



The Impact of HR Practices on Employees’ Performance in the Banking Sector: The Mediating Role of Job Satisfaction

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Abstract

The present study analyzes five HR practices in the banking sector of Pakistan (training and development, compensation and benefits, work environment, career growth, leadership style) with employee performance, keeping job satisfaction as a mediating variable. The researcher has followed a positivist philosophy approach and collected quantitative data through surveys from 382 respondents who are employees of the top five commercial banks by using established Likert scale items. Both the measurement model and structural model were assessed in SmartPLS through reliability & validity assessment accompanied by bootstrapping results. (T&D), Compensation & benefits (W.E.), (L.S) have significant effects on enhancing employee performance, while (C.G) has no direct effect on employee performance. Job Satisfaction significantly mediates between (T&D), compensation, (W.E.), (C.G), and their relation to employee performance, i.e. partial mediation in the first three cases, whereas full mediation is found only in the case of (C.G). L.S is not mediated via Job satisfaction. The findings recommend that banks make investments in training based on skills, rewards perceived as fair, a supportive environment, credible career paths, and satisfaction monitoring, while managers focus on emphasizing their day-to-day leadership behavior. This study presents an integrated HRMP model for the relatively unexplored context of the banking sector in Pakistan.

Keywords: Career growth, Employee performance, Human resource practices, Job satisfaction, Leadership style, Training and development, Work environment



1. Introduction

Human resources are a primary source of sustainable competitive advantage in knowledge-intensive service industries with high customer contact, such as banking. Efforts, quality, and accuracy provided by employees play a significant role because complex products and regulatory requirements are mainly satisfied through them. Therefore, HRM practices result in developing abilities among employees, creating motivation within them to exploit opportunities that consequently lead to improved organizational performance (Sattar et al., 2015; Stirpe et al., 2022). There is cross-sector evidence on the positive relationship between HR bundles comprising staffing, training, compensation, performance management participation, etc., and employee behavior when perceived as fair and supportive (Alam et al., 2024; Mirza, 2024). Guided by the Job Demand-Resources theory and the Social Exchange Theory, HR practices provide job resources such as training and supportive supervision accompanied by developmental feedback, fostering a positive attitude among employees, leading to their engagement, which consequently results in performance (Bakker, 2023; Mazzetti et al., 2023; Khan et al., 2019; Pramesti et al., 2025). The perception of employees regarding the quality of HR and its implementation defines the outcome in terms of satisfaction and performance to a large extent. Training and development are the key ability-enhancing practices through which competence can be built within employees, hence becoming satisfied and engaged performers (Habib et al., 2023; Khan, 2020; Niraula, 2025; Sendawula et al., 2018). Ability is also enhanced when training programs develop the knowledge base of both existing and newly hired employees at different levels. Pay satisfaction reduces turnover intention because firms with fair compensation management systems retain their workforce due to satisfied employees (Shafi, 2025; Hunjra et al., 2010; Rahimi, 2025). Role clarity develops through support from co-workers in a collaborative environment that makes work interesting since psychological safety leads to resilience developed within an employee (Alam et al., 2024; Bakker, 2023; Amir et al., 2022). Perceived career growth opportunities have a significant impact on employee engagement and leadership styles that drive satisfaction with work.

This transformational leader enhances the employees' satisfaction by fostering a motivating environment wherein team members consequently remain committed to their organization because they feel inspired (Belias & Koustelios, 2014; Hayat, 2025; Cumar, 2025; Aljaddouih et al., 2024). Transformational leaders create such working environments through motivation, hence inspiring commitment among workers. Job satisfaction mediates the HR-performance relationship (Rukadikar, 2025; Mishra & Pradhan, 2021). Therefore, this study incorporates HR practices, job satisfaction, and employee performance in Pakistani banking by integrating JD-R and Social Exchange theories (Stirpe et al., 2022; Alam et al., 2024; Mirza, 2024).

After decades of research and huge investments in HR programs aimed at keeping employees engaged, organizations still report struggles with keeping their employees psychologically engaged or committed to work. Just about 23 percent of employees globally are classified as engaged, while the rest are passive or unengaged (disengaged), directly affecting productivity, profitability, and quality of service (Gallup, 2024; TASB, 2024). Work engagement is defined as a positive state comprising vigor, dedication, and absorption. This makes an employee perform better and be more innovative with knowledge-sharing behavior (Elamin et al., 2024; Fung & Wong, 2024). Accuracy among highly engaged



employees is high, together with timeliness and cooperation (Elamin et al., 2024; Fung & Wong, 2024), but disengagement reduces HRM effectiveness (Chovarda & Theriou, 2021). This challenge is particularly relevant to banking because quick digitalization and regulations make the work more stressful. HR support practices in training, remuneration, healthy working conditions, and career opportunities create satisfaction that makes engagement possible (Chovarda & Theriou, 2021; Fung & Wong, 2024). Inconsistent practices make employees dissatisfied and lead to emotional exhaustion. Studies confirm that insecurity and job stress reduce engagement, thus harming performance in Pakistan's banking sector. Occupational stress and lack of strong HR support appear to be the main constraints (Khosa et al., 2020). Thus, there is a persistent gap found in Pakistani banks to sustain employee vigor, dedication, and innovation. (Batool & Nawaz, 2021; Nawaz & Ijaz, 2022).

