
Unpacking the Dynamics: How Leader's Cultural Intelligence Shapes Innovative Work Behavior in Organizations

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Abstract

This research study empirically examines the impact of leader's cultural intelligence (LCI) on Innovative Work Behavior (IWB) of employees and focusing particularly on the mediating role of Knowledge Sharing (KS). This study also identifies the moderating role of Workforce Diversity (WD) on this mediating mechanism. This study utilizes the survey data from a sample of 319 employees in Pakistani telecommunication contact centers. The results of the study indicate a significant positive relationship between LCI and IWB. Knowledge sharing is identified as the mechanism that strengthens the relationship further. Our finding also confirms that WD moderates the KS and IWB link. This research study possesses significant theoretical and practical implications for multicultural organizations, where individuals from diverse cultural origins collaborate closely.

Keywords: Leaders Cultural Intelligence, Knowledge Sharing, Workforce Diversity, Innovative work Behavior, Pakistan

Introduction

The rise of globalization and the interconnectedness between nations has amplified competition among organizations while also providing greater prospects for business expansion and progress. While globalization presents numerous business opportunities, it also introduces substantial challenges, particularly in the form of cultural conflicts. The capability to effectively navigate and handle cultural diversity has now become an essential skill for global leaders (Deal, Leslie, Dalton, & Ernst, 2003). Companies should investments in enhancing the CQ of their leaders (Nosratabadi, Bahrami, & Palo, 2020). This will enable them to thrive in cross-cultural environments and facilitate the creation of suitable organizational environment that foster the growth of intellectual capital. In research conducted by Elenkov and Manev (2009) surveying senior expatriate leaders and their charges, CQ was found to facilitate the positive association between visionary-transformational leadership and organizational innovation. Cultural Intelligence is defined as the ability to interact and work effectively across cultural contexts (Thomas, et al., 2008; Ang, et al., 2007). Overall, the four-factor model of cultural intelligence includes cultural metacognition, cognitive cultural knowledge, motivation to adapt in cross-cultural contexts, and behavioral repertoire (Ang, Dyne, & Koh, 2006). According to Groves and Feyerherm (2011), leaders exhibited strong levels of CQ have increased open-mindedness, allowing them to diffuse

conflicts and tap into the full potential for creativity and innovation of diverse teams. Leaders with elevated culturally intelligence skills can efficiently design process, organizational structures and diverse subcultures at all levels to create a culture of creativity and innovation which can lead to sustainable competitive advantage in multinational organizations (Dogra & Dixit, 2019). The analysis of the data presented by Azevedo and Shane (2019) indicates that cultural intelligence significantly and positively influences individuals innovative work behavior (IWB). It is critical for the leaders to identify CQ as an important contributor in promoting IWB among employees (Afsar et al., 2020). While much previous work has focused on the relationship between LCI and IWB in multinational enterprises and cross-cultural contexts throughout the world, there is little research specifically concerning the role of leader's CQ in the context of intra-national diversity in Pakistan.

Our study is focused on comprehending how knowledge sharing influences the connection between a LCI and the IWB of employees within intranational diverse work force. Innovative work behavior refers to the process of generating, sharing, and executing an individual's novel ideas within the scope of their job responsibilities, benefiting a group or organization (Janssen, 2000). Guillaume et al. (2017) identified that the advantages of diversity increase when there is a need for innovation or when there are knowledge-based tasks. Knowledge sharing (KS) is the collaborative process in which individuals engage in mutual exchange of both implicit and explicit knowledge, collectively contributing to the generation of new knowledge (Garcia, Oliveira & Brohman, 2022). Until now, there is limited empirical study investigating the mediating mechanism of knowledge sharing between the relationship of leader's CQ and employees IWB. Our study also delved into the moderating influence of WD on the association between KS and IWB. Workplace diversity is understood as the vast range of similarities and differences that characterize the employees, such as diversity of age, culture, physical abilities and disabilities, race, religion, gender, and sexual orientation (Saxena, 2014). This study provides us with an opportunity to comprehend the influence of knowledge sharing on the cultivation of employees' innovative work behavior. The outcomes of this study will offer guidance to business executives on accelerating their learning process to foster cultural intelligence in leadership. Furthermore, organizations will gain insights into effective methods for selecting and cultivating employees' innovative work behavior. Through the lens of social exchange theory, our study explores how leaders, utilizing cultural intelligence, establish an environment that fosters a sense of freedom and encourages knowledge sharing among employees, thereby facilitating the promotion of innovative work behavior.

Theoretical Development

Leader Cultural Intelligence and Innovative Work Behavior

The term Cultural Intelligence (CQ) was first introduced in 2003 by researchers Earley and Ang from London Business School (Earley & Ang, 2003). Ang et al. (2006) formally defined cultural intelligence (CQ) as an individual's capacity to participate effectively in cross-cultural interactions, recognizing the importance of the cultural background of both the individual and others involved. Ang and Van Dyne introduced the concept of (CQ), which they broke down into four dimensions: metacognitive, cognitive, motivational, and behavioral factors (2008). Metacognitive intelligence refers to the conscious awareness and regulation of cognitive strategies used in obtaining and understanding knowledge. On the other hand, cognitive intelligence refers to possessing knowledge and structured understanding (Ng, Dyne, & Ang, 2009). Behavioral intelligence involves the capability to exhibit culturally suitable verbal and nonverbal behaviors, whereas motivational intelligence pertains to an individual's cognitive capacity to channel and sustain energy for learning and proficient functioning in culturally diverse situations (Ang, et al., 2007). According to Berraies (2020), managers possessing high cultural intelligence effectively integrate the expectations of individuals from diverse cultures, establish a shared vision, manage them efficiently, and enhance their creativity, which serves as the foundation for innovation within the organization. Groves and Feyerherm (2011) posit that high cultural intelligence enables leaders to be more receptive, thereby

minimizing conflict and maximizing creativity and innovation in diverse teams. Dogra and Dixit (2019) suggest that the involvement of a culturally intelligent leader in designing processes, establishing organizational structures, and cultivating a culture that supports creativity and innovation leads to the establishment of goals for gaining a competitive advantage in multinational organizations. In 2000, Jassen provided a definition of an employee's Innovative Work Behavior (IWB) as the process of generating, advocating, and implementing novel ideas by an individual within their job responsibilities, either as part of a group or within an organization. Azevedo & Shane (2019) found that CQ capabilities significantly and positively affected individual's IWB. Leaders need to be aware and think of cultural intelligence as key determinants of IWB of the employees (Afsar et al., 2020). Employees showing innovative work attitude are significant for an organization to develop new concepts or services to solve issues (Kor, Wakkee, & Sijde, 2021). The findings of Azevedo and Shane (2019) indicated considerable improvements in cultural intelligence capabilities were significantly related to considerable improvements in innovative work behavior. Elenkov and Manev (2009) in their study, reach the conclusion that expatriates must possess cultural intelligence (CQ) in order to effectively integrate knowledge from staff members representing diverse cultures, leading to innovative work behavior. They further suggest that leaders demonstrating culturally intelligent behavior are instrumental in promoting innovation among their followers. Likewise, individuals with multicultural backgrounds are likely to depend on cultural intelligence (CQ) to effectively reconcile and integrate knowledge and perspectives from the diverse cultures they have internalized, allowing them to utilize this information to drive innovative behavior.

