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Perceived Learning Climate Between Perceived Investment in Employee Development and Innovative Performance: An Evidence from Emerging Economy

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ABSTRACT

Purpose- In today's dynamic work environment, employee development is essential for improved task performance. This study explored the link between perceived investment in employee development and innovative performance, with the perceived learning climate enhancing this relationship.

Design/methodology/approach- We collected data from 261 employees in the Islamabad banking and telecom sectors through surveys. We used SmartPLS and SPSS software to analyze the data, conducting confirmatory factor analysis, descriptive statistics, normality assessment, correlation analysis, and linear regression to test our hypotheses.

Findings - Results indicated that perceived investment in employee development positively influenced innovative performance, whereby the relationship was strengthened in the case of a highly perceived learning climate.

Implications- It offers managerial guidance on the importance of perceiving investments in employee development and a positive learning environment to enhance innovative performance. Seminars, workshops, and counseling can cultivate these perceptions. This research introduces the novel concept of a perceived learning climate as a key factor in fostering innovation for firms dedicated to employee development.

Originality - This study applies social exchange theory to explore how employee development investment influences innovative performance, with a focus on the banking and telecom sectors in Islamabad, Pakistan. It also examines how the perceived learning climate moderates this relationship, enhancing its impact.

Keywords: Perceived Investment in Employee Development, Perceived Learning Climate, Innovative Performance, Social Exchange Theory.

1. INTRODUCTION

Developing workers' knowledge, skills, and abilities delivers substantial economic value to organizations, thereby serving as a major talent management initiative from respective companies (Dachner, Ellingson, Noe, & Saxton, 2021). For the same reason,

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organizations invest in training and developing employees as part of their HR strategies (Dachner et al., 2021). More significantly, employee development signifies an essential function of HRM (Kozakhmet, Jayasingam, Majeed, & Jamshed, 2020). Likewise, employee development programs prove necessary in developing and maintaining the capacities of both the workers and the entire company (Chen, Lam, & Zhu, 2020).

Perceived Investment in Employee Development (PIED) plays a key role in this regard and indicates workers' perception that their companies are constantly investing to help them gain new competencies and skills, allowing advancement to new posts inside and outside the organizations (Lee & Bruvold, 2003). PIED positively impacts workers and their firms (Dysvik, Kuvaas, & Buch, 2016) and enhances employee attitudes and behaviors (Jung & Takeuchi, 2019). Past literature indicates positive relationships between PIED and intention to stay, job satisfaction (Koster, De Grip, & Fouarge, 2011), affective commitment, and in-role and extra-role behaviors (Kuvaas & Dysvik, 2009a). Likewise, perceived investment in HR practices positively relates to organizational commitment (Akkermans, Tims, Beijer, & De Cuyper, 2019). Many of these studies focused on these mechanisms in terms of reciprocity norm (Gouldner, 1960), which indicates the core arguments of social exchange theory, asserting that PIED makes workers feel an obligation towards their firms and while reciprocating their firms' efforts, they show improved attitudes and behaviors (Jung & Takeuchi, 2019). Hence, it seems noteworthy to focus on new positive outcomes of PIED with new contextual variables.

In this connection, one behavioral outcome of PIED that may prove beneficial for both individuals and their organizations is innovative performance, whereby Janssen (2000) asserts innovative behavior as involving intentional efforts to bring novel and beneficial ideas. As per Scozzi, Garavelli, and Crowston (2005), innovative behavior (or innovative performance as appraised in this study) is the process that improves the efficiency and effectiveness of problem-solving innovatively and initiates support for the solution. Moreover, scholars tend to agree that constant innovation results from innovative behavior (Shafique, Ahmad, & Kalyar, 2020), which indicates creating and implementing novel and valuable ideas (Scott & Bruce, 1994). Likewise, an employee's innovative behavior is a major factor contributing to a company's competitive advantage

(Jiang & Gu, 2016), signifying the importance of innovative performance. Besides, Ye, Jin, and Wang (2023) had investigated the impact of PIED on employee creativity. Similarly, Jung and Takeuchi (2019) demonstrated the relation of PIED with performance. These arguments signify studying outcomes like innovative performance for PIED, which might serve as a new addition to the existing literature.

Furthermore, perceptions of the learning climate might serve a major role in strengthening the effect of PIED. Such perceptions shape how employees perceive the learning opportunities within their companies (Vera-Cruz, 2006), impacting workers' learning behavior (Nikolova, Van Ruysseveldt, De Witte, & Van Dam, 2014a). Research indicates that work in today's times is changing quickly and can be continuously restructured in nature (Fugate, Van der Heijden, De Vos, Forrier, & Cuyper, 2021), which necessitates the companies to have firm learning climates for their workers to help them cope with their external and internal environments (Habets et al., 2023). Besides, Peng and Chen (2023) studied the influence of learning climate on innovation and creativity. Likewise, Cangialosi, Odoardi, and Battistelli (2020) studied the influence of learning climate on innovative work behavior. Moreover, Jung and Takeuchi (2019) stressed the importance of analyzing how PIED affects individual and organizational outcomes. Moreover, researchers have called for new research studies using personality characteristics and positive personality traits as moderators for enhancing innovative performance (Khan, Chughtai, Mushtaq, & Zeng, 2023; Chughtai & Khan, 2023). These arguments indicate that studying the contextual role of perceived learning climate between PIED and innovative performance might serve as a new addition to the literature.

1.1. Underpinning Theory

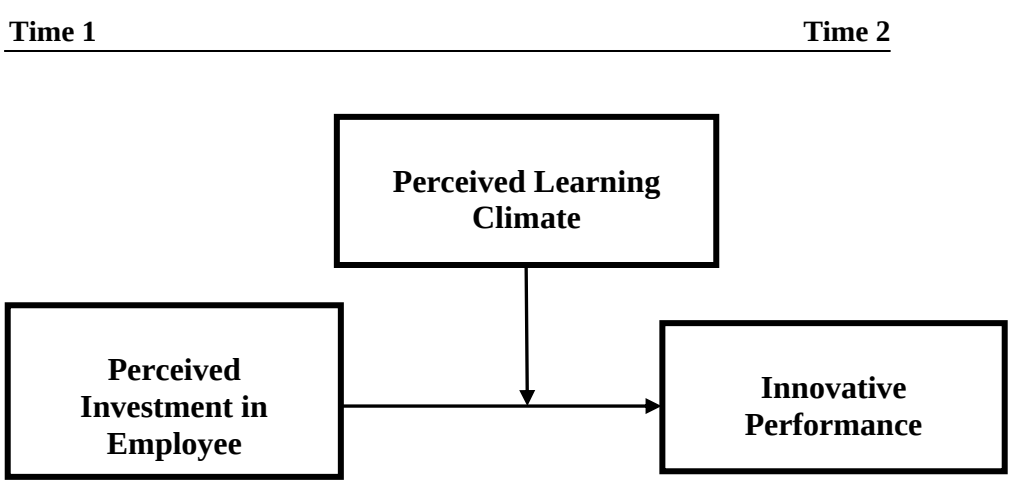
The current study gets justification for its proposed hypotheses from the social exchange theory (Cropanzano, Anthony, Daniels, & Hall, 2017). As per Blau (1983) and Gouldner (1960), the reciprocity norm of social exchange posits that with continuous interactions of individuals with others over time, they feel the urge to reciprocate the aid or benefits they had received from other individuals. Further, Cropanzano et al. (2017) assert that most contemporary social exchange models in organizational behavior involve