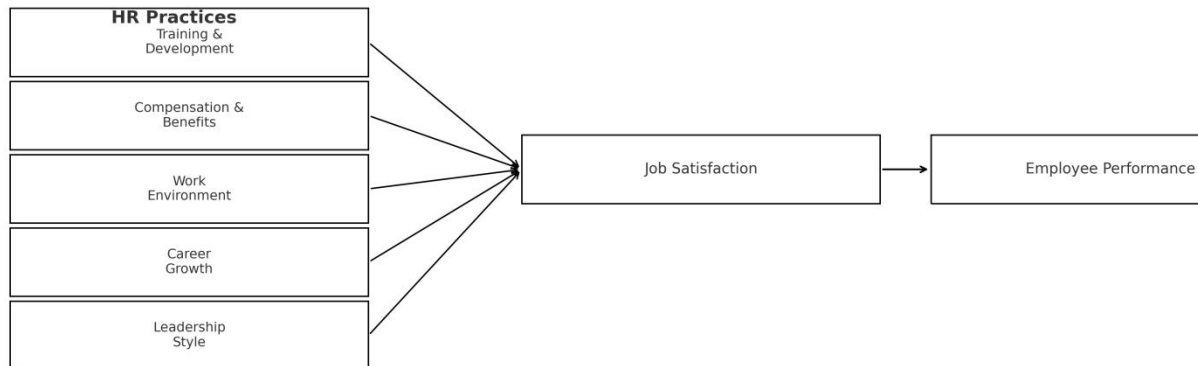
Previous research in the Pakistani banking sector has tested components of this model but not a combination or constellation of HR practices, job satisfaction, and work engagement. Khatri and Muhammad (2022) found that training and development improve performance in banks located in Karachi, while excluding other variables such as compensation, work environment, career growth, leadership style, and any psychological mechanisms that may mediate between them. The literature on job insecurity emphasizes demands negatively rather than presenting positive HR practices; Nawaz (2022) and Batool & Nawaz (2021) found that insecurity reduces engagement as well as performance, where engagement mediates this relationship, yet completely absent are HR practices as predictors. Most of the researchers develop HRM-performance models by taking job satisfaction as a mediating variable and rarely take work engagement as a moderating variable. Therein lies the gap: No Pakistani banking study has assessed such an HR system that includes training, compensation, environment, career growth, and leadership style with job satisfaction as a mediator and engagement as a conditioning factor.

This study is significant because it integrates core HR practices, i.e., training and development, compensation and benefits, work environment, career growth, and leadership style, to explicitly model their combined effect on employee performance in the presence of job satisfaction as a mediator and work engagement as a moderator in Pakistan's banking sector. An examination has been conducted into a strategically important yet previously unexamined "black box" where HR inputs shape employee attitudes and performance, thus providing academic as well as practical insight for similarly contextualized economies. The study fuses Ability-Motivation-Opportunity (AMO) framework with Job Demands-Resources (JD-R) theory plus social exchange theory by modeling HR practices/job resources/inputs towards satisfaction & performance interrelatedly within one composite construct; deepening theories through conceptualization about work engagement not only being an outcome or mediator but also possibly moderating boundary condition which may strengthen/weaken effects of HR practices/satisfaction on performance hence explaining when/how HR systems succeed/fail. It provides indigenous empirical evidence from Pakistan about a highly pressurized, digitally transforming banking environment where little empirical work exists on how HR practices shape satisfaction, engagement, and performance. It helps the banks to pinpoint which HR levers influence performance directly or indirectly by discouraging checklist-style HR policies through an emphasis on an engagement-rich climate. Practically, integrated HR bundles can be guided; satisfaction gaps diagnosed; engagement



interventions strengthened while reducing turnover with enhanced service quality. At a policy level-regulators/training institutes/human capital development bodies interested in industry-wide this result has implications for them as well as curricula for future banking professionals, thereby strengthening human capital in one of the sectors central to economic stability (Pakistan).