Hypothesis 1: Leader cultural intelligence has a positive influence on innovative work behavior.

Knowledge Sharing as a Mediator

In recent times, organizations have become increasingly reliant on their knowledge assets, which primarily reside in their employees (Safa & Solms, 2016). The prosperity and resilience of both businesses and nations hinge crucially upon the foundation of competitive knowledge. (Lin, 2007; Yesil & Dereli, 2013). Presently, the economy is predominantly knowledge-based, positioning knowledge as a fundamental component for organizations and nations to compete, sustain, and progress (Lin, 2007; Xinyan & Xin, 2006). Knowledge sharing can be defined as the deliberate action taken by an individual within an organization to make knowledge accessible and available to others (Ipe, 2003). It involves a conscious effort on the part of the knowledge holder to share their knowledge with others. The success of knowledge sharing or knowledge transfer does not hinge on document or information techniques alone. Instead, it depends on the interactions between individuals within an organization. Knowledge sharing within an organization is fundamentally rooted in the dynamic and collaborative interactions among people (Davenport & Prusak 1998). Knowledge Sharing plays a vital role in achieving tasks, acquiring knowledge, augmenting knowledge reserves, and enhancing knowledge structure (Pian, Jin, & Li, 2019). Furthermore, during the process of knowledge sharing, the knowledge contributor needs to effectively convey the knowledge in a manner that can be comprehended by the recipient (Radaelli et al., 2014). This particular experience enriches the contributor's capacity to cultivate and put into action novel ideas, which constitute essential elements of IWB (Kanter, 1988; Scott & Bruce, 1994). Knowledge sharing is an essential process for organizations to effectively address challenges, gain a competitive advantage, and efficiently achieve their targets. Past research has demonstrated that knowledge sharing directed towards task accomplishment has a positive impact on an individual's IWB. Culturally intelligent managers who can adapt themselves to a diverse work environment facilitate the sharing of knowledge within that setting and thus results in creation of novel ideas (Jyoti, Pereira, & Kour, 2019). Prior research has emphasized the influence of cultural factors on individual's tendencies to share knowledge (Jones, Cline, & Ryan, 2006). This emphasizes the link between CQ and KS, where CQ is delineated into four dimensions according to Earley and Ang (2003). Metacognitive CQ is refers to an individual's awareness

when engaging with team members from different cultural backgrounds (Ang et al., 2006). A robust metacognitive CQ within a team contributes to improved knowledge sharing, as team members consciously consider and align with the cultural preferences of their colleagues both prior to and during interactions (Ang et al., 2007; Chiu et al., 2006). Metacognitive CQ, along with the other three CQs, directly or indirectly influences knowledge sharing, highlighting their complementary roles (Chen & Lin, 2013). Team leaders should urge members to enhance their cultural intelligence actively. Stoermer, Davies, and Froese (2021) suggested that expatriates, when equipped with elevated Cultural Intelligence (CQ), actively engage in increased knowledge sharing within diverse work environments. Employee trust fosters a culture of information sharing, enhancing productivity. When trust in a leader diminishes, close working relationships suffer, hindering knowledge sharing. In such cases, employees may withhold or distort crucial information (Le & Lei, 2018; Ansong, Ennin, & Yeboah, 2022). Managers possessing higher cultural intelligence (CQ) are anticipated to engage in both knowledge absorption and knowledge sharing activities. They are particularly adept at capturing tacit knowledge, which is challenging to communicate. Consequently, this enhances the innovation capability of employees (Curado et al, 2017; Lin, 2007).

Hypothesis 2: Knowledge sharing mediates leader's cultural intelligence influence on innovative work behavior.