three common characteristics – firstly, an initial treatment towards a target person, secondly, a reciprocal response (attitudinal or behavioral) from the target to the action, and thirdly, the formation of the relationship between the perpetrator and target. Further, Cropanzano and colleagues (2017) pinpointed that a positive initial treatment is usually reciprocated by positive responses or decreased negative responses and vice versa.

In terms of current research, as per the assertions of social exchange theory given by Blau (1983), Gouldner (1960), and Cropanzano et al. (2017), the current study posits that PIED results in positive outcome of innovative performance displayed by workers whereas perceived learning climate as a moderator increase the strength of this relation. Hence, when individuals perceive that their organizations are investing in their development, they feel that their organizations care about advancing their knowledge, skills, abilities, and other skills (KSAOs); hence, they feel to reciprocate the positive treatment of their organizations and engage in innovative performance. Besides, individuals who are high on perceptions of learning climate will also be high on their tendencies to reciprocate the positive treatment of their companies because they feel that their companies are providing them with an environment where they can learn and grow more. Hence, individuals having high perceptions of the learning climate and who already perceive that their firms invest in their development will be high on showing innovative performance.

Figure 1

Theoretical Framework



1.2. Objectives of the Study

As employee development initiatives are not quite common in Pakistan, eliciting innovative performance with the perceptions of investment in employee development needs attention, specifically considering the role of possible contextual factors that might instigate or enhance such a relationship. As discussed before, research indicates the significance of PIED in fostering new positive attitudes and behaviors that need attention. Besides, the mechanism through which PIED causes such outcomes is also important to consider. Hence, to address this issue, the current research took PIED as a predictor, innovative performance as an outcome, and perceived learning climate as a moderator based on the justifications from the social exchange theory (Cropanzano et al., 2017). Based on these arguments, the major objectives of the current study are:

a. To examine the influence of PIED on innovative performance.

b. To investigate the moderating role of perceived learning climate between PIED and innovative performance.

Accordingly, the following research questions are investigated for the current study:

Q1: Does PIED positively affect innovative performance?

Q2: Does perceived learning climate moderate the positive relationship of PIED with innovative performance?

1.3. Contribution of the Study

The current study contributes to the prevailing literature in the area of employee development by highlighting the significance of PIED in fostering innovative performance, specifically in the banking and telecom sectors of Pakistan. Secondly, it contributes by proposing the contextual factor of perceived learning climate between PIED and innovative performance, which fosters the sensation of an environment favorable to learning and developing new or existing KSAOs, thereby casting a positive and strengthening effect and instigates individuals to display innovative performance due to their increased skills set. Further, this study is beneficial in the sense that it aids the practitioners of telecom and banking sectors in devising policy guidelines founded on the current study's findings since, in current challenging times, a learned workforce with continuous improvements in skill set is inevitable. Moreover, it contributes to the service

sector companies because endorsing a learning climate or developing perceptions of it would aid in improving the KSAOs of workers; hence, a learned workforce would carry out their duties in a much better way, bringing innovation in their performance and become better able to compete in today's challenging times.

2. LITERATURE REVIEW

2.1. Influence of Perceived Investment in Employee Development on Innovative Performance

Past literature signifies that investing in developing workers influences significant worker attitudes (Barkett & Kang, 2004; Barlett, 2001; Saks, 1995). Further, one of the key objectives of HRD experts is to offer learning opportunities to realize human potential. In this context, employees who perceive that their employers are investing in them feel an obligation to react positively to such investments (Kraimer, Seibert, Wayne, Liden, & Bravo, 2011), thereby putting in more effort to benefit their respective companies as argued by Shore, Tetrick, Lynch, and Barksdale (2006). Moreover, under the social exchange theory, the workers may see investments for developing workers as a signal that their firms appreciate and value their efforts (Kozakhmet et al., 2019). Likewise, under social exchange theory, when companies allocate resources for developing their workers, they generally find their workers more prone to reciprocate positively (e.g., Simon, 1957; Settoon, Bennett, & Liden, 1996; Cropanzano & Mitchell, 2005). Similarly, companies apportioning organizational inducements in the shape of developmental opportunities encourage their workers to invest more efforts to benefit the organizations (Kuvaas & Dysvik, 2010).

Previous literature contends that companies investing in improving the knowledge and skills of workers receive a return on their investment in the form of a productive and effective workforce (Rahman & Nas, 2013). Research has shown that HRM practices can enhance problem-solving capacity, creativity, and team building (Yahya & Goh, 2002). Moreover, HRM practices provide significant means of utilizing the learning capacities, core competencies, and behavioral consequences, hence affecting the firm's performance and innovation (Scarbrough, 2003; Figueiredo, Pais, Monteiro, & Mónico, 2016).

As per the arguments of social exchange theory by (Cropanzano et al., 2017, initially, the perpetrators (firms or individuals, etc.) initiate some positive treatment towards some target (firms or individuals). In turn, the targeted party tends to reciprocate that initial positive treatment of the perpetrator by benefiting the perpetrator somehow. Hence, in terms of theoretical justification for the current study, when individuals develop perceptions about their company's expenditures for developing workers (i.e., PIED), they feel obligated to reciprocate this positive gesture and display innovative performance. Based on these arguments, it is hypothesized that:

Hypothesis 1: *Perceived Investment in Employee Development positively relates to innovative performance.*

