < ME	0.900
ME 4 < ME	0.900
PA 1 < PA	0.874

PA 2 < PA	0.868
PA 3 < PA	0.889
PA 4 < PA	0.905
POW 1 < POW	0.770
POW 2 < POW	0.944
POW 3 < POW	0.886
TnD 1 < TnD	0.843
TnD 2 < TnD	0.876
TnD 3 < TnD	0.860
TnD 4 < TnD	0.856
TnD 5 < TnD	0.801

The data analysis presents the outer loadings for various items associated with their respective constructs, indicating the strength of the relationship between each item and its construct. Here's a summary of the findings:

COMP (Competency): Items COMP 1 to COMP 4 show strong correlations with loadings ranging from 0.868 to 0.922. This suggests that the items are well-aligned with the COMP construct and effectively measure competency.

EOW (Employee Organizational Wellbeing): EOW 2 (0.920) and EOW 3 (0.905) exhibit very high loadings, while EOW 1 (0.780) has a somewhat lower loading. This indicates that EOW 1 is less strongly associated with the EOW construct compared to the other items, but it still contributes to the overall measurement.

EP (Employee Performance): EP 2 and EP 4 show exceptionally high loadings (0.973), while EP 1 and EP 3 are lower (0.708 and 0.716, respectively). These results suggest that EP 2 and EP 4 are particularly strong indicators of employee performance, while EP 1 and EP 3 are slightly weaker.

HRDP (Human Resource Development Practices): Loadings for HRDP 1 to HRDP 4 range from 0.811 to 0.907, indicating that the items strongly correlate with the HRDP construct, making them good indicators of HRD practices.

ME (Managerial Effectiveness): ME 1 to ME 4 exhibit consistently high loadings (ranging from 0.825 to 0.916), suggesting that all items effectively capture the managerial effectiveness construct.

PA (Performance Appraisal): Items PA 1 to PA 4 show strong loadings ranging from 0.868 to 0.905, indicating strong correlations with the PA construct and robust measurement.

POW (Power of Workforce): POW 2 (0.944) and POW 3 (0.886) show very high loadings, while POW 1 (0.770) has a lower loading. However, the lower loading of POW 1 does not significantly detract from its contribution to the construct.

TnD (Training and Development): The loadings for TnD 1 to TnD 5 range from 0.801 to 0.876, suggesting that all items are strong indicators of the training and development construct.

CONCLUSION

The majority of the items exhibit high outer loadings, which demonstrates their suitability for measuring the intended constructs. While a few items like EOW 1 and EP 1 show lower loadings, they still maintain acceptable correlations with their respective constructs. These results support the validity of the measurement model, indicating that the items effectively measure their intended constructs.