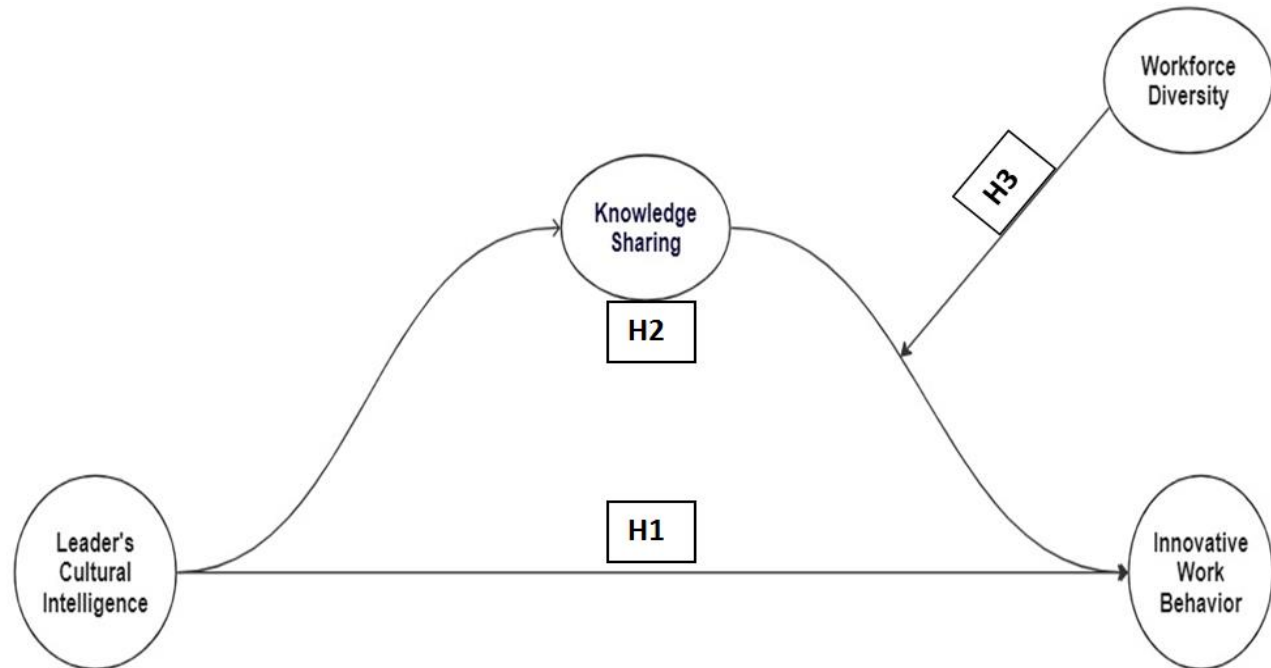
Workforce Diversity as a Moderator

Despite significant advancements in theoretical and empirical frameworks exploring the connection between knowledge sharing and innovative work behavior, the specific mechanisms by which workforce diversity might moderate these effects remain largely unexplored. The concept of workforce diversity, which involves the allocation of personal characteristics among interrelated individuals within an organization, has achieved broad consensus as an essential priority for organizations (Jackson, Joshi, & Erhardt, 2003). Workforce diversity encompasses a wide array of characteristics displayed by employees, ranging from commonplace to distinctive, encompassing factors like age, cultural heritage, physical abilities and constraints, ethnicity, religious beliefs, gender, and sexual orientation (Saxena, 2014). Diversity is an inherent and integral aspect of every organization, and it has the potential to be recognized, harnessed, and transformed into a reservoir of organizational capability and achievement (Chaudhry, Paquibut, & Tunio, 2021). According to Sung and Choi (2021), high-tech firms have the chance to enhance innovation and facilitate progress by fostering age diversity among their predominantly young and age-homogeneous workforce. Nurturing diversity within organizations cultivates an environment where creative and innovative ideas can thrive, resulting in a wide array of opportunities for both employees and the organization as a whole (Nguyen et al, 2021). Innovation cannot be one-dimensional, to broaden decision making and creativity in an organization, we need diverse employees with different attributes and mindsets. Moon and Christensen (2020) stated that diversity across race, gender, or tenure also impacts positively to the ability of exchanging different types of knowledge and skills that may foster problem-solving spillover and ultimately effects organizational performance. An organization can achieve a full cycle of benefits of workforce diversity, but this highly heterogeneous workforce should create positive effects on their perception about this diverse workforce to make a significant contribution through innovative work behavior. Thus, to ensure the benefits of workforce diversity, organizations must foster innovative work behavior by improving attitudes toward a diverse workforce. It is important to implement diversity-oriented human resource policies implementing motivation for employees to generate, adjust, convey and operationalize innovatory ideas within the workplace, with regards to supporting employee innovative work behavior (IWB) (Bogilovi et al., 2020). Hapsari, Stoffers, and Gunawan (2019) found the level of employee engagement (EE) to be positively related to the generational diversity within the organization. In addition, their research indicated that the positive relationship between EE and IWB is significant.

Hypothesis 3: Workforce diversity moderate knowledge sharing influence on innovative work behavior.

Theoretical Framework

Figure 1



Methods

Sample and Procedure

The research participants were employees working in telecommunication contact centers based in Islamabad and Rawalpindi Pakistan. Access to these participants was ensured through personal and professional networks.

Table 1 displays the frequency distribution of sample statistics for the respondents under consideration. Surveys were administered to employees working in teams within telecommunication contact centers. A cover letter was provided along with the surveys, explaining the study's objective and scope, assuring respondents of complete anonymity, and emphasizing the voluntary nature of their participation. Out of the 500 surveys distributed, 319 responses were received and deemed usable, resulting in a 63.80 percent response rate. Of the study's participants, 86.8 percent were within the age range of 24 to 30 years, and among this group, 74 percent were male. The education levels of the respondents varied, ranging from bachelor to master holders. The majority of the participants possess experience levels ranging from 2 to 5 years. Furthermore, the participants represented a diverse mix of occupational levels, ages, ethnicities, and educational backgrounds, all working together as teams within their respective organizations.

Table 1 Demographic Information			
Particular	Description	Frequency	Percentage
Gender	Male	236	74.0
	Female	83	26.0
	Total	319	100.0
Age (in years)	24y to 30y	277	86.8
	31y to 36y	42	13.2
	37y to 43y	0	0
	44y to 50y	0	0
	50+	0	0
	Total	319	100
Qualification	Bachelor	186	58.3
	Master	130	40.8
	M.Phil/MS	3	.9
	Doctoral	0	0
	Total	319	100
Experience (in years)	2y to 5y	273	85.6
	6y to 9y	46	14.4
	10y to 13y	0	0
	14y to 17y	0	0
	18y+	0	0
	Total	319	100

Measures

The data for this study were gathered through a "self-report" questionnaire. The participants were required to rate their cultural intelligence on a scale from 1 to 7, where 1 represented "strongly disagree" and 7 indicated "strongly agree". For innovative work behavior, the scale ranged from 1, meaning "Never," to 5, indicating "always". Additionally, the participants were asked to rate knowledge sharing and workforce diversity on a scale from 1, representing "strongly disagree," to 5, representing "strongly agree". In all cases, higher scores on the respective scales denoted higher levels of the trait or characteristic being assessed.

In Pakistan, English is a major and mandatory subject taught from grade school, and it serves as the primary language of instruction in all universities. With the exception of entry-level jobs that require minimal education, it can be assumed that every employed person in Pakistan has the ability to read and understand English. As a result, there was no need to translate the questionnaire into the native language due to the characteristics of the sample population.

Leader's Cultural Intelligence. Cultural intelligence, the independent variable, was assessed using a twenty-item questionnaire adopted from Dyne, Ang, and Koh's (2015) research. The questionnaire consists of two major parts; four assessment sub-scales which consisted of: metacognitive sub-scale (four items), cognitive sub-scale (six items), motivational sub-scale (five items), and behavioral sub-scale (five items). Responses ranged from 1 (strongly disagree) to 7 (strongly agree). Sample items for each

subscale include: Metacognitive: "This person is conscious of the cultural knowledge he/she uses when interacting with people from different cultural backgrounds". Cognitive: "This person knows the legal and economic systems of other cultures". Motivational: "This person enjoys interacting with people from different cultures". Behavioral: "This person alters his/her facial expressions when a cross-cultural situation requires it". Higher scores on the scale indicate higher levels of CQ in the respective subscales.

Innovative Work Behavior. To assess the IWB of employees, a 17-item scale developed by Jong and Hartog (2010) was utilized, with a reliability exceeding 0.70. The scale includes items such as "employees actively contribute to the implementation of new ideas" and "employees make efforts to persuade others to support innovative ideas." These items were utilized to assess the degree to which employees exhibited innovative work behavior.

Knowledge Sharing. To examine the mediating variable of knowledge sharing, a self-reported instrument consisting of ten items was adopted from the research by Hooff and Ridder (2004). In this questionnaire, the five-point Likert-style scale with response choices (1 (Strongly Disagree) to 5 (Strongly Agree)) were used. The instrument consists of donating (six items) and collecting (four items) subscales. Example item of contributing subscale: "I share the information i have with colleagues within my department." On the other hand, a sample item from the collecting subscale is: "Colleagues with my department tell me what their skills are, when i ask them about it."

Workforce Diversity. Workforce diversity is the moderating variable under examination, so a self-reporting questionnaire of 26 items was adopted from Elsaid (2012) research. Data were collected using a questionnaire structured with a five-point Likert-style scale (1 = Strongly Disagree; 5 = Strongly Agree) (see Table 1). The instrument includes four subscales, which are Gender (eight items), Age (four items), Ethnicity (seven items), and Educational Background (seven items).

Measurement Model

Data Analysis

We used the PLS-SEM technique, which includes PLS algorithm along with bootstrapping and blindfolding approaches, using the well-known SmartPLS software (Hair et al., 2019; Qalati et al., 2021). In addition, it was chosen for being complete in variance analysis (Fan et al., 2021), requiring the least amount of sample size (Hair et al., 2019), easy to operate and a strong recommendation for complex model analysis (Fan et al., 2021; Qalati et al., 2021). We also performed descriptive statistics and conducted various data cleansing procedures using the Statistical Package for the Social Sciences (SPSS), including Harman's single-factor test to assess the presence of common method bias.

Common Method Bias

To ensure that our data was unbiased, we employed two techniques (Harman's single factor test and full-collinearity). As the result of Harman's test showed, the value of Harman's Test is less than the 50% level set by Podsakoff et al, in 2003, which is 40.29%. Similarly, using the (full collinearity approach using the inner variance inflation factor, in other words, the PLS-SEM approach by means of SmartPLS) for the researcher was in the recommended by the full collinearity. The maintained inner variance inflation factor values, ranging from 1.00 to 3.30, consistently remained well below the established threshold of 3.33 (Qalati et al., 2021; Hair et al., 2019), as depicted in Table 2. As a result, it was concluded that the data are deemed suitable for analysis.