2.2. Moderating Role of Perceived Learning Climate

To compete successfully in a fast-changing global economy, a firm's climate fostering workers' learning at the workplace is highly necessary for the firm's survival (Kyndy, Dochy, & Nijs, 2009; Nikolova et al., 2014a). Moreover, providing the workers with a learning environment of high quality implies that the firm values its employees (Egan, Yang, & Bartlett, 2004; Joo, 2010). Learning climate signifies perceptions concerning organizational policies and practices that intend to support, facilitate, and reward the learning behaviors of workers (Nikolova, Van Ruysseveldt, De Witte, & Syroit, 2014b). An organizational climate fosters worker's learning, resulting in acquiring new KSAOs (Nikolova, Van Ruysseveldt, Van Dam, & De Witte, 2016), and provides sufficient opportunities for the workers to advance their competencies (Osagie, Wesselink, Runhaar, & Mulder, 2018). More precisely, a workplace's learning potential signifies an individual's perception concerning occupational interactions and activities through which employees may gain newer or improve their current KSAOs (Nikolova et al., 2014b). Further, according to Marsick and Watkins (2003) and Nikolova et al. (2014b), research shows that facilitating learning opportunities for workers is necessary for worker's learning as well as professional development. Several researches indicated a positive relationship between learning climate perceptions and employee behaviors (Cangialosi et al., 2020). Further, employees' perceptions regarding a firm's characteristics can shape the work environment's effectiveness in engendering learning

processes (Cangialosi et al., 2020), indicating the significance and contextual role of perceptions regarding climate in facilitating learning-related attitudes and behaviors. Besides, Joo, Yang, and McLean (2014) studied the influence of perceived learning culture on creativity, indicating the effect of learning environment on creativity and innovation. Similarly, Eldor and Harpez (2016) studied the impact of perceived learning climate on creativity through mediating mechanisms of employee engagement, job satisfaction, and job involvement.

Previous studies have investigated the role of various climate types in relation to significant predictors and outcomes for companies. For instance, Wang et al. (2023) studied regulatory focus (Promotion-focus and prevention focus) and creativity through the mediation of adaptive-innovative cognitive style, with school climate moderating between Regulatory focus and adaptive style. Similarly, Xing, Lu, Shi, Liu, and Zhang (2023) studied extrinsic, intrinsic, and failure avoidance motivation with learning engagement in research, where perceived organizational climate moderated these relationships. Hence, it indicates the role of climate and its associated perceptions as a contextual variable. Further, Oh and Lee (2022) studied explicit and tacit knowledge acquisition with innovative behaviors through the mediation of group reflexivity, whereas structured and autonomous learning climates moderated these relationships. From these arguments, it can be argued that the perceived learning climate moderates the relationship between PIED and innovative performance.

It is previously asserted that PIED positively relates to employees' innovative performance. Additionally, under the social exchange theory (Cropanzano et al., 2017), it is argued that this relationship will be augmented by the perceptions of the learning climate held by the employees. Individuals with perceptions of learning climate tend to learn more, where such increased learning might instigate such individuals to bring more novel ideas and show innovation in their performance. Hence, under the social exchange theory, it is asserted that employees holding perceptions of employee development and learning climate about their firms will be more likely to repay the positive treatment of employers by displaying innovative performance. Based on these arguments, it is hypothesized that:

Hypothesis 2: *Perceived Learning Climate moderates the relationship between Perceived Investment in Employee Development and Innovative Performance, such that this relation will be strong when perceptions of learning climate are high.*

3. RESEARCH METHODOLOGY

3.1. Procedure for Collecting Data

The current study followed a two-wave research design with temporal segregation for collecting data related to constructs under study from workers of Islamabad, Pakistan's banking, and telecom sector. Data was gathered from 7 firms, including government, semi-government, and private telecom companies and banks. The banking and telecom sectors were chosen because of their significant role in uplifting the economy of Pakistan. Moreover, both these sectors try to specify programs for developing the KSAOs of workers. Besides, certain previous studies on PIED indicate samples from the banking and telecom sectors successfully (Kuvaas & Dysvik, 2009b; Kuvaas & Dysvik, 2010).

A survey was conducted through self-administered questionnaires to get time-lagged data from respondents in about four months by giving a time lag of around 2-3 weeks at each time wave. Before getting the questionnaires filled out, the respondents were provided with a cover letter detailing the study's scope and main purpose. Besides, the researcher personally visited the organizations to get maximum responses from the respondents. Likewise, they were briefed on the objectives of the survey and how their opinions stood important for the organization, especially for policymaking. The respondents were informed about the confidentiality of responses and the voluntary nature of participation in the research. Besides, the HR departments of the targeted firms were first approached to get a reach to the firms for data collection. The questionnaires included a tracking ID and a time lag specification to make it easier to get data at time 2. Previous researchers had taken similar means to get better response rates for their studies (e.g., Chughtai, Syed, Naseer, Chinchilla, 2023).

At time 1, about 350 questionnaires containing the scales for the study's predictor (PIED) and moderator (perceived learning climate) were distributed. At this stage, around 307 filled questionnaires in usable form were received, making a response rate of

87.71%. Next, at time 2, after a 2-3-week interval, the respondents of time 1 were contacted again to reach out to their peers to get data on the study's outcome variable (innovative performance). At this stage, about 261 questionnaires were received in a filled and usable form, making a final response rate of 74.57%.

3.2. Demographic Details of Participants

The respondents had varying genders, ages, qualifications, departments, hierarchical levels, areas of specialization, and other characteristics. For instance, the HR, finance, IT, logistics, marketing, and training departments were contacted. Similarly, the top, middle, lower, and entry-level employees were contacted for data. This indicates the representativeness of the sample within the sectors chosen. The mean age of respondents was about 30 years, with 74.3% being males and 25.7% females. About 73.2% had master's and above qualifications, whereas 26.8% held a bachelor's or below degree. About 21.8% of the respondents worked in the HR department, whereas 21.1% worked in the finance department. Next, about 36.8% had HR, whereas 28.7% had finance as their specialization. The average present experience of respondents with the current company was 5.21 years, whereas total experience was 6.65 years.

3.3. Measures

English is the official language in most of Pakistan's business sectors. Prior literature indicates published research having surveys conducted in English in Pakistan (e.g., Abbas, Raja, Darr & Bouckenoogh, 2014). Additionally, because the study was time-lagged, the respondents were detailed on how to fill out the survey forms to reduce or discard any confusion about the nature of the study or the variables. Therefore, the survey scales were kept in English without translating into Urdu, Pakistan's national language. Besides, 7-point Likert scales were used to get responses on the items in the variables where high values on the Likert showed the highest points of constructs and vice versa. The Likert for measuring PIED ranged from 1=strongly disagree to 7=strongly agree; next, for perceived learning climate ranged from 1=not applicable at all to 7=completely applicable, whereas, for innovative performance, it ranged from 1=not at all to 7=extremely.

3.3.1 Perceived Investment in Employee Development

PIED was tapped through a 9-item measure (Lee & Bruvold, 2003) where they adapted the first two items from a previous study (Tsui, Pearce, Porter, & Tripoli, 1997) and developed the other seven items founded on the variable's definition. A sample item is "My organization allows employees to have the time to learn new skills that prepare them for future jobs." Reliability measured through Cronbach's alpha of this scale was 0.92 for the current study.

