



# Inclusive leadership and employee innovative work behavior: The mediating role of vigor at work, and the moderating role of challenge-related-stress

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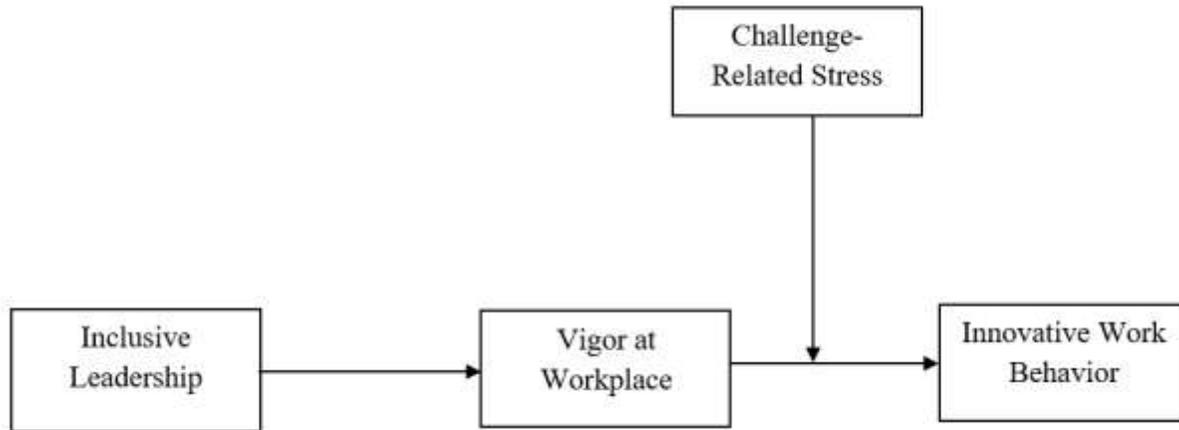
**Abstract-** This research aimed to investigate the effect of inclusive leadership (IL) on employee innovative work behavior (IWB) in commercial banks operating in the territory of Azad Jammu and Kashmir (AJK), Pakistan. "Besides, it examined the impact of the mediating role of vigor at workplace in the relationship between IL and IWB. Furthermore, this study also investigated the moderating effect of challenge-related stress in the relationship between vigor at workplace and IWB. This study utilized quantitative research design and primary data were collected from 353 employees of the banking sector across AJK, Pakistan, using a questionnaire survey. Data were collected in 2-time lags of 6 months. The collected data were analyzed by conducting structural equation modeling (SEM) using AMOS-24." Mediation and moderation analyses were performed using Hayes' (2013) process macro. The results reveal a significant positive effect of IL on IWB and significant mediation of vigor at workplace between the relationship of IL and IWB. Moreover, this relationship gets stronger in the presence of challenge-related stress as a moderator. Few past studies have highlighted the effect of IL on IWB, but this is the only study that has examined the mediation effect of vigor at workplace and moderation effect of challenge-related stress, together in a single research model.

**Keywords:** Inclusive Leadership; Innovative Work Behavior; Vigor at Workplace; Challenge-Related Stress

## I. INTRODUCTION

In the current globalized competitive environment, innovations have been considered an important expediter for performance, growth, and competitiveness (Gumusluoglu & Ilsev, 2009; Perry-Smith & Shalley, 2003). Researchers and practitioners have progressively highlighted the significant impact of innovation on sustainable competitive advantage and persistent organizational success (Duran, Kammerlander, Van Essen, & Zellweger, 2016). Organizational innovations are largely dependent on the development of novel, innovative, and creative ideas among employees and implementation of these novel ideas into real meanings (Amabile, Conti, Coon, Lazenby, & Herron, 1996). In organizations, employee innovation is of critical importance since it recognizes factors that can stimulate IWB of employees (N. Anderson, De Dreu, & Nijstad, 2004), which encourage employees to engage in innovative activities (Montag, Maertz Jr, & Baer, 2012; Shin, Yuan, & Zhou, 2017). Researchers have tried to find out major determinants of IWB (Damanpour, 1991; Montag et al., 2012; Qi, Liu, Wei, & Hu, 2019), and explored numerous factors, such as innovative HRM practices (Chang, Gong, & Shum, 2011), knowledge sharing (Hu, Horng, & Sun, 2009), absorptive ability (Soo, Tian, Teo, & Cordery, 2017), innovative environments (Jaiswal & Dhar, 2015), etc. Among all these factors of IWB, most of the researchers have highlighted leadership as the main determinant of creativity and IWB (D. Jung, Wu, & Chow, 2008; Qi et al., 2019). Many researchers have specified transformational leadership (Imran & Anis-ul-Haque, 2011; D. I. Jung & Sosik, 2002; Afsar, Badir, & Saeed, 2014; Masood & Afsar, 2017; Gumusluoglu & Ilsev, 2009), ethical leadership (Chen & Hou, 2016; Dhar, 2016; Yidong & Xinxin, 2013; Zahra, Ahmad, & Waheed, 2017; Zahra & Waheed, 2017), servant leadership (Cai, Lysova, Khapova, & Bossink, 2018; Topcu, Gursoy, & Gurson, 2015), and paternalistic leadership (Dedahanov, Bozorov, & Sung, 2019; Tian &