Convergent Validity and Reliability

Table 2 shows the reliability and validity of the study variables. We employed the PLS algorithm technique within the SmartPLS software to generate findings pertaining to the evaluation of the measurement model. A test was conducted to analyze factor loadings for the variables in the study. The factor loading values, following the rule of thumb, exceeded 0.7 (Alghazi et al., 2021). The assessment of convergent validity, which included measures like Cronbach's alpha, rho_A, average variance extracted, composite reliability, and confirmatory factor analysis (CFA), yielded results above the prescribed thresholds. Globally, these evaluations results indicated that there is reliability and validity for the study's

measurement model since all the values of convergent validity is greater or equal of the threshold proposed by Henseler et al. (2016): rho- A >0.7, CR >0.8, AVE >0.50, and CA >0.80. Since these results are satisfactory we can conclude that there is a stable and valid measurement model to assess the relationships among the variables under consideration.



Table 2 Convergent Validity

Variable and Constructs	Loading	CA	rho-A	CR	AVE	Inner VIF
Leader cultural Intelligence		.965	.972	.974	.637	1.30
CIMC1.	.773					
CIMC2.	.799					
CIMC3.	.780					
CIMC4.	.827					
CIC1.	.723					
CIC2.	.865					
CIC3.	.668					
CIC4.	.808					
CIC5.	.760					
CIC6.	.787					
CIM1.	.825					
CIM2.	.764					
CIM3.	.798					

IWB11.	.846
IWB12.	.789
IWB12.	.789
IWB13.	.820
IWB14.	.842
IWB15.	.707
IWB16.	.844
IWB17.	.851

Knowledge Sharing	.967	.975	.975	.597	3.30
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KSD1.	.736
KSD2.	.867
KSD3.	.781
KSD4.	.848
KSD5.	.866
KSD6.	.666
KSC1.	.893
KSC2.	.864

KSC3.	.769					
KSC4.	.579					
Workforce Diversity		.932	.942	.943	.629	1.98
WDG1.	.778					
WDG2.	.728					
WDG3.	.849					
WDG4.	.652					
WDG5.	.793					
WDG6.	.786					
WDG7.	.791					
WDG8.	.779					
WDA1.	.799					
WDA2.	.720					
WDA3.	.860					
WDA4.	.810					
WDE1.	.843					
WDE2.	.679					
WDE3.	.806					
WDE4.	.771					
WDE5.	.784					
WDE6.	.751					
WDE7.	.749					
WDEB1.	.726					
WDEB2.	.715					
WDEB3.	.863					
WDEB4.	.767					
WDEB5.	.748					
WDEB6.	.742					
WDEB7.	.758					

Discriminant Validity

The Fornell-Larcker criterion approach proposed by Fornell and Larcker (1981) was used to assess both discriminant validity and cross-loadings of latent variables. The results provided in Table 3 confirm the suitability of Fornell-Larcker criteria approach for conducting the analysis, signifying no issues pertaining to discriminant validity amongst variables.

Table 3 Fornell-Larcker Criteria

Constructs	IWB	KS	LCI	WFD
IWB	0.766			
KS	0.952	0.769		
LCI	0.377	0.413	0.779	
WFD	0.672	0.688	0.376	0.759

Bold values are the square root of AVE □

We also conducted a discriminant validity test using the Heterotrait-Monotrait ratio (HTMT) as an additional criterion. According to Henseler et al. (2015), wherein HTMT values should ideally stay under 1. Furthermore, the HTMT values for each of the individual constructs are also confirmed to be below the accepted threshold as indicated by Table 4, in awareness of its use in this context.

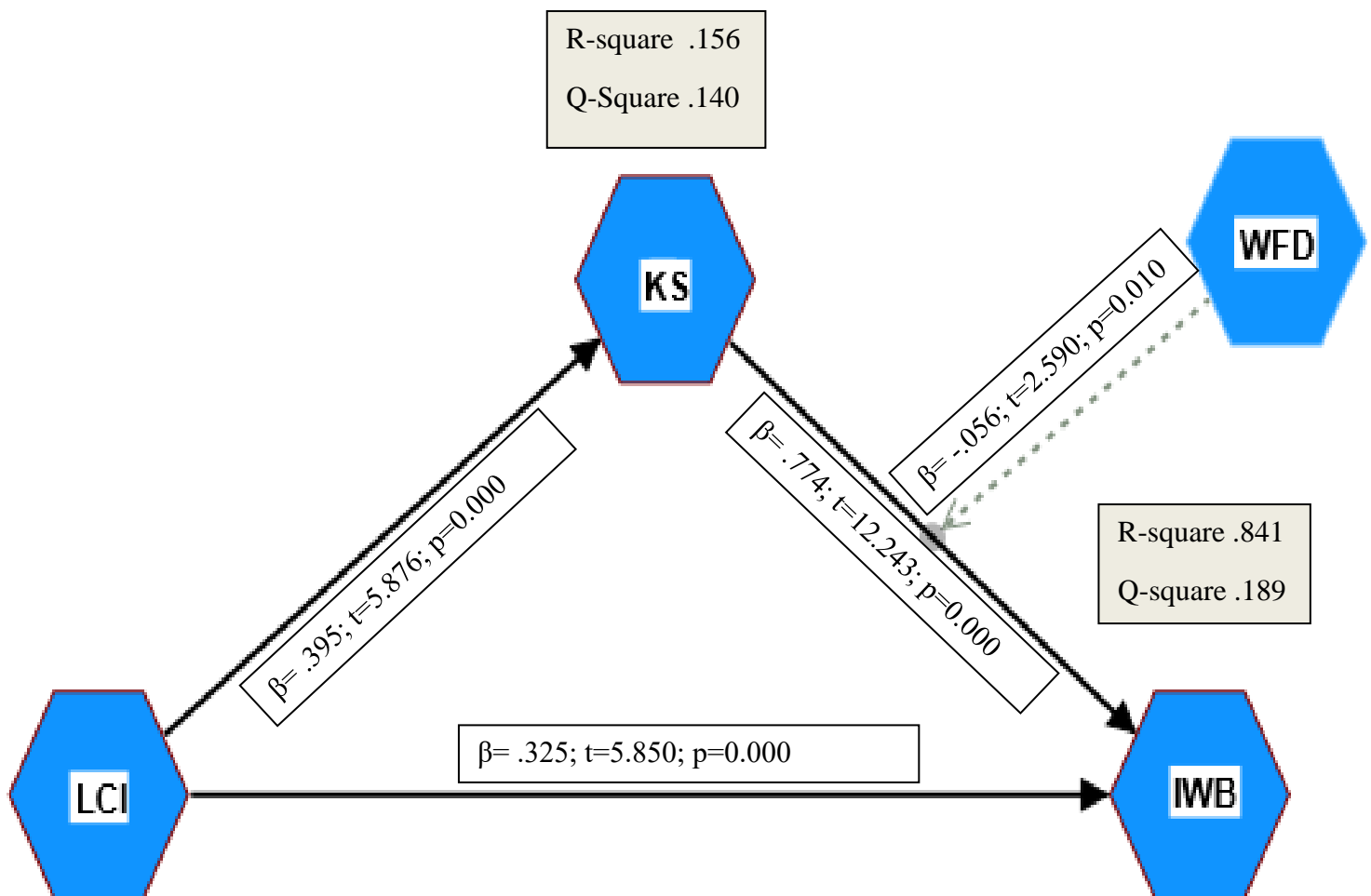
Table 4 Heterotrait-Monotrait (HTMT) ratios

Constructs	IWB	KS	LCI	WFD
IWB				
KS	0.952	0.769		
LCI	0.377	0.413	0.779	
WFD	0.672	0.688	0.376	0.759

Structural Model

In conjunction with Smart PLS, we applied the bootstrapping method for hypothesis testing, which offers a substantial advantage over parametric testing, as advocated by Chin in 2010. The endorsement of bootstrapping for PLS-SEM analysis is robust, emphasized by Henseler et al. in their 2009 study, due to its proven reliability. Within the context of this study, a total of three hypotheses, one direct hypothesis, one mediating hypotheses, and one moderating hypothesis were examined.