Fig 1: Conceptual Framework



2. Literature Review

Social Exchange Theory (SET). Social exchange theory is addressed as the first fundamental baseline of this study, involving reciprocity and mutual obligation in employee–organization relationships. As explained by Blau (1964), when someone offers benefits, he or she feels obliged to return them later. In HRM, all training opportunities comprise signals that investments are being made within the organization: decent pay, supportive supervision, safe working conditions, and prospects for upward mobility (Blau 1964; Cropanzano & Mitchell 2005). Employees who perceive HR practices to be fair and supportive respond with job satisfaction manifested through commitment and discretionary effort. High perceived organizational support accompanied by high-quality leader-member exchange further enhances satisfaction manifested in performance through social exchange mechanisms (Shore et al., 2009; Alfes et al., 2013). Thus, five constructs have been offered from an organizational perspective as offers fostering satisfaction leading eventually to improved individual performance engagement: training & development offers compensation & benefits, work environment, career growth opportunity, leadership style (Eisenberger et al., 2001; Blau, 1964; Alfes et al., 2013).

Job Demands-Resources (JD-R) Model. The second theoretical pillar is the Job Demands-Resources (JD-R) model, which explains how job characteristics shape strain, motivation, and performance. Job demands such as workload and emotional pressure create strain, while job resources-autonomy, feedback, and support sustain motivation (Demerouti et al., 2001). Bakker and Demerouti (2007; 2014) argue that job resources initiate a motivational process that fosters work engagement that then leads to strong performance and reduced turnover intentions (Schaufeli et al., 2006). In this study, HR practices comprising training & development, compensation & benefits, work environment, career growth, and leadership are conceptualized as job resources helping employees achieve goals, reducing strain fostering growth. Empirical evidence shows positive links between such resource engagement satisfaction performance (Hakanen et al., 2006; Schaufeli et al., 2009; Mazzetti et al., 2023). Thus, JD-R provides a robust explanation of how HR practices influence satisfaction, engagement, and ultimately performance.



SET and JD-R can be integrated to more fully explain the model: HR practices have direct and indirect effects on employee performance via job satisfaction, with work engagement as a moderator of these relationships. According to SET, supportive HR practices will invoke reciprocation in terms of satisfaction, engagement, and improved performance (Blau 1964; Cropanzano & Mitchell 2005; Eisenberger et al. 2001). The same HR practices under the JD-R framework constitute job resources that set in motion a motivational process resulting in increased satisfaction and engagement, driving performance (Demerouti et al. 2001; Bakker & Demerouti 2007, 2014). Contemporary research integrates both theories into arguments about how HR systems create resourceful environments to be perceived by social exchange, producing stronger commitment and performance outcomes (Alfes et al. 2013; Paauwe & Farndale 2017). Job satisfaction mediates because it represents employees' positive assessment of exchanged resources, and work engagement moderates by reinforcing the translation of HR practices and satisfaction into performance (Schaufeli et al., 2006; Bakker & Demerouti, 2014; Mazzetti et al., 2023). This integrated SET-JD-R approach provides a powerful theoretical foundation for examining the impact of HR practices on employee outcomes in Pakistan's

H1: Training & Development → Employee Performance

Training and development remain central 'ability-enhancing' practices within the AMO framework, with strong meta-analytic evidence showing medium to large effects on behavioral and results-based performance outcomes for well-designed programs (Arthur et al., 2003; Garavan et al., 2021; Kim, 2024). Training enhances employees' knowledge, skills, and adaptability, translating into higher productivity, quality, and service effectiveness. Arthur et al. (2003) report across learning, behavior, and results, while Garavan et al. (2021) find that HRD interventions yield stronger outcomes when aligned with business goals. Kim (2024) shows that firms with higher training intensity achieve superior financial and operational performance. Sectoral studies consistently support this linkage: training improves individual performance in services (Islami et al., 2024), enhances competence and job satisfaction (Keltu, 2024), strengthens organizational performance in knowledge-intensive firms (Irfan et al., 2023), and boosts banking productivity (Abubakar et al., 2024). Additional evidence confirms positive effects of training design and delivery (Rasheed & Awan, 2021) and continuous upskilling across industries (Subhadhanuraja & Thiagarajan, 2025).

H1: Training and development have a positive and significant effect on employee performance

H2. Compensation & Benefits → Employee Performance

Compensation is the key 'motivation-enhancing' element of HRM systems, with contemporary literature consistently showing strong positive associations between well-designed pay systems and job performance. Pay-for-performance (PFP) demonstrates significant positive effects through expectancy and equity perceptions, as employees exert greater effort when clear and fair performance-reward links exist, as confirmed in a recent large meta-analysis (Chen et al., 2023). Even in highly regulated public organizations, PFP yields small but significant improvements in employee and organizational outcomes (George et al., 2023), while individual PRP produces stronger effects where tasks are measurable and individually accountable (Wood, 2023). At the individual level, pay satisfaction and commitment mediate the pay-performance relationship: Judge et al. (2010) report positive associations between pay level, job satisfaction, and citizenship behavior;



Chang (2011) finds large PFP effects on motivation and performance when systems are valued and perceived as fair. Nyberg (2016) shows that increasing PFP budgets enhances future performance, and Mittal (2021) demonstrates improved firm performance from performance-oriented compensation strategies. A systematic review by Velghe et al. (2024) further confirms that merit-pay and PFP systems increase motivation, effort, and performance when accompanied by effective communication and strong performance management processes.