Sanchez, 2017) considerably influenced the employees IWB. Regardless of these studies, still, “there is inadequate research on the influence of inclusive leadership (IL) on IWB (Javed, Abdullah, Zaffar, ul Haque, & Rubab, 2019; Javed, Khan, & Quratulain, 2018; Qi et al., 2019). IL is relatively dissimilar from other types of leadership (Carmeli, Reiter-Palmon, & Ziv, 2010).” IL is closely coordinated the factors of workplace innovation, such as openness, inclusiveness, distinctiveness, and provision of innovation (Carmeli et al., 2010; Randel et al., 2018). Studying the influence of IL on IWB can offer more understanding into existing literature concerning the impact of leadership on IWB because of rare empirical studies. The current research established new theoretic insights on how IL influences employees’ IWB. To study the relationship between IL and employees’ IWB, we suggested employees’ vigor at workplace as a mediator that refers to employees’ state of mind that they have emotional vigor, physical strength, and cognitive energy to do the work. To explain, in the study of leadership behavior, vigor at workplace is normally related to management effectiveness (Church & Waclawski, 1998; Shirom, 2003). Past studies have provided several theoretical associations to advocate that vigorous or energetic employees are expected to have a positive effect on work-related behaviors (Wefald, Smith, Gopalan, & Downey, 2017). For example, studies of (Carmeli, Ben-Hador, Waldman, & Rupp, 2009; Shirom, 2010; Little, Nelson, Wallace, & Johnson, 2011; Wefald et al., 2017) established that vigorous individuals were more expected to make a positive work environment and stated higher level of well-being, engagement, vitality, performance, and effectiveness. Based on these theoretical foundations, this study looks for providing an empirical assessment regarding workplace vigor. Scholars have emphasized on the significance of IL in organizations (Javed et al., 2019; Javed et al., 2018; Qi et al., 2019) and vigor at workplace (Kaya & Karatepe, 2020; Shirom, 2003, 2007, 2011) in enhancing employee IWB. However, there is no study found that has examined the relationship between IL and IWB through vigor at workplace, hence, this study has been made to fill this literature gap. In this study, we added to existing research by examining the impact of IL on employee IWB through vigor at workplace. Furthermore, another uniqueness of this study is that it has examined how the relationship between employee workplace vigor and their IWB can be strengthened with the presence of challenge-related stress. Challenge-related stress often develops from challenging work stresses like increased responsibilities, heavy workloads, and time pressures, and these expedite individual growth (Cavanaugh et al., 2000). Challenge stressors generate feeling in employees that their managers give value to them, because employees may perceive that their managers have higher expectations for them and they are also influenced by employee’s ability to accomplish more tasks in less time. This will stimulate employees’ intrinsic motivation that will lead to constructive work behaviors and consequences such as higher performances (Qing & Zhang, 2014). Challenge-related stress is linked with positive job outcomes and creating challenges and feelings of success or performance (Zhu, Xu, & Zhang, 2019). As the previous studies established that challenge-related stress enhances positive job behaviors and work outcomes, this study is aimed to investigate the moderating effect of challenge-related stress between the relationship of employee vigor and workplace and their IWB which was not previously explored. Hence, our study is directed to make three foremost contributions to understanding the role of IL, workplace vigor, challenge-related stress, and IWB. First, this study contributed and extended past studies on the factors related to employees IWB by investigating how IL influenced the work behaviors of employees. The second contribution of this study is the investigation of the mediating role of workplace vigor between the relationships of IL & IWB, which is not previously explored. The third contribution of this study is the exploration of the moderating effect of challenge-related stress between the relationship of employee vigor at workplace and their IWB, which is also not examined before. This study follows Social Exchange Theory (SET) as according to SET, when IL offers valuable resources to employees, in response, employees get motivated by engaging themselves more vigorously to their job responsibilities and applying more physical, mental, and emotional means to the organization (Strom, Sears, & Kelly, 2014). Figure 1 shows the hypothesized research model that has been developed to achieve the described research objectives.