Figure 2 Result of PLS-SEM



In the context of this study, there are three hypotheses. To analyze these hypotheses, we utilized SmartPLS version 4, employing bootstrapping with 5,000 subsets for robust statistical evaluation. The study reveals a substantial and positive correlation between LCI and IWB ($\beta = .325$; $t = 5.850$; $p = 0.000$), supporting the acceptance of Hypothesis 1. In Table 6, the indirect impact of LCI on IWB through KS as a mediator is presented, along with the moderating influence of WFD on the relationship between KS and IWB. The finding for hypothesis 2 affirm that KS acts as a mediator in the relationship between LCI and IWB, with a significant coefficient ($\beta = 0.306$; $t = 5.493$; $p < 0.000$). Moreover, this study examines how WFD moderates the link between KS and IWB. Hypothesis H3 confirms a significant negative moderation effect, with a ($\beta = -0.056$; $t = 2.590$; $p < 0.010$).

TABLE 5 Hypotheses Testing and Strength of the Model

Hypothesis	Proposed Relationship	Path Coefficient	SD	t-value	p-value	Decision
H1	LCI → IWB	.325	.056	5.850**	.000	Supported
Indirect Effect						
H2	LCI→KS→IWB	.306	.056	5.493**	.000	Supported
Moderating Interaction						
H3	WFD x KS→ IWB	-.056	.022	2.590*	.010	Supported

Figure 3 illustrates the moderating role of WFD in the relationship between LCI and IWB. In addition to this, various criteria were employed to evaluate the moderating effects.

In Figure 3, it is evident that WFD plays a significant role in negatively influencing the association between KS and IWB. This provides empirical support for the hypothesis H3, which posited that WFD acts as a moderator in the relationship between KS and IWB.

Figure 3 Moderating effect of WFD between LCI and IWB.

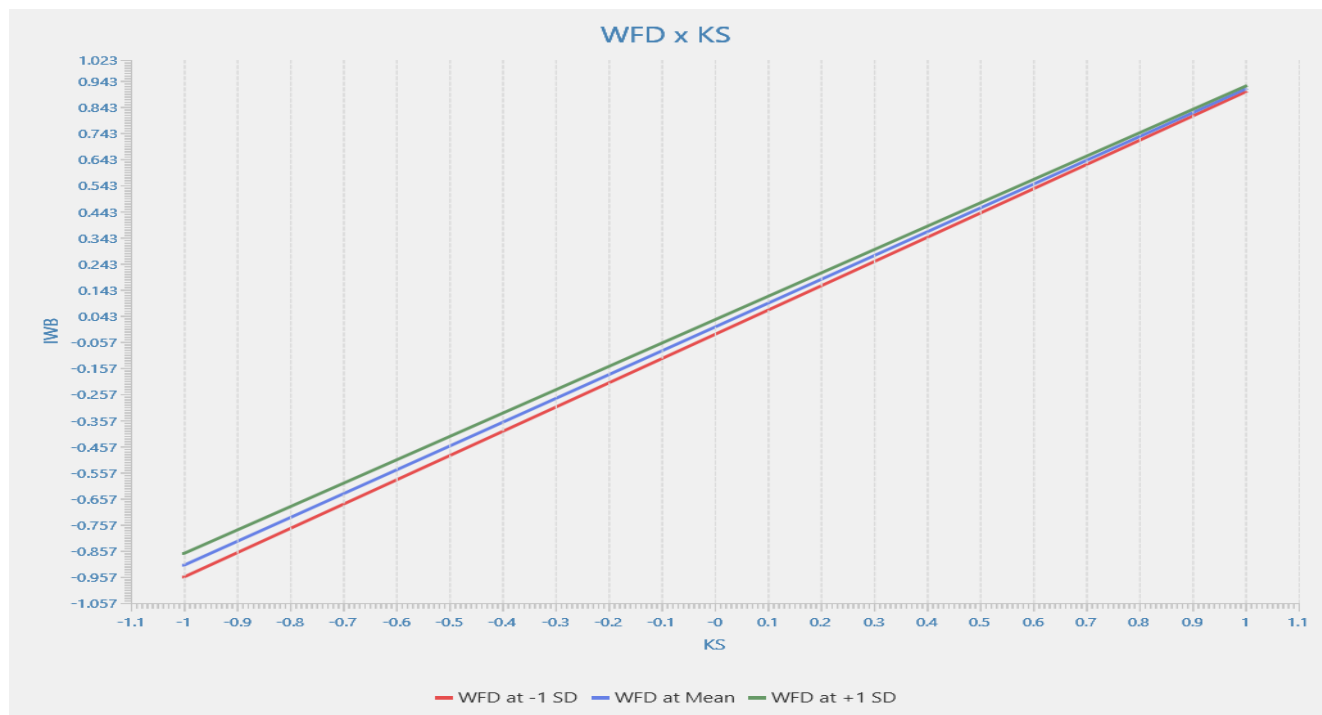


TABLE 6 R2 and Q2.

	R2	Q2
Knowledge Sharing	.156	.140
Innovative Work Behavior	.841	.189

The Predictive Power of the Model

The collective variance explained by exogenous variables is represented as R2. As per the data in Table 5, it is evident that this exogenous variable can account for 15.60% of the observed KS, while explaining 84.10% of the observed IWB. In Cohen's 1988 study, he categorized R-squared values into three distinct levels: low (R-squared ranging from 0.02 to 0.13), medium (R-squared between 0.13 and 0.26), and high (R-squared exceeding 0.26). The findings derived from this study suggest that KS (Knowledge Sharing) falls within the category of medium impact, while the IWB (Innovation Work Behavior) score is classified as substantial. SmartPLS applies a blindfolding procedure to ensure a cross-validated redundancy measure known as Q2, reflecting the predictive power of a research model (Hair et al., 2017). According to Chin et al. (2020), so this means that for Q2 to be greater than zero. Evidence is found in Table 6 where both KS and IWB $Q2 > 0$ imply a strong predictive power of the model.