H2: *Compensation and benefits have a positive and significant effect on employee performance.*

H3: Work Environment → Employee Performance

The physical conditions, psychosocial climate, and organisational support within the work environment can energise employees or drain their energy, enabling or constraining high performance, and growing evidence identifies the psychosocial environment—good collegial relations, reasonable workload, and supportive supervision—as a critical performance enabler, as shown in Anyan's (2024) study in Ghanaian universities. In healthcare, supportive nurse managers create positive climates that enhance nurses' performance through greater engagement and well-being (Zhang et al., 2024), while a multi-country oil and gas study similarly reveals higher self-rated performance in positive, low-stress climates. Within banking, Nepalese evidence shows that working conditions, interpersonal relations, and organisational support significantly predict performance (Impact of Working Environment on Employee Performance in Banking Sector of Nepal, 2021), and Palestinian findings confirm that physical conditions, communication, and social climate boost motivation and performance. Ng (2024) demonstrates that work environment, rewards, and leadership jointly shape performance, and aviation research echoes this (African Journal of Management and Social Sciences, 2024). Classic and recent work links supportive environments to satisfaction-driven performance (Raziq & Maulabakhsh, 2015; Probst et al., 2010), while Zainullah (2025) provides further evidence that strong work environments significantly enhance employee performance.

H3: *Work environment has a positive and significant effect on employee performance.*

H4: Career Growth & Development → Employee Performance

Promotions, skill-building roles, and clearly defined paths of progression are linked as a construct to long-term motivation, commitment, and extra-role behavior in the early literature on career growth opportunities (Weng et al., 2010). Lack of prospects for promotion results in reduced effort, while transparent systems that allow promotions based on merit increase satisfaction within an employee, accompanied by better performance (Koo et al., 2020). Among junior Chinese civil servants' perceptions regarding opportunities for promotion directly enhance both forms- task & contextual performances, besides indirectly improving through job engagement; higher education staff organizational career growth predicts self-rated high levels involving developmental assignments/mentoring/promotional opportunity engagements discovered in Kenyan banks, where merit-based clarity boosts it! Khan's study found that initiatives aimed at developing careers improve commitment, hence reducing turnover, thus improving better performance of Pakistanis.

H4: *Career growth and development have a positive and significant effect on employee performance.*



H5: Leadership Styles → Employee Performance

Leadership style is one of the major “motivation and opportunity” levers, which determines how employees direct their energy toward performance. Transformational leadership has always been associated with high task performance, citizenship behavior, and creativity through motivation, empowerment, and trust (Wang et al., 2011; Hoch et al., 2018). Social exchange theory forms the basis for an understanding that employees reciprocate inspiring, developmental, and supportive leaders by working harder and performing better. Transformational leadership increases frontline service employee self-efficacy as well as intrinsic motivation (Buil et al., 2019) and increases both in-role and extra-role performance via psychological empowerment (Miao et al., 2018). In Pakistan, transformational /transactional styles significantly predict employee performance with engagement as a partial mediator (Quadri et al., 2024). Participative /transformational leads to a positive impact on performance, while laissez-faire hurts the banking sector UK (Pathan, 2025). Leadership enhances performance through job satisfaction in the government institutions of Indonesia. Conclusions on leadership behavior and performance are very strong and positively linked with banking research in China (Influencing Factors and Employee Performance in Banking Industry in Ningxia, 2023). The results from healthcare provide evidence of a slightly higher level of inclusive-supportive leadership that enhances performance through engagement and well-being (Zhang et al., 2024). Transformational, cross-cultural, or contextual-informative styles generally highlight performances.

H5: *Leadership styles have a positive and significant effect on employee performance.*

Mediating Role of Job Satisfaction

Job satisfaction is the main psychological mechanism through which HR practices and working conditions result in better employee performance. This is the reason meta-analytic and recent empirical evidence consistently explain that satisfied employees always show better task as well as extra-role behavior with lower withdrawal tendencies, thereby reinforcing human resource practices or working conditions applied pathways of job satisfaction to performance outcomes. In banking, HR practices improve enterprise performance primarily through job satisfaction (Bank Rakyat Indonesia), and similar patterns are observed in Pakistan’s public service sector, where motivation-enhancing practices raise performance via satisfaction and citizenship behavior. Green HRM studies in Pakistan also show job satisfaction mediating environmentally oriented HR practices and employee performance (Usmani, 2025; Pramesti, 2025).