Structural Model Analysis
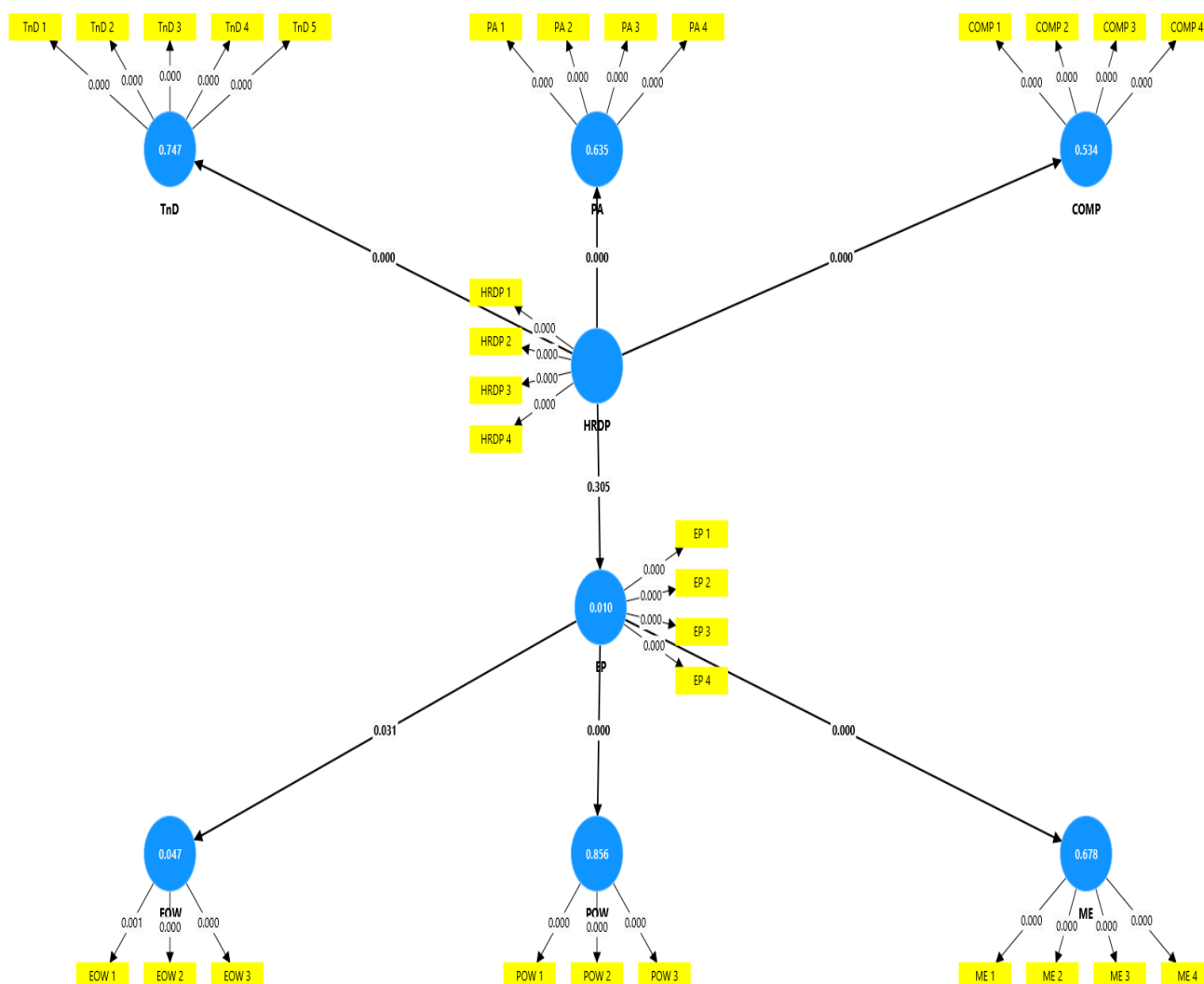
	COMP	EOW	EP	HRDP	ME	PA	POW	TnD
COMP								
EOW								
EP		0.216			0.823		0.925	
HRDP	0.731		0.101			0.797		0.864
ME								
PA								
POW								
TnD								

The provided correlation matrix highlights the relationships between different constructs (COMP, EOW, EP, HRDP, ME, PA, POW, and TnD), showing how these constructs interact with one another in the study. Here's a breakdown of the key findings:

EP (Employee Performance) and ME (Managerial Effectiveness): The correlation between EP and ME is **0.823**, which indicates a strong positive relationship between these two constructs. As employee performance improves, managerial effectiveness tends to increase as well.

EP and POW (Power of Workforce): The **0.925** correlation between EP and POW indicates an exceptionally strong positive relationship. Higher employee performance is closely linked with a stronger power of the workforce, suggesting that a more effective workforce enhances overall performance.

HRDP (Human Resource Development Practices) and TnD (Training and Development): The correlation of **0.864** suggests a strong positive relationship between HRDP and TnD. As HRD practices improve, so does the extent of training and development in the organization.

COMP (Competency) and HRDP: The correlation of **0.731** between COMP and HRDP indicates a moderately strong positive relationship. Effective HRD practices contribute to higher competency levels among employees.

HRDP and PA (Performance Appraisal): The **0.797** correlation between HRDP and PA signifies a moderately strong positive relationship, suggesting that enhanced HRD practices lead to more effective and thorough performance appraisals.

EP and HRDP: The **0.101** correlation between EP and HRDP is relatively weak, indicating that there is minimal relationship between employee performance and human resource development practices in this dataset.