**Figure 1: Hypothesized Study Model**

## II. THEORETICAL FOUNDATION AND HYPOTHESES DEVELOPMENT

### **Inclusive Leadership (IL) and Innovative Work Behavior (IWB)**

IL as a management concept was introduced initially by Nembhard and Edmondson, (2006), and defined it as “words and deeds by a leader or leaders that indicate an invitation and appreciation for others’ contributions.” Subsequently, Carmeli et al., (2010) established that “inclusive leadership refers to leaders who exhibit openness, accessibility, and availability in their interactions with followers.” Afterward, IL was described by Hollander (2009) as a “win-win situation with a common goal and vision of interdependent relationships” (Hantula, 2009; Hollander, 2012). Hollander highlighted the significance of the follower’s role and emphasized more on their opinion about leaders. Ospina and El Hadidy, (2011) defined an “inclusive leader as valuable and someone who accepted staff at all levels in the organization and was responsible for results.” Ospina and El Hadidy emphasized that IL acknowledges the importance of followers’ behavior diversity. Moreover, the leader’s inclusiveness plays an important role in developing organizational inclusiveness. Especially, such leaders have three unique qualities; first, they tolerate follower’s failures, and attentively listen to their views, ignore their errors, encourage and guide followers rationally on their mistakes. Secondly, inclusive leaders not only acknowledge their efforts but also pay more attention to their further training and praising their achievements instead of showing jealousy (Qi et al., 2019). The third significant quality of inclusive leaders is that they treat all their subordinates equally, respect their feelings, display the nondiscriminatory attitude, and impartially consider subordinates’ interests and needs (Qi et al., 2019). If we compare IL with other leadership styles we may differentiate it because of its exclusive acceptance nature, individuality, belongingness, appropriateness, inclusiveness, and uniqueness (Randel et al., 2018). For example, transformational leadership is more focused on the development and motivation of employees according to organizational needs (Dvir, Eden, Avolio, & Shamir, 2002). Moreover, transformational leadership is more leader centered and discourage active follower participation, mutual guidance, and rewards (Hollander, 2012). On the other hand, IL is more focused on employee acceptance by permitting them to offer their distinctive views and abilities and inspiring them to participate in organizational accomplishments (Qi et al., 2019). Though the main focus of servant leadership is to help the employees in their growth and success (Liden, Wayne, Zhao, & Henderson, 2008), IL leans towards employee’s necessities for work-group availability and openness (Qi et al., 2019). Empowering leadership emphasized on “leading by example, training and coaching, and power-sharing” (Srivastava, Bartol, & Locke, 2006), while IL expedited the insight of openness, accessibility, and inclusiveness. Based on the above-sited differences, the similarities between current leadership conceptualizations and IL were nominal, and all other leadership types might not completely capture the strategic principles of IL (Randel et al., 2018). Regardless of the critical and distinctive IL role in the research of leadership, so far, limited studies have scrutinized the

association between IL and employee IWB. The objective of this research is to scrutinize how inclusiveness of leadership in an organization influenced employee IWB through vigor at workplace.

IWB was well-thought-out as a sequence of activities that refer to creation, promotion, and recognition of ideas for novel techniques, processes, technologies, and products (Janssen, 2000; Yuan & Woodman, 2010). The focus of employee IWB is on the process of innovation, such as, engaging in inventive actions, instead of the innovation results, like novel products (Drazin, Glynn, & Kazanjian, 1999; Montag et al., 2012), which is beyond the creativity concept (Shin et al., 2017). For the last many decades, different leadership types have been proved to affect employee IWB in organizations (Mumford, Scott, Gaddis, & Strange, 2002). Innovations are closely related to leadership encouragement, freedom, and leadership, and organizational support (Amabile, 2018).

As of theoretic perspectives, IL can encourage employee IWB in many ways (Qi et al., 2019). IL can stimulate employees to participate in the innovation process (Atwater & Carmeli, 2009). Leadership inclusiveness improves the perception of employees about the organization and develops employee intrinsic motivation (Conger & Kanungo, 1998), which leads to more engagement in innovative behavior (Conger & Kanungo, 1998; Shin & Zhou, 2003). Employee's work behaviors depend on organizational or leadership support. IL provides resources to the employees such as knowledge, support, and time that are essential for IWB (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Reiter-Palmon & Illies, 2004). When leaders support their employees, they often acquire extra freedom and autonomy to involve in IWB (Foss, Woll, & Moilanen, 2013). A leader's inclusiveness is an employee's trust centered as leaders use different approaches to enhance the ability, potential, and capacity of employee's behavior (Qi et al., 2019). Moreover, IL also facilitates employee's perceived organizational belongingness while sustaining their individuality, so they can contribute extravagantly to the process of innovation (Randel et al., 2018). Furthermore, IL can serve as an example for IWB (Jaussi & Dionne, 2003). According to Nembhard and Edmondson (2006), there is a positive correlation between IL and employees' commitment to improved quality work. Inclusive leaders display an explicit relationship with the followers through rationality and openness in contribution, accessibility, and openness (Carmeli et al., 2010), which can facilitate employee engagement in IWB that are usually known as "discretionary behavior" (Janssen, 2000; Qi et al., 2019). These unique features of inclusive leaders can reshape employee's perceptions of encouragement and increase their innovative behavior (Randel et al., 2018). Therefore, on the basis of extensive literature review, we can hypothesize that:

***H1: There is a positive relationship between IL and employee IWB.***

### **Mediating Role of Vigor at Workplace**

This study explains vigor at workplace as a "mediator" that arbitrates the association between IL and employee IWB. Vigor at workplace is defined by Shirom as "a positive affective response to one's ongoing interaction with significant elements in one's job and work environment that comprises the interconnected feelings of 1) physical strength, 2) emotional energy, and 3) cognitive liveliness" (Shirom, 2003). Physical strength means one's feelings about his/her physical abilities and application of physical energy into their work, while emotional energy means relational feelings induced while expressing kindness, responsiveness, empathy, and emotive backing to others. "Cognitive liveliness" refers to one's emotional liveliness, cognitive responsiveness, and mental agility (Shirom, 2007). Even though there is limited research on the workplace vigor as a positive job-related outcome, past studies have provided several theoretical recommendations that workplace vigor positively influences the critical job-related outcomes and behaviors. "For instance, Carmeli et al. (2009) established that employees who feel vigorous at workplace often build a progressive work environment and exhibit higher levels of liveliness and well-being. Likewise, Shirom (2007) also found that employees with high vigor are likely to be more efficient, and demonstrate a higher level of work engagement." Similarly, Wefald et al., (2017) also argued that vigor at workplace is a unique positive organizational behavior (Wefald et al., 2017). Based on these past studies, the current study looks for the provision of an empirical evaluation of vigor at workplace concerning positive work behaviors like IWB. Moreover, this study investigates how inclusive leadership enhances workplace vigor that outcomes in enhanced IWB.

Leadership in the organization facilitates the employees' vigor at workplace. Shirom (2003, 2007) recognized leadership behaviors (like collective decision-making and reward-based compensation) as key originators of vigor. Shirom also theorized that individual empowerment and autonomy among employees so they can make individual work environment decisions are the important influencing factors of workplace vigor (Wefald et al., 2017). IL is positively related to employee engagements at the workplace (Choi, Tran, & Park, 2015). According to social exchange theory, when IL offers valuable resources to employees, in response, employees get motivated by engaging themselves more vigorously to their job responsibilities and applying more physical, mental, and emotional means to the organization (Strom, Sears, & Kelly, 2014). IL also encourages and challenges employees to contribute greatly to the organization (Hantula, 2009; Hollander, 2012). The endowment of proper support by leadership encourages employees to achieve beyond their work expectations (Detert & Burris, 2007; Detert & Edmondson, 2011). As an inclusive leader is more open, accessible, and available to employees, this may increase vigor at work of employees, which positively impacts the employees' work outcomes and behaviors in the long run.

Vigor at workplace has been established to antecede innovation and creativity (James, Brodersen, & Eisenberg, 2004; Shirom, 2007; Staw & Barsade, 1993). Vigor is a positive and satisfying job-related attitude that is regarded as energy, devotion, and engagement (W. B. Schaufeli & Bakker, 2010), which is a positive experience in itself (W. Schaufeli & Salanova, 2007), and also has positive outcomes for the organization (W. B. Schaufeli, Salanova, González-Romá, & Bakker, 2002), such as creativity and innovative behaviors (Bhatnagar, 2012). Past research on workplace vigor has constantly shown that provision of work resources such as support from leadership, learning prospects, autonomy, and performance feedback is positively correlated with engagement and workplace vigor (Bakker & Demerouti, 2008; Bhatnagar, 2012; W. Schaufeli & Salanova, 2007). Vigor at workplace has been found to have mediating effects (Palmer, Jordan, & Hochwarter, 2017). "Little et al., (2011) have investigated the mediating effect of vigor between the relationship of Integrating attachment style and employees' extra-role performances. (Carmeli, McKay, & Kaufman, 2014) have investigated the mediating effect of vigor in the relationship between creativity and emotional intelligence. Carmeli et al., (2009) have examined vigor's mediating role between the relationship of social leadership and job performance. Palmer et al., (2017) have tested the mediation effect of employees' vigor in the relationship between abusive supervision and employees' work satisfaction. On the basis of above discussion, we can hypothesize that:"

## ***H2: Vigor at workplace mediates the relationship between IL and employee IWB.***

### **Moderating Role of Challenge-Related Stress**

Experiencing stress is usually assumed bad, and both organizations and employees find ways to avoid and get rid of feeling stressed. However, several studies have revealed that stress might have desired consequences, since stress has multiple dimensions and many of them are related to positive job outcomes (Scheck, Kinicki, & Davy, 1995; Boswell, Olson-Buchanan, & LePine, 2004). The study of (Cavanaugh et al., 2000) have established that feeling stress that is related to challenging experiences is positively related to work outcomes. "According to Boswell, Olson-Buchanan, and LePine, (2004)"challenge-related stress is more specifically related to positive job outcomes like employee satisfaction and retention. The relationship between job stressors and job outcomes is widely researched in organizational behavior and industrial psychology research (Podsakoff, LePine, & LePine, 2007; Raja & Abbas, 2013)." An extensive literature is available on both positive and negative effects of job stressors (Fay, Bagotyrute, Urbach, West, & Dawson, 2019; Goh, Pfeffer, & Zenios, 2016; Jaramillo, Mulki, & Boles, 2011; Kivimäki, Ferrie, & Kawachi, 2017; Lambert, Lambert, & Ito, 2004; Li & Lambert, 2008). The workplace stressors are generally divided into two types; challenge stressors and hindrance stressors (Li & Lambert, 2008). This study will investigate how the presence of challenge-related stress will strengthen the link between workplace vigor and employee IWB. Challenge-related stress is although hectic but it is considered as potentially helpful in promoting individual growth and success, therefore, challenge-related stress triggers innovative behaviors (Brady & Cunningham, 2019; LePine, Podsakoff, & LePine, 2005; Rosen et al., 2020). According to the study of (Peng, Zhang, Xu, Matthews, & Jex, 2019) challenge stressors positively influence the employee innovative performance. In a meta-analysis of job stressors, Brady and Cunningham (2019) also establish that challenge-related stress is positively associated with work outcomes such as creativity and innovation, while hindrance and threat-