3.3.2 Perceived Learning Climate

A 12-item scale, 'Learning Potential of the Workplace', i.e., LPW (Nikolova et al., 2014b), was used for measuring learning climate perceptions. The scale includes four subscales: learning through reflection, learning through experimentation, learning from colleagues, and learning from a supervisor. The current study takes the scale as an aggregate. A sample item for this scale is "When confronted with difficulties in my tasks, I am given the opportunity to consider what the best possible approach is". The reliability found via Cronbach's α for the current scale was 0.95 for this study.

3.3.3 Innovative Performance

A six-item measure (Scott & Bruce, 1994) was used for measuring innovative performance. It is a supervisor-rated scale, but due to difficulty in getting data from them, peers were approached for data. The sample item for this scale is "generates creative ideas." Cronbach's α was 0.93 for this measure in the current study.

3.4. Control Variables

A One-way ANOVA test was carried out to analyze their effect on the dependent variable, innovative performance, where the results indicated that sector, designation, marital status, present experience, and total experience significantly affected innovative performance. There were four categories of designation (frontline, entry-level management, mid-management, top-management), where a dummy variable was made for category 1, i.e., frontline, to control the effect of designation. Besides, the effects of the sector, marital status, present experience, and total experience were directly controlled as these were continuous constructs.

4. RESULTS AND ANALYSIS

4.1. Confirmatory Factor Analysis

The confirmatory factor analysis was performed using AMOS to ascertain the discriminant validity of the variables under study. The results of CFA were authenticated through the fit indices of $\chi 2/Df$, CFI (Comparative Fit Index), NFI (Normal Fit Index), TLI (Tucker-Lewis Index), and RMSEA (Root Mean Square Error of Approximation). Regarding the acceptable values for these indices, as per Chen, Curram, Bollen, Kirby, and Paxton (2008), the acceptable value for $\chi 2/Df$ should be lower than three, those of RMSEA should be lower than 0.08 for a good fit while for mediocre fit the value can be between 0.08 to 0.10. Further, as per Anderson and Gerbing (1988), for the fit indices like CFI, NFI, and TLI, values higher than 0.95 are considered good, whereas values equal to 0.85 or higher are considered acceptable.

Further, Anderson and Gerbing (1988) suggested that a one-on-one pair of variables should be compared against the one-factor model for the same variables. Firstly, the full measurement model encompassing all the study's variables (3-factor model) was tested and compared with the respective 1-factor model, where all factors were loaded on one factor. Moreover, for all possible pairing of the constructs, the two-factor models were compared with their respective one-factor models. Results designated better fit for full-factor model comprised of three variables ($\chi 2 = 494.60$, Df = 284, ($\chi 2/Df = 1.75$, CFI = 0.96, NFI = 0.92, TLI = 0.96, RMSEA = 0.05) as compared to the respective one-factor model ($\chi 2 = 532.10$, Df = 256, ($\chi 2/Df = 2.08$, CFI = 0.95, NFI = 0.91, TLI = 0.93, RMSEA = 0.06). Furthermore, the results indicated that for every case, multiple unrestrained models held better fitness for models assessed against models of a single factor. Hence, sufficient discriminant validity was obtained for the study. The results are displayed in Table 1.

Table 1

Confirmatory Factor Analysis

Model	CMIN	DF	CMIN/DF	CFI	GFI	NFI	TLI	RMSEA
Hypothesized 3-factor model (PIED, PLC, IP)	494.60	284	1.75	.96	.88	.92	.96	.05
1-factor model (PIED, PLC, IP)	532.10	256	2.08	.95	.87	.91	.93	.06
2-factor model (PIED, PLC)	326.15	153	2.13	.96	.89	.93	.95	.07
1-factor model (PIED, PLC)	392.22	139	2.82	.94	.88	.92	.92	.08
2-factor model (PIED, IP)	1270.08	79	1.61	.98	.94	.96	.98	.05
1- factor model (PIED, IP)	173.99	74	2.35	.96	.91	.94	.95	.07
2-factor model (PLC, IP)	172.12	111	1.55	.99	.93	.96	.98	.05
1-factor model (PIED, IP)	219.78	110	1.99	.97	.91	.95	.96	.06

Note. N = 261. PIED = Perceived Investment in Employee Development; PLC = Perceived Learning Climate; IP = Innovative Performance.

4.2. Normality of Data

Skewness and Kurtosis tests were conducted to assess whether the data was normally distributed. Results in Table 2 signify that data for all constructs (PIED, Perceived Learning Climate, Innovative Performance) was normally distributed as indicated by the figures of plus_minus 1.96 for skewness and plus_minus seven for kurtosis according to recommendations of previous scholars (Hair, Black, Babin, Anderson, & Tatham, 2010).

Table 2

Normality of Data

Variable	**Skewness**		**Kurtosis**	
	Statistic	**SE**	**Statistic**	**SE**
PIED	-0.968	.151	0.667	.300
PLC	-1.672	.151	3.128	.300
IP	-0.992	.151	0.862	.300

Note. N = 261. PIED = Perceived Investment in Employee Development; PLC = Perceived Learning Climate; IP = Innovative Performance.

4.3. Composite Reliabilities and Average Variance Extracted

The test for composite reliability and average variance extracted were executed through SmartPLS to establish whether the constructs studied are valid. Results for CR and AVE are displayed in Table 3. Composite Reliability shows a much better alternative to Cronbach's alpha reliability to calculate convergent validity, where the composite reliability usually ranges between 0 and 1, where 1 designates perfect reliability. According to the recommendations of Hock and Ringl (2006), values of composite reliability should be equal to or exceed 0.60. Results designate that values of composite reliabilities for the proposed variables in this research fall in the acceptable range, i.e., PIED (0.93), PLC (0.95), and IP (0.93).

Further, according to Garson (2016), AVE shows average communality for every latent factor in a reflective model. For establishing an acceptable convergent and discriminant validity, the AVE values must surpass 0.500 (Chin, 1998). The results for the current study variables show that the AVE values are well above the acceptable value of 0.500, i.e., PIED (0.60), PLC (0.60), and IP (0.70).

Table 3

Composite Reliabilities and Average Variance Extracted

Variables	CR	AVE
PIED	0.93	0.60
PLC	0.95	0.60
IP	0.93	0.70

Note. N = 261. PIED = Perceived Investment in Employee Development; PLC = Perceived Learning Climate; IP = Innovative Performance.

4.4. Descriptive Statistics, Reliabilities, and Correlations

The mean, standard deviations, Cronbach's alpha reliabilities, and bivariate correlation analysis results for the major variable under study are presented in Table 4, where means and standard deviations for the variables are PIED (M = 5.07, SD = 1.26), PLC (M = 5.39, SD = 1.21) and IP (M = 5.47, SD = 1.10). Besides, regarding the correlations amongst study variables, results designated that PIED was positively and significantly related to perceived learning climate ($r = 0.29$, $p < .000$) and innovative

performance (r = .28, p < 0.000). Next, perceived learning climate positively and significantly correlated with innovative performance (r = 0.28, p < 0.000).