Discussion

The results of model testing in this study have confirmed that there is an indirect effect of cultural intelligence on innovative work behavior through knowledge sharing as a mediator in the indirect effect of CQ on IWB in employees of telecommunication contact centers. Moreover, this study examined workforce diversity as a moderator in the relationship between knowledge sharing and innovative work behavior. In our conceptual study, we initially found direct effects of cultural intelligence of the leaders on innovative work behavior via PLS-SEM. In the right context, this result suggests that leaders who are knowledgeable about workplace culture will be able to connect with team members in a way that encourages increased team productivity through innovative work behavior. It was identified that cultural intelligence capabilities had a significant positive effect on individual IWB (Azevedo & Shane, 2019). They found positive effect of cultural intelligence on contextual performance by encouraging innovative work behavior (Afsar, et al., 2020). The current study confirms that this cultural intelligence (CQ) actually plays a crucial role in the improvement of employees' innovative work behavior. CQ equips them with a wide array of verbal and nonverbal skills to speak in an effective way from the perspective of their own cultural backgrounds. Besides, stimulates an accentuated awareness of the intricacies that shape multicultural interactions (Leung & Chiu, 2010). This study finding is similar to previous studies (Berraies, 2020; Groves and Feyerherm, 2011; Dogra and Dixit, 2019) who discussed the significance of leader cultural intelligence in various sectors.

With respect to the mediation hypothesis and the second research objective, this study provided strong evidence of a positive and statistically significant mediating effect KS on the relationship between LCI (Leaders' Cultural Intelligence) and employees' IWB. The findings of this study reveal that leaders, as a central component of the processes, are mostly the ones being in charge of implementing the advised policies and practices and can have great impact to increase employees innovative work behavior (IWB) by facilitating knowledge sharing culture by team members. The study finding is consistent to previous study (Akram et al., 2020; Arsawan et al. 2022; Zhao et al.; Curado et al, 2017; Lin, 2007).

Regarding the ultimate moderation hypothesis and research aim, our study observed a minor yet statistically significant negative interaction effect of workforce diversity on the relationship between KS and IWB ($\beta = -.056$, $t = 2.590$, $p = 0.010 < 0.05$). Consequently, this outcome provides empirical support for H3. This result suggests that the impact of LCI on IWB may exhibit a slight reduction in strength in the presence of high workforce diversity. Furthermore, it implies that in situations with a high degree of workforce diversity, LCI's effect on IWB tends to be relatively less negative. Therefore, we suggest that

these organizations devise such approaches that ensure recruitment of best-fit candidates for the jobs as it will boost both productivity and innovative work behavior. This finding aligns with the conclusion from Small, Major and Kaiser (2022) which states that focus on widespread diversity initiatives can be troublesome. This can create a feeling of decreased inclusion for those belonging to targeted groups, increased concerns about bias and ultimately result in a decline in innovative work behavior.

Theoretical Implication

Our study has significant theoretical implications for the literature. This research adds to the literature on Cultural Intelligence (CQ), developing work by Sharma and Hussain (2017) and Ott and Michailova (2018). Previous studies have extensively analyzed the influence of Cultural Intelligence (CQ) on various individual work behaviors among employees including job performance (Chen et al., 2010; Jyoti and Kour, 2015), intercultural negotiation (Groves et al., 2015), and decision-making (Ang et al., 2007); however, little is known in the literature to date regarding how CQ affects non-routine performance (particularly innovative behavior) in multicultural settings. Individuals with high levels of CQ seem to have the capacity to both access and use functional knowledge for creative idea generation with wide utility. The findings of this study confirm those of Korzilius, Bucker and Beerlage (2017), indicating that Cultural Intelligence (CQ) can improve the individuals' ability of cross-cultural interactions and result in innovative outputs. Thus, this present study adds to the understanding of CQ, which is a core competency in cross-cultural settings.

Rather than directly investigating the link between a LCI and their innovative performance, our research highlighted the importance of KS as a mediator of this relationship. Leaders & supervisors motivate and facilitate knowledge sharing among employees for learning & innovation, according to this research. Moreover, admirable managers relating to relational leadership serve as a strong base for elevating their employees' cultural intelligence and both of their intentions towards the improvement of their innovative performance. Our research findings also confirm that KS mediates the relationship between LCI and employees IWB.

Moreover, building upon existing research on the influence of leaders' cultural intelligence, we further investigated the contingent impact of Workforce Diversity (WFD). The outcomes unveiled a moderating effect that WFD exerts on the relationship between KS and IWB. Our study's results suggest that WFD marginally weakens the intensity of the association between KS and IWB.

Managerial Implication

This study unveils valuable practical implications. Our findings indicate that Leader Cultural Intelligence can yield positive effects on employees' innovative behavior, both through direct and indirect channels. As a result, organizations need to adopt appropriate measures for effective workforce management. Firstly, organizations are highly encouraged to include Cultural Intelligence (CQ) in their evaluation of potential leaders during the recruitment phase and priorities those with larger CQ scores. For example, at the recruitment stage, organizations may recruit leaders who perform particularly well in CQ assessments. Third and finally, results of the study provide great insights on the creation of an organization optimized for knowledge sharing. Since organization can significantly benefit from both leader's Cultural Intelligence (LCI) through a knowledge-sharing climate that boosts innovative behavior, organizations should invest as much as they can to encourage a knowledge-sharing culture. Thereafter, a longitudinal pilot study also recently demonstrated evidence that training on the concepts of an individual's Cultural Intelligence (CQ) can impact an individual's innovative work behavior (IWB) (Azevedo and Shane, 2019). While research does demonstrate that multicultural diversity can boost innovation in most organizations, it is imperative for companies in multi-ethnic country like Pakistan to understand what encourages diversity as well as what restricts diversity. It should be noted that diversity has spillover effects both in terms of the positive and the negative, thus to help achieve the innovation and productivity from such diverse teams, it needs to properly managed. Further, leaders can encourage

employees to develop positive and innovative work behavior by creating a culture of sharing knowledge that transcends religious, ethnic and cultural lines.

Limitations and Future Research

It is important to note the limitations of this study before discussing potential directions for future research. First, due to cross-sectional data, the causal relationships between variables are difficult to ascertain. Thus, we recommend the future researcher using longitudinal or multilevel research design to study the associations of each of the variables. Secondly, the quantitative data used within this research effectively illustrate relationships between the aforementioned variables, yet fail to provide explanations or reasons behind the correlations. Hence, qualitative data collection and analysis in future studies may assist in elucidating the mechanisms associated with these associations. Thus, utilizing a mix-method approach i.e. both qualitative and quantitative data could provide the holistic insights about LCI and their IWB. Third, CQ is measured at the general aggregated level in this study. Korzilius et al. (2017), however, have noted that metacognitive, cognitive, motivational, and behavioral CQ dimensions play a pivotal role in understanding the cognitive complexity of people in intercultural contexts. This can maybe be augmented through future studies for innovative behavior and CQ as a construct of different sub dimensions.

Conclusion

Using a cross-sectional research design, the current study shows a positive relationship between Leader Cultural Intelligence (LCI) and employees Innovative work Behavior (IWB). More specifically, the results demonstrate that LCI indirectly impacts employee's IWB via knowledge sharing as a mediator. In addition, results show a mediated moderation model, where WFD moderates the relation between LCI and employees IWB through knowledge sharing. Accordingly, it can be concluded that knowledge sharing and workforce diversity can greatly affect the link between leader cultural intelligence and the employees' innovative work behavior.