related job-stressors have inverse effects on job outcomes. Rosen et al., (2020) established the positive indirect effect of challenge-related job stress on employee performance, behaviors, and wellbeing outcomes. Based on the above literature, we hypothesize that challenge-related stress will be valued as being advantageous for individual growth and achievements, therefore, will enhance employees' vigor and innovative behaviors. Therefore, we propose the following hypothesis:

***H3: Challenge-Related Stress moderates the relationship between vigor at work and IWB. When Challenge-Related Stress will be higher the relationship will be stronger than lower.***

### III. RESEARCH METHODS

#### ***Sample and Procedure***

Random sampling technique and questionnaire survey method were adopted in this research, taking banking sector employees as the study sample. To evade the potential issues of common method bias, the data were collected in 2 time-lags of three months each. In the first time lag, we collected the data about inclusive leadership and vigor at workplace. In the first time wave, 402 banking sector employees were targeted across AJK Pakistan by dropping questionnaire onsite. By the end of three months, we were able to collect 379 responses. In the second time lag, we have collected the data related to IWB and challenge-related stress from the same employees. In three-month time we have collected 367 responses. 14 questionnaires were dropped from the final analysis due to missing information and mismatch between respondents of time-1 and time-2. 353 utilizable responses were gathered in both time 1 and time 2, and our final research sample was 353 respondents. Therefore, a successful response rate of 88% was achieved. Among these respondents 79% were male and 21% were female employees: 87% of the respondents have a post-graduate degree while 13% were just graduate: 36% of the respondents have experience of 1~5 years, 43% have 6~10 years of experience, 16% have 11~15 years for banking experience, and 5% were experienced above 15 years.

#### **Measures**

##### ***Inclusive Leadership***

This study utilized 9-item measurement scale of Carmeli et al., (2010) and also used by (Zhu et al., 2019) to measure the construct of inclusive leadership on 5-point Likert scale (1= strongly disagree, 5= strongly agree) with items, such as "The manager is open to hearing new ideas; The manager encourages me to access him/her on emerging issues; The manager is ready to listen to my requests."

##### ***Vigor at Workplace***

The construct of vigor at workplace was measured with a 14-items scale of "Shirom-Melamed Vigor Measure" (SMVM) developed by Shirom (2004). The respondents were asked to answer the question of "How often have you felt this way at work?" with 14 different options such as "I feel full of pep, I feel I can contribute new ideas," on a 5-point scale (1= never, 5= Always).

##### ***Challenge-Related Stress***

6-items measurement scale developed by "Cavanaugh et al., (2002) and used by Zhu et al., (2019) was adopted to measure challenge-related stress. Respondents were asked to rate the amount of stress caused by each item to them", such as "The amount of responsibility I have," on a 5-point Likert scale (1= no stress whatsoever, 5 = extremely high stress).

##### ***Innovative Work Behavior***

The 10-items scale of (De Jong & Den Hartog, 2010) was used to measure IWB, and items used were like "How often does this employee, pay attention to issues that are not part of his/her daily work; how often does this employee, generate original solutions for problems; how often does this employee, make important

organizational members enthusiastic for innovative ideas; and how often does this employee, contribute to the implementation of new ideas?" All items were measured on a scale of 1 to 5 (where 1= never, 5= Always).

**Analytical Strategy**

"The data reliability, validity, and correlations were examined using AMOS version 24. Confirmatory factor analysis (CFA) was conduct to determine the model-fitness before testing the hypotheses. Structural equation modeling (SEM) was conducted to examine the relationship between variables. Moreover, the slop test developed by Hayes and Preacher (2008) was used to test the moderation effect."

IV. RESULTS

**Descriptive and Correlations**

Table one shows results of descriptive and correlation analysis. Consistence with the research hypotheses IL was positively related with vigor at workplace (r= 0.259; p < 0.001), IWB (r= 0.273; p < 0.001), and challenge-related stress (r= 0.031; p > 0.05). Moreover, vigor at workplace is positively relatedto IWB (r= 0.432; p < 0.001), and challenge-related stress (r= 0.042; p > 0.05). Furthermore, the relationship between IWB and challenge-related stress is also positive (r= 0.106; p < 0.05).