Table 4

Mean, Standard Deviations, Reliabilities, and Correlations

Variables	Mean	SD	PIED	PLC	IP
PIED	5.07	1.26	(.92)		
PLC	5.39	1.21	.29***	(.95)	
IP	5.47	1.10	.28***	.28***	(.93)

Note. N = 261.

Control variables are sector, marital status, designation, present experience, and total experience. One dummy construct was calculated for controlling the effect of designation; the sector was directly controlled for having fewer classifications, whereas age, present, and total experience were controlled directly, being continuous variables. PIED = Perceived Investment in Employee Development; PLC = Perceived Learning Climate; IP = Innovative Performance. The parentheses include values of Cronbach's alpha reliabilities.

*p < .05, **p < .01, ***p < .001.

4.5. Test of Hypotheses

4.5.1 Direct Effects

For testing the proposed hypotheses of the study, SPSS 21 was utilized. Firstly, hierarchical regression analysis was performed to test the direct influence of the predictor variable (PIED) on the criterion variable (innovative performance), where the criterion variable was inserted in the dependent variable slot, controls were inserted in step one, and the independent variable was inserted in step two. Results are shown in Table 5, where the control variable of the sector significantly affected innovative performance (β = .265; p < .001). Further, PIED positively affects innovative performance (β = .234; p < .001). Further, the value of R square for innovative performance (R2 = .181, p < .001) indicates that PIED explains around 18% of the variation in innovative performance. These results indicate support for hypothesis 1.

Table 5

Regression Analysis for Direct Effects

Predictors	Innovative Performance		
	B	R2	ΔR2
		Step1	
Controls		.131***	
Sector	.265***		
Marital Status	-.109		
Designation	-.080		
Present Experience	.202		
Total Experience	-.121		
		Step-2	
		.181***	.050***
PIED	.234***		

Note. N = 261.

*p < .05, **p < .01, ***p < .001.

4.5.2 Interactive Effects

Next, multiple moderated regression (MMR) analysis was performed to test the study's second hypothesis. Before the test, the mean-centered values of the predictor, moderator, and interaction term were computed for use in MMR. During the test, the controls were taken in step one, predictor (PIED) and moderator (PLC) were taken in step two, the interaction of predictor and moderator (PIED x PLC) was inserted in step three, while criterion (innovative performance) was taken in the dependent variable slot. The results presented in Table 6 indicate that both PIED (β = .183, p < .001) and PLC (β = .172, p < .001) had significant and positive direct effects on Innovative Performance. Further, the interaction term (PIED x PLC) also positively and significantly affected Innovative Performance (β = .147, p < .01). Besides, the R square values (R2 = .226, p < .01) indicate that the PIED x PLC brings 26% change in IP. These results indicate that hypothesis 2 was supported in the current study.

Table 6

Regression Analysis for Moderation Effects

Predictors	Innovative Performance		
	B	**R2**	**ΔR2**
	Step1		
Controls		.131***	
Sector	.265***		
Marital Status	-.109		
Designation	-.080		
Present Experience	.202		
Total Experience	-.121		
	Step-2		
		.206***	.075***
PIED	.183***		
PLC	.172***		
	Step-3		
		.226**	.021**
PIED*PLC	.147**		

Note. N = 261.

*p < .05, **p < .01, ***p < .001.

Additional support for hypothesis 2 was found through the slope test results, where results show that the link between PIED and innovative performance proved stronger for high PLC levels (β = 0.28, t = 4.32, p < 0.001) as opposed to low levels of PLC (β= .07, t= 1.10, p<.1). Table 7 and figure 2 displays the results numerically and graphically accordingly.

Table 7

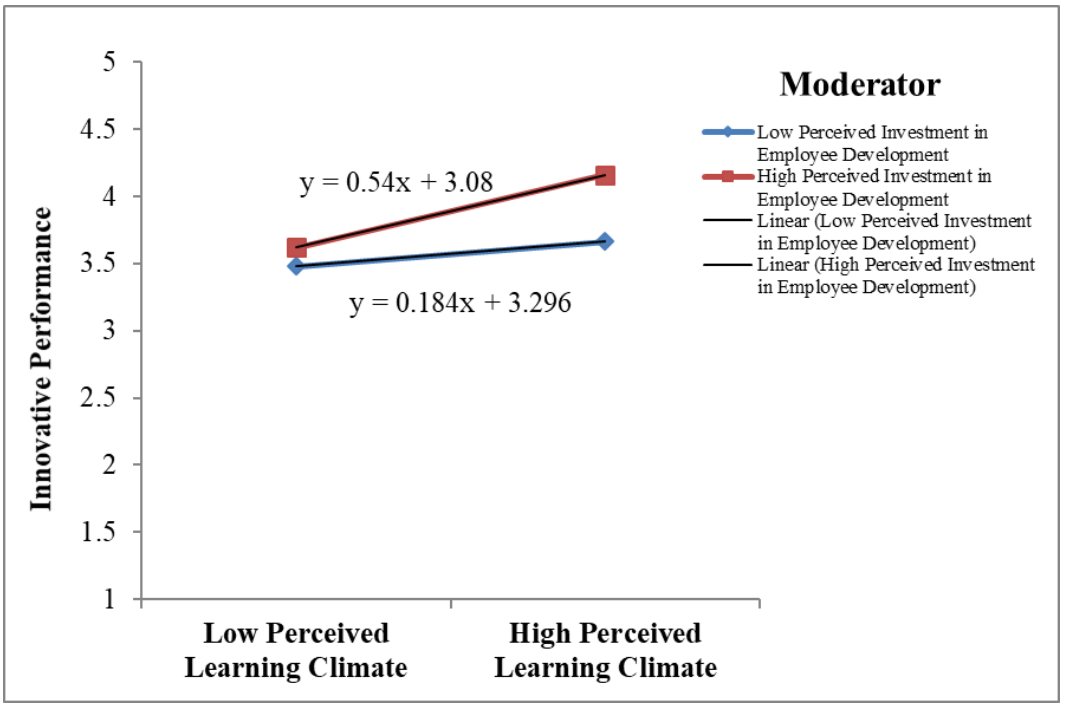
Simple Slope Test Results for Interaction

Interaction	**Innovative Performance**					
	Moderator Condition					
	High PLC			**Low PLC**		
	β	T	P-value	β	t	P-value
PIED*PLC	0.28	4.32	p<0.001	.07	1.10	p<.1

Note: N = 261. PIED = Perceived Investment in Employee Development; PLC = Perceived Learning Climate.