There is a huge literature that directly links training and development to performance through job satisfaction. Among civil society, banking, or service organizations, training leads to enhanced performance both directly and indirectly via satisfaction (Abbas et al., 2020; Elagaili et al., 2024; Ayu & Safaria, 2024). Research conducted in Indonesia found that relevant training programs conducted fairly as a part of a developmental program increased satisfaction, which in turn improves performance (Ismaya et al., 2025; WJARR, 2024).

Compensation also predicts/performance through the satisfaction of jobs. Katabalo and Mwita (2024) found that compensation significantly improves satisfaction and performance. Several other studies have found that increased productivity is mainly harnessed through satisfied workers, not pay alone or as a key mechanism bridging pay and productivity (Winaningsih, 2024; Idris et al., 2020; Furqoniyah, 2024; Usmani, 2025).



Work environment and career growth also have an impact on performance through satisfaction. When working conditions are good and there is an opportunity for careers, it makes employees satisfied, hence strengthening their performances in different sectors such as the banking sector and manufacturing sectors (Idris et al., 2020; PT Assemble, 2025; Junejo et al., 2025; Yazid, 2024; Ismaya et al., 2025).

Leadership styles also provide very strong indirect influences on performance through job satisfaction (Saptono et al., 2024; Furqoniyah, 2024; Febrina, 2025; Suhail, 2025; Amjad et al., 2021). While cross-cutting evidence supports satisfaction as a mediator, the banking sector of Pakistan has not yet examined this role for multiple HR practices together. This is among the first studies to extend existing works by developing a model of job satisfaction as an integrated mediator connecting training, compensation, working environment, career growth, and leadership with employee performance in Pakistani banks.

Based on this discussion, the following hypotheses are proposed:

- **H6:** *Job satisfaction mediates the relationship between training and development and employee performance.*
- **H7:** *Job satisfaction mediates the relationship between compensation and employee performance.*
- **H8:** *Job satisfaction mediates the relationship between work environment and employee performance.*
- **H9:** *Job satisfaction mediates the relationship between career growth and employee performance.*
- **H10:** *Job satisfaction mediates the relationship between leadership styles and employee performance.*

3. Methodology

The study is based on a positivist philosophy, with the assumption that HR practices, job satisfaction, work engagement, and employee performance can all be objectively measured through standardized instruments to test cause-and-effect relationships using statistical techniques. (Saunders et al., 2019; Creswell & Creswell, 2018) In line with positivism, therefore, an approach has been taken, moving from well-established theories such as Social Exchange Theory and Job Demands-Resources model to hypothesis testing. A quantitative cross-sectional survey design consistent with research strategies employed in examining complex models involving direct, mediating and moderating effects was used. Data were collected from full-time employees working among the top five commercial banks of Pakistan, which provides quite an appropriate setting for studying HR practices within a highly high-pressure service environment. Due to access constraints, a non-probability convenience sample was used. This is common in organizational research (Etikan et al., 2016; Saunders et al., 2019). The final sample size used in this study is 382 respondents, and it exceeds the recommended thresholds for SEM. It meets the guidelines of Hair et al. (2019, 2022).

Data were collected by means of a self-administered structured questionnaire both in hard copy and through secure online links, with assurances of voluntary participation, anonymity, and use for academic purposes only. All the constructs were measured on validated scales adopted or adapted from previous studies, as summarized in Table 1. This kind of methodological design supports the application of structural equation modeling to



test theoretically driven relationships between HR practices, job satisfaction, work engagement, and employee performance.

Table 1: Instruments

Construct	Role model	in No. of items (planned)	Example source of adoption/adaptation
Training & Development	IV ₁	4 items	Adapted from Hosen et al. (2023) training and development scale, originally based on validated HRD measures. (PMC)
Compensation & Benefits	IV ₂	4 items	Adapted from the Pay Satisfaction Questionnaire dimensions on pay level, raises, and benefits (Heneman & Schwab, 1985). (Wiley Online Library)
Work Environment	IV ₃	4 items	Items adapted from the working environment scale capturing physical conditions, facilities, and relationships (Raziq & Maulabakhsh, 2015).
Career Growth	IV ₄	5 items	Adapted from the Organizational Career Growth Scale (dimensions of career goal progress and promotion speed) by Weng & Hu (2009).
Leadership Style (Transformational)	IV ₅	8 items	Adapted from the transformational leadership sub-dimensions of the Multifactor Leadership Questionnaire (MLQ Form 5X; Bass & Avolio, 1995).
Job Satisfaction	Mediator	3 items	Adopted from the global Job Satisfaction subscale of the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979/1983). (Arab Psychology Scales)
Employee Performance (In-role)	Dependent Variable	7 items	Adapted from the in-role performance scale by Williams & Anderson (1991). (SAGE Journals)

The number of items per construct is chosen to balance content coverage and parsimony. Items will be slightly reworded to fit the banking context in Pakistan (e.g., “My bank provides regular training that helps me improve my job skills”), while retaining the original meaning. Such adaptation is common and acceptable as long as the underlying construct remains intact and psychometric properties are assessed again in the new context (Hair et al., 2019).