**Convergent and Discriminant Validity“**

The values of composite reliability (CR) and average variance extracted (AVE), determine the discriminant and convergent validity (Fornell & Larker, 1981; Henseler, Ringle, & Sarstedt, 2015). The value greater than 0.60 for CR, and 0.50 for AVE demonstrate excellent convergent validity (Bagozzi & Yi, 1988), whereas, the greater value of the square root of AVE than the construct’s correlation, confirms divergent validity (Fornell & Larker, 1981). As shown in table 01, all the values of CR are greater than 0.60, AVE greater than 0.70, and the square root of AVE is also greater than the correlations, hence, it confirms both convergent and discriminant validities.”

**Confirmatory Factor Analysis (CFA)“**

Prior to testing hypotheses, fitness of the measurement model was tested by conducting CFA as recommended by (Anderson & Gerbing, 1988).The measurement model has four latent variables IL, IWB, vigor at workplace, and challenge-related stress.”To access the model-fitness, the most common used fit indices: “Chi-square ( $\chi^2/df$ ), Tucker-Lewis index (TLI), Comparative Fit Index (CFI), Incremental fit index (IFI), and Root Mean Square Error of Approximation (RMSEA)” were used. The initial measurement model shows slightly poor fit, but after following modification indices, excellent model fit was achieved as shown in table 02 ( $\chi^2/df = 2.20$ , RMSEA= .06, IFI= .95, TLI= .95, and CFI= .94). Moreover, factor loadings of all items were ranged from 0.71 to 0.93, hence, no item was dropped from data analysis.

“Table 1: Descriptive Statistics, Reliability, Validity, and Correlation Analysis”

Variables	Mean	SD	CR	AVE	MSV	1	2	3	4
<b>1- IL</b>	3.58	0.90	0.91	0.53	0.075	<b>0.730</b>			
<b>2- VaW</b>	3.25	0.88	0.98	0.79	0.186	0.259***	<b>0.891</b>		
<b>3- IWB</b>	3.41	0.88	0.98	0.81	0.186	0.273***	0.432***	<b>0.902</b>	
<b>4- CRS</b>	3.37	0.89	0.93	0.68	0.011	0.031	0.042	0.106†	<b>0.825</b>

“N = 353; Significance of Correlations: † p < 0.100; \* p < 0.050; \*\* p < 0.010; \*\*\* p < 0.001; MSV = Maximum Shared Variance; IL = Inclusive leadership; VaW= Vigor at workplace; IWB = Innovative work

behavior; CRS= Challenge-related stress;Diagonal elements (in bold) are the square root of the AVE.”

Table 2: Measurement Models

Measurement Model	$\chi^2$	df	$\chi^2/df$	RMSEA	IFI	TLI	CFI
4-Factor Model (original)	2534.65	696	3.64	.09	.89	.88	.89
4-Factor Model (revised)	1499.76	681	2.20	.06	0.95	.95	.94

### Test of Hypotheses

SEM was performed using AMOS 24 to test the degree of relationship among the study variables. The direct effect is shown in table 03, which demonstrate that there is significant effect of IL on vigor at workplace ( $\beta = 0.223$ ,  $P < .001$ ) and IWB ( $\beta = 0.235$ ,  $P < .001$ ). Moreover, the direct effect of vigor at workplace on IWB is also significant ( $\beta = 0.423$ ,  $P < .001$ ).

“Table 03: Test of Hypothesis Direct Effect

Relationships	Path coefficients	P-Value
Inclusive Leadership → Vigor at Work	0.223	<.001
Inclusive Leadership → Innovative Work Behavior	0.235	<.001
Vigor at Work → Innovative Work Behavior	0.423	<.001

”

### Mediation Effect

The mediation effect of vigor at workplace between the relationship of IL and IWB is shown in table 04. The results reveal significant indirect effect ( $\beta = 0.09$ ,  $P < .05$ , 95%CI= 0.04 ~ 0.13), which confirms that vigor at workplace significantly mediates the relationship of IL and IWB. However, there is partial mediation as both direct and indirect effects are significant.

Table 04: Test of Hypothesis Mediation Effect “

Relationships	Total Effect	Direct Effect	Indirect Effect	CI (95%)
Inclusive Leadership →Vigor at Work → Innovative Work Behavior	0.23***	0.14**	0.09*	[0.04 ~ 0.13]

Note: \* $p < .05$ , \*\* $p < .01$  \*\*\* $p < .001$ . CI = Confidence Interval”

### Moderation Effect

The moderation effect of challenge-related stress between the relationship of vigor at workplace and IWB was tested using slope test developed by (Preacher & Hayes, 2008), by plotting the significant interactions of challenge-related stress (moderator) for low and high values of (mean  $\pm$  SD). Table 5, and Figure 2 shows these interactions of the moderator, which demonstrate that the relationship between vigor at workplace and IWB was weaker ( $\beta = 0.319$ ,  $p < .001$ ) for low challenge-related stress, while this relationship was stronger ( $\beta = 0.580$ ,  $P < .001$ ) in the presence of high challenge-related stress. Therefore, the study results support

hypothesis 3 proposing that employees who have high challenge-related stress might show more innovative behavior in the presence of vigor at the workplace.