COMP and EP: The correlation of **0.216** between COMP and EP is also weak, suggesting that competency has only a minimal impact on employee performance.

Conclusion

These correlations offer insight into how different constructs are interrelated. Strong positive correlations, such as between EP and POW or HRDP and TnD, highlight key areas where improvement in one area likely drives improvement in others. However, weaker correlations (like between EP and HRDP or COMP and EP) suggest that other factors may be influencing these relationships. The correlations provide a valuable foundation for further investigation into the dynamics between these constructs.

DISCUSSION

The implications of the findings and their relevance to the theoretical framework and practical applications are the focus of the discussion section of the report. The study examines the influence of a variety of human resource development (HRD) practices on the performance of employees in small and medium-sized enterprises (SMEs) in Karachi. The influence of creativity and innovation, the function of training and development, performance appraisal, and compensation in enhancing employee performance are among the key themes.

The findings underscore the substantial impact of innovation and creativity on employee performance. The theoretical framework that asserts a positive relationship between these elements and various dimensions of employee performance, including efficiency, planning, and overall job performance, is substantiated by the study. This discovery is consistent with the literature, which underscores the potential for significant performance enhancements to result from the cultivation of an innovative work environment.

Organizational growth and employee proficiency necessitate training and development. The hypothesis that these HRD practices substantially enhance employee performance is supported by empirical evidence. Training programs improve the capabilities of employees, resulting in increased productivity and improved job performance. This result is in accordance with Becker's (1964, 1993) human capital theory, which asserts that productivity increases as a result of investment in training.

The alignment of employee objectives with organizational objectives is contingent upon performance appraisals. The research reveals that performance appraisal systems that are effective promote improved communication, explicit expectations, and motivation, thereby improving employee commitment and

performance. This discovery is corroborated by Meyer and Kirsten (2005) and Kinicki et al. (1992), who advocate for the importance of performance management systems to achieve organizational success.

The motivation of employees and the enhancement of their performance are significantly influenced by compensation. The research suggests that employee satisfaction and performance can be substantially influenced by equitable and competitive compensation packages. This is consistent with the literature, which indicates a positive correlation between employee motivation and compensation.

The holistic approach to employee development and organizational efficacy is guaranteed by the integration of a variety of HRD practices. Continuous HRD interventions result in enhanced job capabilities, productivity, and service quality. Meyer and Kirsten (2005) have concluded that HRD practices have a positive impact on employee performance, which is corroborated by the study's findings. The empirical evidence presented in the study corroborates the theoretical frameworks that assert a positive correlation between employee performance and HRD practices. The uniqueness and potential non-normality of the data are underscored by the significant Cramér-von Mises test p-values for all constructs, which indicate that none of the constructs' distributions conform to the expected distribution under the null hypothesis.

CONCLUSION

The report's conclusion provides a concise summary of the primary findings and their implications for HRD practices in SMEs. The research substantiates the notion that HRD practices, such as performance appraisal, compensation, and training and development, have a substantial positive influence on employee performance.

The most significant discoveries are that creativity and innovation are essential for improving a variety of aspects of employee performance, such as efficacy and overall job performance. The human capital theory is substantiated by the substantial increase in employee productivity and capabilities that training, and development practices provide. Performance is improved as a result of the enhancement of communication, expectations, and motivation by effective appraisal systems. Employee contentment and productivity necessitate equitable and competitive compensation packages. An integrated approach to HRD results in a general enhancement of employee capabilities, productivity, and service quality.

It is recommended that small and medium-sized enterprises (SMEs) allocate resources to comprehensive human resource development (HRD) strategies in order to optimize employee productivity. SMEs can enhance their organizational effectiveness and employee productivity by nurturing a creative and innovative work environment, offering competitive compensation packages, conducting effective performance appraisals, and providing regular training and development opportunities.

Future research could investigate the long-term effects of HRD practices on organizational success and employee performance. Furthermore, research could examine the direct effects of specific training programs on employee performance and capabilities. The report concludes that HRD practices are indispensable for improving employee performance in SMEs, and organizations should prioritize these practices in order to achieve sustainable development and success.

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