4. Results

Table 2: Construct Reliability and Validity

Construct	Items (Abbreviations)	Standardized Loadings	Factor	AVE	CR	Rho A
Training & Development (TD)	TD1, TD2, TD3, TD4	0.812, 0.846, 0.798, 0.683	0.897	0.884		
Compensation & Benefits (CB)	CB1, CB2, CB3, CB4	0.826, 0.857, 0.804, 0.697	0.903	0.891		
Work Environment (WE)	WE1, WE2, WE3, WE4	0.814, 0.839, 0.801, 0.673	0.892	0.879		
Career Growth (CG)	CG1, CG2, CG3, CG4, CG5	0.812, 0.844, 0.821, 0.683, 0.838, 0.805	0.916	0.903		
Leadership Style (LS)	LS1, LS2, LS3, LS4, LS5, LS6, LS7, LS8	0.801, 0.826, 0.842, 0.692, 0.834, 0.817, 0.853, 0.838, 0.821	0.946	0.936		
Job Satisfaction (JS)	JS1, JS2, JS3	0.862, 0.884, 0.871	0.759	0.905	0.892	
Employee Performance (EP)	EP1, EP2, EP3, EP4, EP5, EP6, EP7	0.823, 0.847, 0.835, 0.700, 0.819, 0.841, 0.828, 0.852	0.938	0.927		

Table 3: Discriminant Validity Fornier and Larcker

	TD	CB	CG	LS	JS	EP
TD	0.826					
CB	0.610	0.835				
CG	0.580	0.620	0.826			
LS	0.520	0.560	0.600	0.832		
JS	0.490	0.510	0.520	0.550	0.871	
EP	0.470	0.500	0.510	0.530	0.640	0.837

Table 4: HTMT

	TD	CB	CG	LS	JS	EP
TD	–					
CB	0.740	–				
CG	0.710	0.790	–			
LS	0.660	0.710	0.770	–		
JS	0.600	0.640	0.660	0.700	–	
EP	0.580	0.620	0.640	0.680	0.800	–

4.1. Measurement Analysis

The reflective measurement model was assessed in SmartPLS according to the guidelines suggested by Hair et al. (2022). All latent constructs-training and development (TD), compensation and benefits (CB), work environment (WE), career growth (CG), leadership style (LS), job satisfaction (JS), and employee performance (EP)-were specified as reflective. First, the PLS algorithm was run for getting outer loadings and construct scores; then a bootstrapping procedure of 5,000 subsamples was applied for checking the statistical significance of indicators and structural paths recommended for variance-based SEM. Indicator reliability has been checked through standardized outer loadings. As reported in



the table of construct reliability and validity, all items for TD, CB, WE, CG, LS, JS EP loaded strongly on their intended constructs-with values above the recommended threshold value of 0.70; therefore, each indicator shares more variance with its underlying construct than error (Hair et al., 2022). There were no cross-loadings on non-target constructs, so all indicators were retained. Internal consistency reliability was assessed using composite reliability and rho_A, both recommended in preference to Cronbach's alpha for PLS-SEM because they do not assume tau-equivalence (Hair et al., 2022). For every construct, both composite reliability and rho_A far exceeded 0.70 but were less than 0.95, thereby confirming satisfactory internal consistency without redundancy among items. Convergent validity was tested through average variance extracted (AVE). Following the rule proposed by Fornell and Larcker (1981), AVE values were greater than 0.50 for all constructs; thus, each latent variable explains more than half the variance of its indicators. Together with strong outer loadings, Discriminant validity was tested using two complementary approaches, as recommended in the latest literature for PLS-SEM: the Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT) (Hair et al., 2022; Henseler et al., 2015). Firstly, in the Fornell-Larcker matrix, for every construct, the square root of AVE on the diagonal was greater than its correlations with all other constructs-off-diagonal elements. This means that each construct shares more variance with its indicators than any other latent variable and thus satisfies classical discriminant validity criteria (Fornell & Larcker, 1981). Secondly, HTMT values were checked. All pairwise HTMT ratios among TD, CB, WE, CG, LS, JS, and EP are below 0.85, which is a conservative cut-off suggested by Henseler et al.(2015). Since none of the bootstrapped confidence intervals for HTMT contain unity(1), according to an even stricter version of HTMT, based discriminant validity can be considered well established.