Figure 2

Interaction Effects of Perceived Investment in Employee Development and Perceived Learning Climate on Innovative Performance



5. DISCUSSION

The major objectives of this research were to examine the effect of PIED on innovative performance and, secondly, to investigate the moderation of perceived learning climate between PIED and innovative performance. Hence, the first hypothesis of this research was that PIED positively relates to innovative performance, whereby findings indicated that PIED positively affected innovative performance. The previous literature also supports this assertion; for instance, HRM practices aid in improving problem-solving tendencies and creativity for workers (Yahya & Goh, 2002). Besides, HRM practices also help to use the learning and core capacities and behavioral outcomes, hence improving a company's performance and innovation (Scarbrough, 2003; Figueiredo, Pais, Monteiro, & Mónico, 2016). Moreover, based on the arguments of social exchange theory's reciprocation norm (Cropanzano et al., 2017), when the

organization invests in developing the KSAOs of workers, this positive treatment of the company is reciprocated by workers, and they display innovative performance.

Further, the second hypothesis of the current study was that PLC moderates the relation between PIED and innovative performance, such that this relation will be strong when perceptions of learning climate are high, where analysis results provided support by indicating the significant moderation of PLC on the link amid PIED and innovative performance. Past literature also provides supporting arguments in this connection; for instance, previous scholars contend that the learning potential of a workplace signifies worker's perceptions relating to workplace activities building the KSAOs (Nikolova et al., 2014b), where such perceptions also hold positive associations with employee behaviors (Cangialosi et al., 2020). Hence, under the social exchange theory's reciprocity norm (Cropanzano et al., 2017), when employees perceive that the company invests in their development and perceive that the workplace has a usual tendency and environment to develop their KSAOs (Perceived learning climate), their inclination to reciprocate the positive treatment of firm will be more, and their innovative performance will increase.

5.1. Implications

5.1.1 Theoretical Implications

Previous literature shows that firms actively invest in training and developing their workers as a part of their HR policies (Dachner et al., 2021). Besides, employee development has been a significant HRM function (Kozakhmet et al., 2020). PIED has been studied with the perspective of reciprocity norm of the social exchange theory (Cropanzano et al., 2017), where workers feel that they are liable to repay the benefits of their respective firms, making them display constructive attitudes and behaviors (Jung & Takeuchi, 2019) indicating the significance of research on positive outcomes of PIED.

The findings of the current study contributed to the present literature by proposing new contextual variables and outcomes for PIED, hence indicating that higher perceptions of learning climate tend to enhance the positive effect held by PIED on innovative performance. Besides, the social exchange theory asserts that the positive initiatives taken by the company for the benefit and well-being of workers are reciprocated by the employees; hence, the current research utilized these arguments to

interpret the relation of PIED and innovative performance where higher perceptions of learning climate strengthen the effect of PIED on innovative performance as a means of reciprocation of the initial positive step taken by the company for developing employees. Hence, this study gives a new research insight into the role of perceptions as contextual variables in the PIED–innovative performance relationship. Further, fruitful additions can be made through future research by looking into other possible moderators or mediators affecting this relationship.

5.1.2 Practical Implications

The study holds positive implications for practitioners. The employees are a true and most important asset for the firms, so firms must take means to develop them. Whenever the firms actively invest in developing them, it would develop perceptions on the part of employees that their firms care about them. Even when the firms are not active in investing, they should indicate through various platforms that they intend to impart certain developmental programs. For instance, workshops, seminars, and company newsletters can be utilized. Such means develop the positive perceptions of workers by making them try to reciprocate the positive measures taken by the firms through increased efforts to benefit the firms. Hence, perceptions of employee development play an important role in obtaining the potential positive attitudes and behaviors, for instance, innovative performance in the case of the current study. Besides, the perceptions of the learning climate are also important since such a climate stimulates the workers to develop their KSAOs even more, further positively affecting the innovative tendencies of employees. The practitioners should foster a learning climate in the company and develop perceptions regarding it through communication, counseling, and learning activities.

5.1.3 Social Implications

In today's quickly changing global economy, an organizational climate that favors workers learning at the workplace is essential for both the survival of a company and its ability to compete successfully (Kyndt et al., 2009; Nikolova et al., 2014a). Besides, the role of a knowledgeable, skilled, and able workforce in the success of organizations cannot be underestimated. Moreover, successful for-profit and non-profit organizations hold significance in advancing the living standards of people and society. The initiatives

taken by firms for developing such KSAOs hold significance in this regard. Besides, the perceptions of learning climate hold high significance since the feelings regarding an environment supportive of learning will have a profound effect on the link of PIED with innovative performance, since learning supportive climate will strengthen the effect of PIED, and the resulting KSAOs will improve, further improving the ability of workers to show innovative performance. Likewise, as argued before, the social exchange theory also plays a role since such workers are prone to reciprocate the firm's positivity for the worker's well-being and, hence, perform innovatively. This indicates that the perceived learning climate holds social significance as well since it helps in upgrading the KSAOs of workers as well as bringing positive employee behaviors, for instance, innovative performance in the case of the current study.

5.2. Strengths

This study holds numerous strengths. Firstly, it proposed new variables in relation to PIED, i.e., perceived learning climate and innovative performance. Secondly, it used temporal segregation in the research design to collect data from banks and telecom companies in Islamabad, Pakistan. Thirdly, it used multiple sources to collect data on the variables (self and peers). Fourthly, it targeted firms in government, semi-government, and private sectors, indicating the generalizability of the results. Fifthly, the sample size was adequate with respect to the number of items in the current study. Moreover, the study scales indicated good reliability, normality, and validity, showing another strength of the study.

5.3. Limitations and Directions for Future Research

Current research has some weaknesses despite its strengths. Data was not gained through a full longitudinal design. Further, only one outcome variable was considered for the scope of this study. Future research should focus on a fully longitudinal research design. Also, the same relationships can be tested using data with an increased sample size. New outcome variables should be tested as mediators and new outcome variables. Although the choice of only two sectors might indicate reduced generalizability of the study, as these sectors are more focused on taking means to develop employees, it highlights the potential and generalizability of this study for the research area addressed.

However, future studies should focus on testing the same model in other regions and industries, which might also focus on employee development to see the results in other sectors. These relationships should also be tested in other cultures and countries to see their applicability in other contexts.

6. CONCLUSION

This research focused on the worth of developing human capital in the current era by proposing a model based on the positive outcome of PIED in the form of innovative performance. It also focused on the significance of perceptions of a positive learning culture, which augmented the positive relation of PIED with the outcome of innovative performance. Results supported the study's direct and moderation effects in the context of a developing country like Pakistan. It provided fruitful guidelines for future scholars to focus on favorable outcomes of PIED. Besides, it provides guidelines for practicing managers to develop PIED to retrieve positive attitudes and behaviors from the workers.