“Table 05: IWB Predicted from VW and CRS (Moderation Effect)

DV: Innovative Work Behavior	$\beta$	$p$	95% CI	
			Lower	Upper
VW***	0.450	< .001	0.356	0.543
CRS*	0.099	< .05	0.005	0.193
VW x CRS**	0.147	< .01	0.057	0.238

Test(s) of highest order unconditional interaction: (X\*W)

R<sup>2</sup> -chng = .023\*\*

F Statistics = 10.32

**Conditional Effects of the focal predictor (VW) at values of the moderator (CRS)**

	$\beta$	$p$	95% CI	
One SD below mean	0.319	< .001	0.204	0.433
At the mean	0.450	< .001	0.356	0.543
One SD above mean	0.580	< .001	0.449	0.712

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ ”

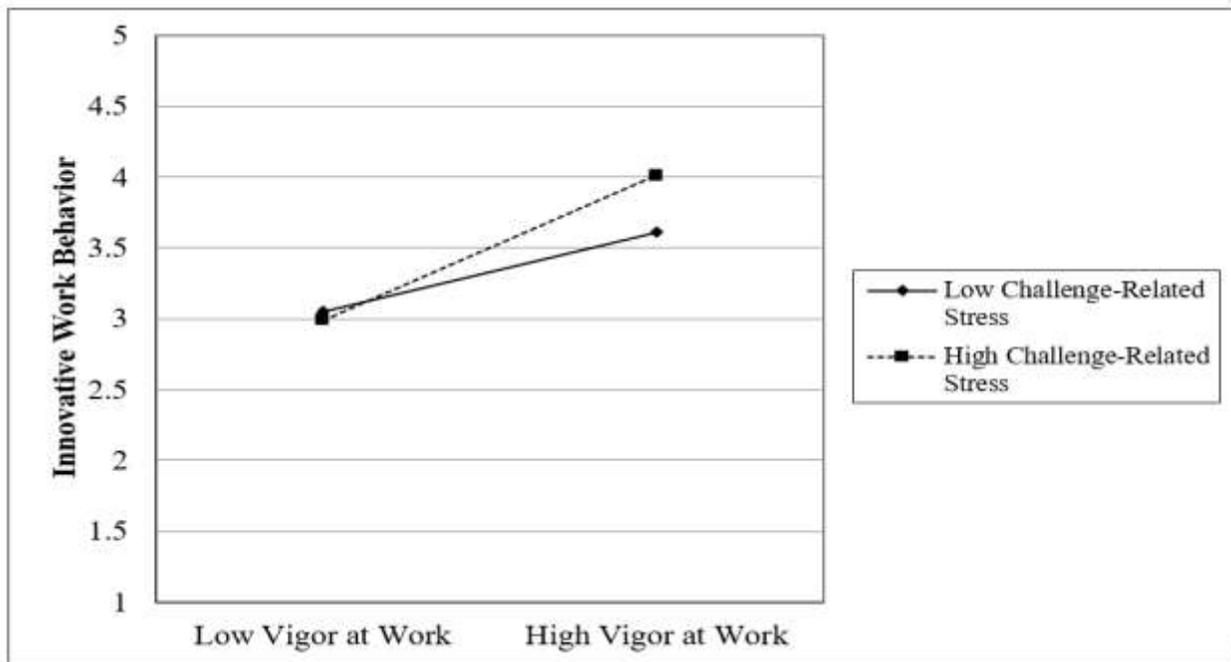


Figure 02: Interacting effect of vigor at workplace and challenge-related stress on IWB

## V. DISCUSSION

“Many studies of leadership have focused on different types of leadership and their relationship with employee’s vigor at workplace and innovative work behaviors (IWB), among these types inclusive leadership (IL), is the most prominent and hot debate nowadays (Javed et al., 2019; Javed et al., 2018; Qi et al., 2019; Zhu et al., 2019). Similarly, the current study emphasized an investigation of the relationship between IL and IWB, and IL and vigor and workplace. Moreover, this study examined the mediating role of employee vigor in the

relation of IL and IWB. Furthermore, this study also investigated the challenge-related stress as a moderator between IWB and vigor at the workplace. To achieve study objectives, we have developed and tested 3 hypotheses. The first hypothesis (H1) was predicting a positive relationship between IL and IWB. The results reveal the same outcome as per our prediction and are well in-line with prior studies of (Javed et al., 2019; Javed et al., 2018). In the second hypothesis (H2), we predicted that vigor at work significantly mediates the relationship between IL and IWB. The results proved significant mediation effect and past studies also support the study outcome (see, Javed et al., 2018-2019). In the third hypothesis (H3), we predicted that challenge-related stress moderates the relationship between vigor at work and IWB, and when challenge-related stress will be higher the relationship will be stronger than lower. The finding of the current study supports the third hypothesis as well. The results confirm that challenge-related stress can enhance the positive impact of vigor at the workplace on employee IWB.”