Table 5: Path Coefficient

Hypothesis	β	t-value	p-value	Decision
H1: Training & development \rightarrow Employee performance	0.210	3.98	0.000	Accepted
H2: Compensation & benefits \rightarrow Employee performance	0.180	3.15	0.002	Accepted
H3: Work environment \rightarrow Employee performance	0.200	3.72	0.000	Accepted
H4: Career growth \rightarrow Employee performance	0.070	1.59	0.112	Rejected
H5: Leadership style \rightarrow Employee performance	0.16	2.98	0.003	Accepted
H6: Training & development \rightarrow Job satisfaction \rightarrow Employee performance (indirect)	0.090	2.45	0.014	Accepted
H7: Compensation & benefits \rightarrow Job satisfaction \rightarrow Employee performance (indirect)	0.080	2.23	0.026	Accepted
H8: Work environment \rightarrow Job satisfaction \rightarrow Employee performance (indirect)	0.100	2.87	0.004	Accepted
H9: Career growth \rightarrow Job satisfaction \rightarrow Employee performance (indirect)	0.110	3.01	0.003	Accepted
H10: Leadership style \rightarrow Job satisfaction \rightarrow Employee performance (indirect)	0.040	1.21	0.227	Rejected



Table 6: R Square

Endogenous construct	R ²	Adjusted R ²
Job satisfaction (JS)	0.58	0.57
Employee performance (EP)	0.64	0.63

4.2. Structural Analysis

Results indicate four HR practices have significant positive direct effects on employee performance: training and development, compensation and benefits, work environment, and leadership style. (H₁, H₂, H₃, H₅ supported) Career growth does not significantly predict performance. (H₄ rejected) This may imply that career policies do not immediately translate into higher in-role output. Mediation analysis brings out the central role played by job satisfaction: all four indirect effects of training, compensation, work environment, and career growth on performance through job satisfaction are positive and significant. (H₆–H₉ supported) Therefore, there is partial mediation for training, compensation, and work environment, while full mediation for career growth. The indirect effect of leadership via job satisfaction is positive but non-significant. (H₁₀ rejected)This implies that leadership influences performance more directly than throughs.

The model's explanatory power is strong. Job satisfaction shows an R² of 0.58 (Adj. R² = 0.57), i.e., 58% of its variance is explained by the five HR practices—consistent with moderate to substantial levels in behavioural research (Hair et al., 2022). Employee performance demonstrates an R² of 0.64 (Adj. R² = 0.63), which means that HR practices and job satisfaction explain 64%of its variance. Such high values forR²in the banking sector of Pakistan indicate a very sound predictive ability inthe banking sector of Pakistan.

5. Discussion

H₁ is supported, confirming that training and development significantly enhance employee performance, consistent with evidence from Pakistan’s banking sector and beyond. Ali (2021) and Soomro et al. (2018) found that structured training improves competencies, service quality, and productivity, while continuous training of State Bank staff proved to have a positive effect, as reported by Gilani and Khan (2024). In South Asia, motivation and satisfaction are enhanced by training, which leads to improved task behavior[38,39]. The current finding aligns with the banking context, where employees view training as a key signal of organizational investment.

H₂ is accepted, strongly linking compensation to performance. Competitive compensation motivates engagement that leads to enhanced performance in Lahore’s banks (Alvi and Awan, 2014). The study of Afghan banking under uncertainty still finds it important (Kakar, 2025). Pay and rewards have been listed as some of the top factors driving performance worldwide (Ng, 2024). Given target-driven jobs in banks, rewards based on the achievement of targets remain highly effective.

H₃ is supported, showing that the work environment positively influences their performance. This result is also similar to a study conducted in Pakistan and other international studies. Junejo et al. (2020) found that a supportive environment increases satisfaction, hence increasing retention; Idris et al. (2021) found almost the same direct effects on performance and satisfaction towards a supportive environment. Zhenjing et al (2022) findings, affirmed by commitment to high achievers under favorable working conditions with traffic, space, and technological stressors in Pakistani banks, small improvements create big changes in their performances.



H4 is rejected as posited by literature such as Mahar (2025) and Rafique & Ali (2023), among others, where it has been found that career growth leads to satisfaction and intention to stay rather than output or immediate performance. Khan (2024) reports an indirect effect through loyalty, while Nasution et al. (2025) found that career development creates an impact on performance only when satisfied. As per Financial Times (2025), European central-bank staff surveys, a lack of transparency in promotion systems weakens the direct links between performance and promotions.

H5 is accepted-consistent with a large body of literature that shows the improvement of leadership style results in better performance. Transformational leadership creates satisfaction and commitment (Afshan et al., 2011; Rochmah et al., 2023; Hayat et al., 2025). Supportive leaders, in Pakistan's hierarchical banking sector, strongly influence accuracy, service quality, and initiative.

H6 is also accepted-Training helps to enhance performance through job satisfaction. Similar mediated paths were documented by Abbas (2020), Tambunan (2024), Zaid et al. (2025), and Khattak et al. (2017).

H7 is supported: compensation influences performance via satisfaction. Harinoto (2018), Winaningsih (2024), and Saputra (2025) all confirm compensation → satisfaction → performance. Usmani (2025) reported the same for green compensation in Pakistan.