References

- Afsar, B., Al-Ghazali, B. M., Cheema, S., & Javed, F. (2020). Cultural intelligence and innovative work behavior: the role of work engagement and interpersonal trust. *European Journal of Innovation Management*.
- Akram, T., Lei, S., Haider, M. J., & Hussain, S. T. (2019). The Impact of Organizational Justice on Employee Innovative Work Behavior: Mediating Role of Knowledge Sharing. *Journal of Innovation Knowledge*, 5(2), 117-129.
- Alghazi, S. S., Kamsin, A., Almaiah, M. A., Wong, S. Y., & Shuib, L. (2021). For Sustainable Application of Mobile Learning: An Extended UTAUT Model to Examine the Effect of Technical Factors on the Usage of Mobile Devices as a Learning Tool. *Sustainability*, 13, 1-22.
- Ang, S., & Dyne L. V. (2008). Conceptualization of Cultural Intelligence: Definition, Distinctiveness, and Nomological Network. In *Handbook of Cultural Intelligence: Theory, measurement, and applications* (pp. 3-15). Routledge.
- Ang, S., Dyne, L. V., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., et al. (2007). Cultural Intelligence: Its Measurement and Effects on Cultural Judgment and Decision Making, Cultural Adaptation and Task Performance. *Management and Organization Review*, 3(3), 335-371.
- Ang, S., Dyne, L. V., & Koh, C. (2006). Personality Coorelates of the Four-Factor Model of Cultural Intelligence. *Group & Organization Management*, 31(1), 100-123.
- Ansong, A., Ennin, E. E., & Yeboah, M. A. (2022). Relational leadership and employee creativity: The role of knowledge-sharing behaviour and leader-follower dyadic tenure. *Journal of Hospitality and Tourism Insights*.

- Arsawan, W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. (2022). Leveraging Knowledge Sharing and Innovation Culture into SMEs Sustainable Competitive Advantage. *International Journal of Productivity and Performance Management*, 71(2), 405-428.
- Azevedo, A., & Shane, M. J. (2019). A New Training Program in Developing Cultural Intelligence can also Improve Innovative Work Behavior and Resilience: A Longitudinal Pilot Study Of Graduate Students and Professional Employees. *The International Journal of Management Education*, 17(3), 100303.
- Berraies, S. (2020). Effect of middle managers' cultural intelligence on firms' innovation performance: Knowledge sharing as mediator and collaborative climate as moderator. *Personnel Review*, 49(4), 1015-1038.
- Bogilovi, S., Bortoluzzi, G., Cerne, M., Ghasemzadeh, K., & Znidarsic, J. (2021). Diversity, Climate and Innovative Work Behavior. *European Journal of Innovation Management*, 24(5), 1502-1524.
- Chaudhry, I. S., Paquibut, R. Y., & Tunio, M. N. (2021). Do Workforce Diversity, Inclusion Practices, & Organizational Characteristics Contribute to Organizational Innovation? Evidence from the U.A.E. *Cogent Business & Management*, 8(1), 1-24.
- Chen, G., Kirkman, B. L., Kim, K., & Farh, C. I. (2010). When Does Cross-Cultural Motivation Enhance Expatriate Effectiveness? A Multilevel Investigation of the Moderating Roles of Subsidiary Support and Cultural Distance. *Academy of Management Journal*, 53(5), 1110-1130.
- Chen, M. L., & Lin, C. P. (2013). Assessing the effects of cultural intelligence on team knowledge sharing from a socio-cognitive perspective. *Human Resource Management*, 52(5), 675-695.
- Chin, W. W. (2010). How to Write up and Report PLS Analyses. In V. E. Vinzi, J. Henseler, W. W. Chin, & H. Wang, *Handbook of partial Least Squares* (pp. 655-690). Berlin, Heidelberg: Springer.
- Chin, W., Cheah, J. H., Liu, Y., Ting, H., Lim, X. J., & Cham, T. H. (2020). Demystifying the Role of Causal- Predictive Modeling Using Partial Least Squares Structural Equation Modeling in Information Systems Research. *Industrial Management & Data System*, 120(12), 2161-2209.
- Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision support systems*, 42(3), 1872-1888.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Science*. New York: Lawrence Erlbaum Associates.
- Curado, C., Oliveira, M., Gastaud, A. C., Macada, & Nodari, F. (2015). Teams innovation: getting there through knowledge sharing and absorptive capacity. *Knowledge Management Research & Practice*, 15, 1-9.
- Curado, C., Oliveira, M., Gastaud, A. C., Nodar, F., & ACG Macada. (2017). Teams' Innovation: Getting There Through Knowledge Sharing and Absorptive Capacity. *Knowledge Management Research & Practice*, 15, 45-53.
- Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Harvard Business Press.
- Deal, J. J., Leslie, J., Dalton, M., & Ernst, C. (2003). Cultural Adaptability And Leading Across Cultures. *Advances in Global Leadership*, 3, 167-181.
- Detelin, E. S., & Ivan, M. M. (2009). Senior Expatriate Leadership's Effects On Innovation And The Role Of Cultural Intelligence. *Journal of World Business*, 44(4), 357-369.
- Dogra, A. S., & Dixit, V. (2019). The Role of CQ, EQ and SQ in Shaping Leadership Competence in Context to Transformational Leadership. *International Journal on Leadership*, 7(2), 1-8.
- Dyne, L. V., Ang, S., & Koh, C. (2015). Development and validation of the CQS: The cultural intelligence scale. In *Handbook of cultural intelligence* (pp. 34-56). Routledge.
- Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. California: Stanford University Press.

- Elenkov, D. S., & Manev, I. M. (2009). Senior Expatriate Leadership's Effects on Innovation and the Role of Cultural Intelligence. *Journal of World Business*, 44, 357-369.
- Elsaid, A. M. (2012). The Effects of Cross Cultural Work Force Diversity on Employee Performance in Egyptian Pharmaceutical Organizations. *Business and Management Research*, 01(04), 162-179.
- Fan, M., Huang, Y., Qalat, S. A., Shah, S. M., Ostic, D., & Pu, Z. (2021). Effects of Information Overload, Communication Overload, and Inequality on Digital Distrust: A Cyber-Violence Behavior Mechanism. *Frontiers in Psychology*, 12, 1-11.
- Fornell, C., & Larcker, D. F. (1981). Structural Equation Models With Unobservable Variables and Measurement Errors: Algebra and Statistics. 382-388.
- Garcia, P. S., Oliveira, M., & Brohman, K. (2022). Knowledge Sharing, Hiding And Hoarding: How Are They Related? *Knowledge Management Research & Practice*, 20(3), 339-351.
- Groves, K. S., & Feyerherm, A. E. (2011). Leader Cultural Intelligence in Context: Testing the Moderating Effect of Team Cultural Diversity on Leader and Team Performance. *Group & Organization Management*, 36(5), 535-566.
- Groves, K. S., Feyerherm, A., & Gu, M. (2015). Examining Cultural Intelligence and Cross-Cultural Negotiation Effectiveness. *Journal of Management Education*, 39(2), 209-243.
- Guillaume, Y. R., Dawson, J. F., Ebode, L. O., Woods, S. A., & Wests, M. A. (2017). Harnessing Demographic Differences In Organizations: What Moderates The Effects Of Workplace Diversity? *Journal of Organizational Behavior*, 276-.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to Use and How to Report the Results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Hapsari, C., Stoffers, J., & Gunawan, A. (2019). The Influence of Generational Diversity Management and Leader-Member Exchange on Innovative Work Behaviors Mediated by Employee Engagement. *Journal of Asia-Pacific Business*, 2(2), 1-15.
- Heath, D. K., Martin, D. L., & Shahisaman, D. L. (2017). Global Leadership Competence: The Intelligence Quotient of a Modern Leader. *Journal of Leadership Education*, 16(3), 134-145.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. *Journal of the Academy of Marketing Science*, 43, 115-135.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *New challenges to international marketing*, 20, 277-319.
- Hooff, B. V., & Ridder, J. A. (2004). Knowledge Sharing in Context: The Influence of Organizational Commitment, Communication Climate and CMC use on Knowledge Sharing. *Journal of Knowledge Management*, 08(06), 117-130.
- Ipe, M. (2003). Knowledge Sharing in Organizations: A Conceptual Framework. *Human Resource Development Review*, 2(4), 337-359.
- Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications. *Journal of Management*, 29(6), 801-830.
- Jankelova, N., Skorkova, Z., Joniakova, Z., & Nemethova, I. (2021). A Diverse Organizational Culture and Its Impact on Innovative Work Behavior of Municipal Employees. *Sustainability*, 13, 3414.
- Janssen, O. (2000). Job Demands, Perceptions of Effort-reward Fairness and Innovative Work Behaviour. *Journal of Occupational and Organizational Psychology*, 73, 287-302.
- Janssen, O. (2003). Job Demands, Perceptions Of Effort-Reward Fairness And Innovative Work Behaviour. *Journal of Occupational and Organizational Psychology*, 73, 287-302.
- Jones, M. C., Cline, M., & Ryan, S. (2006). Exploring knowledge sharing in ERP implementation: an organizational culture framework. *Decision support systems*, 41(2), 411-434.
- Jong, J. D., & Hartog, D. D. (2010). Measuring Innovative Work Behaviour. *Creativity and Innovation Management*, 19(01), 24-36.