REFERENCES

Abbas, M., Raja, U., Darr, W., & Bouckenooghe, D. (2014). Combined effects of perceived politics and psychological capital on job satisfaction, turnover intentions, and performance. Journal of Management, 40(7), 1813-1830. https://doi.org/10.1177/0149206312455243

Akkermans, J., Tims, M., Beijer, S., & De Cuyper, N. (2019). Should employers invest in employability? Examining employability as a mediator in the HRM–commitment relationship. Frontiers in Psychology, 10, 717. https://doi.org/10.3389/fpsyg.2019.00717

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), 411-423. https://doi.org/10.1037/0033-2909.103.3.411

Bartlett, K. R. (2001). The relationship between training and organizational commitment: A study in the health care field. Human Resource Development Quarterly, 12(4), 335-352. https://doi.org/10.1002/hrdq.1001

Bartlett, K., & Kang, D. S. (2004). Training and organizational commitment among nurses following industry and organizational change in New Zealand and the United States. Human Resource Development International, 7(4), 423-440. https://doi.org/10.1080/1367886042000299799

Blau, P. M. (1983). Exchange and power in social life. New York: John Wiley.

Cangialosi, N., Odoardi, C., & Battistelli, A. (2020). Learning climate and innovative work behavior, the mediating role of the learning potential of the workplace. Vocations and Learning, 13(2), 263-280. https://doi.org/10.1007/s12186-019-09235-y

Chen, F., Curran, P. J., Bollen, K. A., Kirby, J., & Paxton, P. (2008). An empirical evaluation of the use of fixed cutoff points in RMSEA test statistic in structural

equation models. Sociological Methods & Research, 36(4), 462-494. https://doi.org/10.1177/0049124108314720

Chen, M. Y. C., Lam, L. W., & Zhu, J. N. (2020). Should companies invest in human resource development practices? The role of intellectual capital and organizational performance improvements. Personnel Review, 50(2), 460-477. https://doi.org/10.1108/PR-04-2019-0179

Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), Modern methods for business research (pp. 295–336). Lawrence Erlbaum Associates, Publishers.

Chughtai, M. S., & Khan, H. S. U. D. (2023). Knowledge-oriented leadership and employees' innovative performance: a moderated mediation model. Current Psychology, 1-14. https://doi.org/10.1007/s12144-023-04502-7

Chughtai, M. S., Syed, F., Naseer, S., & Chinchilla, N. (2023). Role of adaptive leadership in learning organizations to boost organizational innovations with change self-efficacy. Current Psychology, 1-20. https://doi.org/10.1007/s12144-023-04669-z

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. Journal of Management, 31(6), 874-900. https://doi.org/10.1177/0149206305279602

Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Entity justice and entity injustice: a review and conceptual extension. Organizational Justice, 207-243.

Dachner, A. M., Ellingson, J. E., Noe, R. A., & Saxton, B. M. (2021). The future of employee development. Human Resource Management Review, 31(2), 100732. https://doi.org/10.1016/j.hrmr.2019.100732

Dysvik, A., Kuvaas, B., & Buch, R. (2016). Perceived investment in employee development and taking charge. Journal of Managerial Psychology, 31(1), 50-60. https://doi.org/10.1108/JMP-04-2013-0117

Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. Human resource development quarterly, 15(3), 279-301. https://doi.org/10.1002/hrdq.1104

Eldor, L., & Harpaz, I. (2016). A process model of employee engagement: The learning climate and its relationship with extra-role performance behaviors. Journal of Organizational Behavior, 37(2), 213-235. https://doi.org/10.1002/job.2037

Figueiredo, E., Pais, L., Monteiro, S., & Mónico, L. (2016). Human resource management impact on knowledge management: Evidence from the Portuguese banking sector. Journal of Service Theory and Practice, 26(4), 497-528. https://doi.org/10.1108/JSTP-12-2014-0269

Fugate, M., Van der Heijden, B., De Vos, A., Forrier, A., & De Cuyper, N. (2021). Is what's past prologue? A review and agenda for contemporary employability research. Academy of Management Annals, 15(1), 266-298.

Garson, G. D. (2016). Partial least squares (PLS-SEM): Regression and structural equation models. North Carolina: G. David Garson and Statistical Associates Publishing.

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. American Sociological Review, 25(2), 161-178. https://doi.org/10.2307/2092623

Habets, O., Peters, P., Van der Heijden, B., Stoffers, J., Blomme, R., & Liao, S. (2023). Do you really want to hurt me? The impact of contextual factors on the

moderating role of dark leadership in the relationships between learning climate facilitation, employability and turnover intention in the Netherlands and China. Frontiers in Psychology, 14.

Hair Jr, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). SEM: An Introduction. Multivariate Data Analysis: A global perspective, 5(6), 629-686.

Höck, M., & Ringle, C. M. (2006, September 28-30). Strategic networks in the software industry: An empirical analysis of the value continuum [Paper Presentation]. IFSAM VIIIth World Congress, Berlin, Germany.

Janssen, O. (2000). Job demands, perceptions of effort‐reward fairness and innovative work behaviour. Journal of Occupational and Organizational Psychology, 73(3), 287-302. https://doi.org/10.1348/096317900167038

Jiang, W., & Gu, Q. (2016). How abusive supervision and abusive supervisory climate influence salesperson creativity and sales team effectiveness in China. Management Decision, 54(2), 455-475. https://doi.org/10.1108/MD-07-2015-0302

Joo, B. K. (2010). Organizational commitment for knowledge workers: The roles of perceived organizational learning culture, leader–member exchange quality, and turnover intention. Human resource development quarterly, 21(1), 69-85. https://doi.org/10.1002/hrdq.20031

Joo, B. K., Yang, B., & McLean, G. N. (2014). Employee creativity: The effects of perceived learning culture, leader–member exchange quality, job autonomy, and proactivity. Human Resource Development International, 17(3), 297-317. https://doi.org/10.1080/13678868.2014.896126

Jung, Y., & Takeuchi, N. (2019). Testing mediation effects of social and economic exchange in linking organizational training investment to employee outcomes. Personnel Review, 48(2), 306-323. https://doi.org/10.1108/PR-06-2017-0174

Koster, F., De Grip, A., & Fouarge, D. (2011). Does perceived support in employee development affect personnel turnover?. The International Journal of Human Resource Management, 22(11), 2403-2418. https://doi.org/10.1080/09585192.2011.584404

Kozhakhmet, S., Jayasingam, S., Majeed, N., & Jamshed, S. (2020). When investment in employee development promotes knowledge sharing behavior in an uncertain post-Soviet context. Personnel Review, 49(2), 370-388. https://doi.org/10.1108/PR-12-2018-0523