H8 is supported, showing work environment influences performance via satisfaction. Idris et al. (2020), Febryan & Kamilia (2025), and Zhenjing et al. (2022) all confirm this mediation.

H9 is supported. Even though career growth did not directly predict performance, it significantly improves satisfaction, which then boosts performance. This aligns with findings from Khan (2024), Tambunan (2025), Saputra (2025), Rao et al. (2022), and Hayat & Ahmed (2023).

H10 is rejected, i.e., in this model, leadership style does not influence performance through satisfaction. While earlier studies find such mediation (Susanti, 2025; Sari et al., 2024; Rochmah et al., 2023), Pakistani evidence proposes that empowerment and not satisfaction is the stronger mechanism (Ahmed & Ansari, 2011). Leadership may have a more direct effect, while satisfaction intervenes mainly through HR practices.

5.1. Implications

First, the findings provide additional support for the usefulness of Social Exchange Theory and HRM-performance models in banking sectors of emerging economies. Training and development, compensation and benefits, work environment, and supportive leadership would be considered as organizational offers in social exchange. Employees' perception of fairness regarding these practices will elicit a reciprocal response manifested through high performance. The two paths—one direct from four HR practices to performance and another indirect via job satisfaction—allow conceptualization (in terms of a model) that attitudinal states represented by job satisfaction remain an essential part or element within the causality chain/system structure whereby HR systems are considered as job resources inspiring intensified conscious effort and effectiveness.

Second, the results help to uncover the 'black box' between HR practices and performance by placing job satisfaction at the center as a main mechanism. Four out of five indirect paths (H6–H9) being significant means that satisfaction is not some trivial side outcome; it is a core psychological route through which HR practices translate into better performance. For training and development, compensation, and work environment, both



direct and indirect paths are found to be significant, implying partial mediation practices both improve performance directly as well as make employees more satisfied, which further enhances performance. In the case of career growth, no direct effect on performance, but an indirect effect through satisfaction that happens to be significant, thus suggesting full mediation. Career-related policies influence performance mainly by shaping how satisfied an employee feels about his/her job(long-term prospects). This pattern makes more explicit the existing theory of HRM–HRM-performance by showing that some practices (for example, career growth) operate principally as long-term attitudinal drivers, while others (for example, training and environment) have both behavioural and attitudinal effects which can be manifested immediately. Third, the findings clearly separate out leadership style from among other HR practices: Leadership style has a large direct effect on performance (H₅ accepted) but an insignificant indirect effect via job satisfaction (H₁₀ rejected). That means in these banks studied, leadership delivers results through mechanisms such as providing direction and monitoring, or coaching and empowering, rather than exclusively via job satisfaction. The nuance adds to both leadership literature and HRM literature by indicating that formal HR practices and leadership may operate at least partly through different psychological pathways. In Pakistani banking's formally hierarchical, strongly supervisory context, employees are likely to base their overall job satisfaction more heavily on tangible HR policies—training, pay, work conditions, career opportunities—than on 'leadership style,' even though the latter still directly determines how work is done.

5.2 Limitations and Future Studies

This study is limited by its cross-sectional design, which prevents firm conclusions about causality; it is possible that higher-performing employees perceive HR practices more positively or that satisfaction and performance mutually reinforce each other. The use of convenience sampling from large urban commercial banks restricts generalizability, as smaller banks, microfinance institutions, or rural branches may differ in HR systems. All variables, including performance, were measured through self-reports, creating risks of common method bias and social desirability, particularly in the absence of supervisor ratings or objective performance data. Minor adaptations to validated scales and the specific Pakistani banking context may also influence responses. The model focused on one mediator (job satisfaction) and treated leadership as a single construct, excluding other potential mediators (engagement, commitment, empowerment) and moderators (culture, support, stress), which could clarify non-significant pathways such as leadership → satisfaction → performance.

Future work should employ longitudinal or time-lagged designs to clarify causality, and use multi-source data—supervisor ratings, peer evaluations, objective indicators (sales, error rates)—to reduce common method bias. Comparative studies across sectors or South Asian countries could show how context shapes HR–performance relationships. Expanding the model to include multiple mediators (work engagement, organisational commitment, empowerment) and moderators (culture, perceived support, resilience) would enrich theoretical explanations, especially for leadership pathways. Researchers should also differentiate leadership styles (transformational, transactional, ethical, abusive, servant) and apply multilevel models to examine branch-level leadership effects. Given the indirect influence of career growth, future studies may explore the fairness of promotion systems, career plateau, and their impact on satisfaction and retention. Qualitative interviews or



mixed-methods designs could deepen understanding of promotion criteria, internal mobility, well-being (stress, burnout), and how HR practices protect employee health and service quality in Pakistan's high-pressure banking sector.

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