## VI. IMPLICATIONS

### ***Theoretical Implications***

This study has numerous theoretical implications. First of all, this study extended the limited understanding of IL and its relationship with IWB. Secondly, current research investigated the mediating role of employees' vigor at workplace between the relationship of IL and IWB which was not previously explored. Finally, the current study is the first, according to the best knowledge of the author, that has explored the moderation impact of challenge-related stress to strengthen the association between employee vigor at workplace and their IWB. Hence, the current study has valuable contributions in extending the current understanding and literature about IL, IWB, vigor at workplace, and challenge-related stress.”

### ***Practical Implications***

The current study has numerous practical implications too. The results of this study reveal the significant positive effect of IL on employee IWB. Hence, organizations should focus on such leadership practices that can enhance or contribute to employees' IWB. The rapid change in innovative behavior of service and production firms pushing the corporate environment to move more strongly in competition and to remain alive in the race of organizational advancement. A lot of literature evidenced that innovation is a tool through which most of the firms achieve competitive advantage in their domain among other firms in the same industry, and as a result, a sense of competition generates through different aspects in the workplace that must be addressed by the organization in proper time and manner. Innovation not only a tool but it's a practice that involves many aspects in it such as corporate environment, internal values, and strengths, in the shape of employee motivation and their roles in decision making to generate worthy ideas (Boer, Kuhn, & Gertsen, 2006). The role of a manager or leader also matters a lot in the formation of innovative behavior of employees (Döös & Wilhelmson, 2009; Kianto, 2008; Yidong & Xinxin, 2013). Through these literature references, it became clear that innovation and effective leadership walks together. “

This study attempts to address the significance of leadership approaches to the IWB. It has been observed that leadership is the technique that helps to come up with innovative ideas, by involving others in decision making or open discussions on any issue. The type of leadership named as inclusive leadership is regarded as the key factor to create innovation, that defines that involvement of employees or other members in decision making is quite necessary (Carmeli et al., 2010; Javed et al., 2018-2019). This involvement of employees makes the leader able to understand the problems and solutions experienced by the theme in the workplace and to derive some better ideas towards the new challenges. The liberty of sharing ideas not only helps leaders or managers but it also helps to create a sense of motivation in employees by considering their valuable ideas. As a result, the mechanism of IWB is created in the workplace. It is hereby recommended that the organizations should adopt inclusive leadership by involving the subordinates in discussions to make fruitful decisions. By the reference of a study (Javed et al., 2018-2019), there are several ways through which inclusive leadership could be created in managers, appreciation for employees, and their work they have done. Second, managers should pay attention to the professional and personal issues of their team members. Third, employee recognition and enhancement should be on time. Forth, the future forecasting should also be under

consideration, while performance evaluation. Fifth, in the workplace, the employees should be given some liberty to decide how to do the given task. And among all others, the one that is more important to become an inclusive leader is to involve subordinates or team members while the decision making process by allowing them to feel and speak freely. This can cause the creation of innovative workplace behavior in employees (Choi, Tran, & Kang, 2017). It is not necessary that all the given ideas by employees help to move towards success, it could also be a reason for failure as well. Innovative work behavior is itself a practice that as much be older as much fruitful. That means if an employee or set of team members are supposed to practice under inclusive leadership in routine bases, it can bring betterment in their decisional approaches. The supportive corporate working environment can help employees to make more effective decisions in risky situations. Mental and psychological autonomy to speak freely can help employees to cope with the challenging issues within and outside of the organizations, which also helps managers to push their team members in a better direction to keep this innovative chain continue (Afsar et al., 2014). But accepting and ignoring the failure of employees under inclusive leadership helps managers to build more confidence and motivation in employees, and a result the mechanism of IWB becomes more strong and worthy (Hollander, 2012).”

## VII. LIMITATION AND FUTURE RESEARCH

This study has several limitations which are an opportunity for future researchers. Initially, the data for the study was collected only form commercial banks operating in the territory of AJK, Pakistan. This limitation could be addressed in future studies by gathering data from businesses representing the production sector. Secondly, the data were collected from only 353 employees and future studies can be conducted with an extended sample size from the perspective of any other country as well. Moreover, to get more comprehension about employee’s innovative behavior, managers or leaders might be asked to rate their followers either than asking employees about their IWB as in this study. Thirdly, future studies can be made with different cultural contexts, as culture plays an important role in determining leadership behaviors. Furthermore, future studies can use; working environments, trust in leadership; creative self-efficacy, organizational innovative capabilities, and intrinsic motivation as potential moderating or mediating variables.

### **Ethical Statement**

This study followed the defined research ethics. The research motive was communicated to the participants before filling the survey. Moreover, the participation of respondents was voluntary.

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