Kraimer, M. L., Seibert, S. E., Wayne, S. J., Liden, R. C., & Bravo, J. (2011). Antecedents and outcomes of organizational support for development: The critical role of career opportunities. Journal of Applied Psychology, 96(3), 485-500. https://doi.org/10.1037/a0021452

Kuvaas, B., & Dysvik, A. (2009a). Perceived investment in permanent employee development and social and economic exchange perceptions among temporary employees. Journal of Applied Social Psychology, 39(10), 2499-2524. https://doi.org/10.1111/j.1559-1816.2009.00535.x

Kuvaas, B., & Dysvik, A. (2009b). Perceived investment in employee development, intrinsic motivation and work performance. Human Resource Management Journal, 19(3), 217-236. https://doi.org/10.1111/j.1748-8583.2009.00103.x

Kuvaas, B., & Dysvik, A. (2010). Exploring alternative relationships between perceived investment in employee development, perceived supervisor support and employee outcomes. Human Resource Management Journal, 20(2), 138-156. https://doi.org/10.1111/j.1748-8583.2009.00120.x

Kyndt, E., Dochy, F., & Nijs, H. (2009). Learning conditions for non‐formal and informal

workplace learning. Journal of Workplace Learning, 21(5), 369-383. https://doi.org/10.1108/13665620910966785

Lee, C. H., & Bruvold, N. T. (2003). Creating value for employees: investment in employee development. The International Journal of Human Resource Management, 14(6), 981-1000. https://doi.org/10.1080/0958519032000106173

Marsick, V. J., & Watkins, K. E. (2003). Demonstrating the value of an organization's learning culture: the dimensions of the learning organization questionnaire. Advances in developing human resources, 5(2), 132-151. https://doi.org/10.1177/1523422303005002002

Nikolova, I., Van Ruysseveldt, J., De Witte, H., & Syroit, J. (2014b). Work-based learning: Development and validation of a scale measuring the learning potential of the workplace (LPW). Journal of Vocational Behavior, 84(1), 1-10. https://doi.org/10.1016/j.jvb.2013.09.004

Nikolova, I., Van Ruysseveldt, J., De Witte, H., & Van Dam, K. (2014a). Learning climate scale: Construction, reliability and initial validity evidence. Journal of vocational Behavior, 85(3), 258-265. https://doi.org/10.1016/j.jvb.2014.07.007

Nikolova, I., Van Ruysseveldt, J., Van Dam, K., & De Witte, H. (2016). Learning climate and workplace learning. Journal of Personnel psychology, 15, 66–75. https://doi.org/10.1027/1866-5888/a000151

Oh, S. Y., & Lee, J. (2022). Knowledge acquisitions and group reflexivity for innovative behaviours of SME workers: the moderating role of learning climates. Knowledge Management Research & Practice, 1-15. https://doi.org/10.1080/14778238.2022.2113346

Osagie, E. R., Wesselink, R., Runhaar, P., & Mulder, M. (2018). Unraveling the competence development of corporate social responsibility leaders: The importance of peer learning, learning goal orientation, and learning climate. Journal of Business Ethics, 151, 891-906. https://doi.org/10.1007/s10551-017-3638-8

Peng, J. C., & Chen, S. W. (2023). Learning climate and innovative creative performance: Exploring the multi-level mediating mechanism of team psychological capital and work engagement. Current Psychology, 42, 13114–13132. https://doi.org/10.1007/s12144-021-02617-3

Rahman, W., & Nas, Z. (2013). Employee development and turnover intention: theory validation. European Journal of Training and Development, 37(6), 564-579. https://doi.org/10.1108/EJTD-May-2012-0015

Saks, A. M. (1995). Longitudinal field investigation of the moderating and mediating effects of self-efficacy on the relationship between training and newcomer adjustment. Journal of Applied Psychology, 80(2), 211-225. https://doi.org/10.1037/0021-9010.80.2.211

Scarbrough, H. (2003). Knowledge management, HRM and the innovation process. International Journal of Manpower, 24(5), 501-516. https://doi.org/10.1108/01437720310491053

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. Academy of Management Journal, 37(3), 580-607. https://doi.org/10.5465/256701

Scozzi, B., Garavelli, C., & Crowston, K. (2005). Methods for modeling and supporting innovation processes in SMEs. European Journal of Innovation Management, 8(1), 120-137. https://doi.org/10.1108/14601060510578619

Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations:

Perceived organizational support, leader–member exchange, and employee reciprocity. Journal of Applied Psychology, 81(3), 219-227. https://doi.org/10.1037/0021-9010.81.3.219

Shafique, I., Ahmad, B., & Kalyar, M. N. (2020). How ethical leadership influences creativity and organizational innovation. European Journal of Innovation Management, 23(1), 114-133. https://doi.org/10.1108/EJIM-12-2018-0269

Shore, L. M., Tetrick, L. E., Lynch, P., & Barksdale, K. (2006). Social and economic exchange: Construct development and validation. Journal of Applied Social Psychology, 36(4), 837-867. https://doi.org/10.1111/j.0021-9029.2006.00046.x

Simon, H. A. (1957). Models of man: social and rational; mathematical essays on rational human behavior in society setting. New York: Wiley.

Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. (1997). Alternative approaches to the employee-organization relationship: does investment in employees pay off?. Academy of Management Journal, 40(5), 1089-1121. https://doi.org/10.5465/256928

ud din Khan, H. S., Li, P., Chughtai, M. S., Mushtaq, M. T., & Zeng, X. (2023). The role of knowledge sharing and creative self-efficacy on the self-leadership and innovative work behavior relationship. Journal of Innovation & Knowledge, 8(4), 100441.https://doi.org/10.1016/j.jik.2023.100441

Vera-Cruz, A. O. (2006). Firms' culture and technological behaviour: the case of two breweries in Mexico. International Journal of Technology Management, 36(1-3), 148-165. https://doi.org/10.1504/IJTM.2006.009966

Wang, L., Yang, D., Cui, Y., Zheng, J., Wang, J., Yang, Y., & Luo, Z. (2023). Regulatory focus and creativity: Adaptive-innovative cognitive style as a mediator and school climate as a moderator. Psychology in the Schools, 60(4), 1019-1041. https://doi.org/10.1002/pits.22819

Xing, L., Lu, Y., Shi, Z., Liu, W., & Zhang, H. (2023). Moderating effect of organizational climate on the relationship between research motivation and learning engagement among nurses taking part-time master's program: A cross-sectional study. Nurse Education in Practice, 68, 103604. https://doi.org/10.1016/j.nepr.2023.103604

Yahya, S., & Goh, W. K. (2002). Managing human resources toward achieving knowledge management. Journal of Knowledge Management, 6(5), 457-468. https://doi.org/10.1108/13673270210450414