- Jyoti, J., & Kour, S. (2015). Assessing the Cultural Intelligence and Task Performance Equation: Mediating Role of Cultural Adjustment. *Cross Cultural Management*, 22(2), 236-258.
- Jyoti, J., Pereira, V., & Kour, S. (2019). Examining the impact of Cultural Intelligence on Knowledge Sharing: Role of Moderating and Mediating Variables. *Understanding the role of business analytics: Some applications*, 169-188.
- Kanter, R. M. (1988). Three Tires for Innovation Research. *Communication Research*, 15(5), 509-523.
- Kor, B., Wakkee, I., & Sijde, P. v. (2021). How to Promote Managers' Innovative Behavior at Work: Individual Factors and Perception. *Technovation*, 99, 1-15.
- Le, P. B., & Lei, H. (2018). The mediating role of trust in stimulating the relationship between transformational leadership and knowledge sharing processes. *Journal of knowledge management*, 22(3), 521-537.
- Leung, A. K., & Chiu, C. Y. (2010). Multicultural Experience, Idea Receptiveness, and Creativity. *Journal of Cross-Cultural Psychology*, 41(5), 723-741.
- Lin, H. F. (2007). Knowledge Sharing and Firm Innovation Capability: an Empirical Study. *International Journal of Manpower*, 28(3), 315-332.
- Lin, H. F. (2007). Knowledge Sharing and Firm Innovation Capability: an Empirical Study. *International Journal of Manpower*, 3(4), 315-332.
- Moon, K.-K., & Christensen, R. K. (2020). Realizing the Performance Benefits of Workforce Diversity in the U.S. Federal Government: The Moderating Role of Diversity Climate. *Public Personnel Management*, 49(1), 141-165.
- Ng, K. Y., Dyne, I. V., & Ang, S. (2009). From Experience to Experiential Learning: Cultural Intelligence as a Learning Capability for Global Leader Development. *Academy of Management Learning & Education*, 8(4), 511-526.
- Nguyen, T. N., Yadav, M., Pande, S., Bhanot, A., & Hasan, M. F. (2021). Impact of Diversity Management on Organizational Performance in hotel organizations: a conceptual framework. *International Journal of Systems Assurance Engineering and Management*, 1-11.
- Nosratabadi, S., Bahrami, P., & Palo, K. (2020). Leader Cultural Intelligence And Organizational Performance. *Cogent Business & Management*, 7(1), 1-17.
- Ott, D. L., & Michailova, S. (2018). Cultural Intelligence: A Review and New Research Avenues. *International Journal of Management Reviews*, 20(1), 99-119.
- Pian, Q. Y., Jin, H., & Li, H. (2019). Linking Knowledge Sharing to Innovative Behavior: the moderating role of collectivism. *Journal of Knowledge Management*, 23(8), 1652-1672.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Promoting Professionals' innovative behaviour through knowledgesharing: the moderating role of social capital. (n.d.).
- Qalati, S. A., Yuan, L. W., Khan, M. A., & Anwar, F. (2021). A Mediated Model on the Adoption of Social Media and SMEs' Performance in Developing Countries. *Technology in Society*, 64, 1-12.
- Radaelli, G., Lettieri, E., Mura, M., & Spiller, N. (2014). Knowledge Sharing and Innovative Work Behaviour in Healthcare: A Micro-Level Investigation of Direct and Indirect Effects. *Creativity and innovation management*, 23(4), 400-414.
- Safa, N. S., & Solms, R. V. (2016). An Information Security Knowledge Sharing Model in Organizations. *Computers in Human Behavior*(57), 442-451.
- Saxena, A. (2014). Workforce Diversity: A Key to Improve Productivity. *Procedia Economics and Finance*, 11, 76-85.
- 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.

- Sharma, N., & Hussain, D. (2017). Current Status and Future Directions for Cultural Intelligence. *Journal of Intercultural Communication Research*, 46(1), 96-110.
- Small, P. A., Major, B., & Kaiser, C. (2022). Diversity Initiatives and White Americans' Perceptions of Racial Victimhood. *Personality and Social Psychology Bulletin*, 48(6), 968-984.
- Stoermer, S., Davies, S., & Froese, F. J. (2021). The influence of expatriate cultural intelligence on organizational embeddedness and knowledge sharing: The moderating effects of host country context. *Journal of International Business Studies*, 52, 432-453.
- Sung, S. Y., & Choi, J. N. (2021). Contingent Effects Of Workforce Diversity on Firm Innovation: High-Tech Industry And Market Turbulence As Critical Environmental Contingencies. *The International Journal of Human Resource Management*, 32(9), 1986-2012.
- Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J.-L., et al. (2008). Cultural Intelligence: Domain and Assessment. *International Journal of Cross Cultural Management*, 8(2), 123-143.
- Xinyan, Z., & Xin, Z. (2006). Moderating Effects of Organizational Justice to Knowledge-based Psychological Ownership and Knowledge Sharing. *Proceedings of the 8th International Conference on Innovation & Management*, 875-879.
- Yesil, S., & Dereli, S. F. (2013). An Empirical Investigation of the Organisational Justice, Knowledge Sharing and Innovation Capability. *Procedia-Social and Behavioral Sciences*, 75, 199-208.
- Zhao, S., Jiang, Y., Peng, X., & Hong, J. (2021). Knowledge Sharing Direction and Innovation Performance in Organizations. *European Journal of Innovation Management*, 24(2), 371-394.