

# How Do Leaders Influence Innovation and Creativity in Employees? The Mediating Role of Intrinsic Motivation

Administration & Society  
1–25

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DOI: 10.1177/0095399721997427

journals.sagepub.com/home/aas



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## Abstract

Drawing on the social exchange theory, this research examines how inclusive leaders foster innovative work behavior and creativity in employees. Data were collected in two steps from the 320 employees working in Chinese R&D organizations to draw the result for this research. The findings indicate a positive impact of inclusive leadership on innovative work behavior and creativity. In addition, intrinsic motivation mediates this relationship. The implications and future research are also discussed.

## Keywords

China, inclusive leadership, innovative work behavior, creativity, intrinsic motivation

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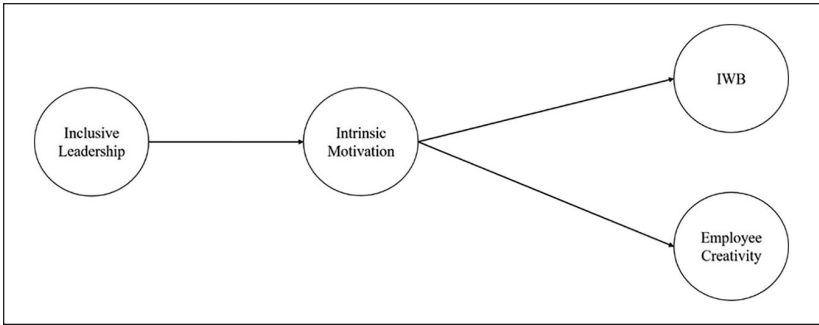
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## **Introduction**

In this modern era of globalization, the organizations need to be innovative to survive in the current scenario of market and stay competitive. To do so, the organizations tend toward their human resources and strive innovating their working styles, methods, and operations which lead to productive outcomes (Jung et al., 2003; Khan et al., 2012; Ramoorthy et al., 2005). According to Janssen (2000), the employees must be skilled and trained to have an uninterrupted flow of innovation and accomplish the aims and goals of the organizations. The occurrence of innovative work behavior (IWB) within the organizations is found attributing effective leadership, and thus, the inclusive leaders stimulate intellectually and cherish the innovative thinking which in turn brings the IWB among the subordinates and followers to procure the recent knowledge and new technologies. The IWB is not a routine behavior that usually evades traditional or customary means to approach work. Instead, it discovers and then implements the modern means of working and accomplishing the day-to-day tasks as well as other assigned tasks. For this, the employees need intrinsic motivation which will help them advance and boost up the process of innovation (Edmondson & Lei, 2014). Intrinsic motivation is developed due to the personal interests of the individuals which let them tend toward the accomplishment of assigned tasks at their own, without any external influence. This may be increased by the leaders and their relationships with followers and subordinates.

We choose to study these outcome variables due to these considerations. First, the prior studies have discussed little about the relationship of inclusive leadership (IL) with IWB and creativity, and no study has been conducted in the context of R&D employees. Most of the studies have been conducted in the private firms, and some are limited to a single organization or industries. Second, from this literature, it is quite clear that IL encourages IWB and creativity; this makes a contribution to say that better leaders will boost the IWB of their subordinates and followers which in turn will lead to creative ideas. The three qualities of the inclusive leaders (openness, accessibility, and availability) jointly bring the IWB within the employees. These qualities of the leaders are useful in building the good relations among the leaders and followers. In turn, employees are encouraged to share their ideas and implement them with the support of their leaders. Third, these constructs are key elements of any organization and have major implications to improve the performance of employees and the organizations as a whole. Finally, studying the impact of IL on IWB and creativity directly and indirectly via intrinsic motivation will be effectual for the R&D departments as well as organizations to evaluate whether inclusive leaders are meant to bring IWB and creativity in



**Figure 1.** Proposed framework.

Note. IWB = innovative work behavior.

their subordinates to their best or still there is a lack somewhere that needs to be addressed.

This study adds significant contribution to the literature of IWB and creativity. Prior research findings show the connection between creativity, IWB, and IL. However, the findings are not clear enough, thus make it inconsistent and unclear. In line with this research, up to our knowledge, this is the first study focusing on the leadership of R&Ds and its impact on innovativeness and creativity of employees. However, a very little consideration is given to the mechanism about how to establish and maintain the relationship of IL, IWB, creativity and the factors which affect this relationship (i.e., mediation). Furthermore, the present research broadens the past studies regarding the relationship of IL-IWB and creativity by investigating it in R&Ds of China. Subsequently, this research answers to the calls related to IL-IWB, creativity relationship directly and indirectly via any mechanism. Our research findings will be more useful and add a significant contribution to the growth of leadership and human resource management (HRM) theories and literature by expanding the domain of the empirical research adapted to test the theory. We have delineated the overall proposed motivational research model in Figure 1 below.

### *Theory and Hypothesis Development*

*IL and IWB.* IWB is the behavior of employees which is meant to take the initiative and intended introduction of innovative and useful concepts, ideas, procedures, and products in their working role, working groups, and employer organizations (Farr & Ford, 1990). According to De Jong and Den Hartog

(2007), IWB not only aims to identify the new ideas and procedures of doing the same tasks and day-to-day assignments but also helps to develop the behaviors and ways of implementing them with the intention to enrich the performance of employees as well as organizations. In addition, it comprises the implementation of those ideas, processes, and products (Farr & Ford, 1990). Specifically, it intends to deliver some sort of benefit to the organizations. IWB consists of four sets of activities which are closely related to each other. These activities include problem recognition, generation of the ideas, promotion, and realization of those ideas (De Jong, 2006; Janssen, 2000; Scott & Bruce, 1994). The first two factors (problem recognition and generation of new ideas) relate to the concept of work behaviors which are creativity oriented, while the preceding two behavioral factors refer to the work behaviors which are implementation oriented and include the promotion of newly generated ideas (De Jong & Den Hartog, 2010). All four factors collectively develop the IWBs among employees, which improve their performance and working styles to execute their day-to-day tasks and other assignments given to them by their leaders.

Employees become innovative in the workplace when they can create new methods of doing things and come up with different and unique processes. Furthermore, implementing innovative ideas can help restructure new and innovative alternatives. In addition to the diverse tags and ideas related to innovative behavior of the employees, it also focuses on the actions that are self-initiated and have a future orientation leading to the improvement and innovation in the working styles and behavior of the individuals (Parker et al., 2006). Subsequently, the innovation among employees seems continuous since they keep endeavoring to introduce the IWBs. As a result, the IWB of an individual initiates when a problem is identified, which allows them generate the ideas for its solution (Scott & Bruce, 1994). The IWB is not possible without the support of leaders; it truly needs the encouragement and appreciation from the leaders. Leaders play an important role in creating innovative behavior among the employees (Pundt, 2015). This lets us choose IL to examine and understand the IWB of R&D employees in China.

Leadership is a key component of creativity and innovation in organizations and thus strengthens the work environment. The concept of IL was first introduced by Nemphard and Edmondson (2006) in management. They defined it as the words and deeds of the leader which show an invitation and appreciation for the contribution of others (employees). Others defined it as a win-win circumstance with a common objective and vision mutually dependent on both the leaders and employees Hollander (2009). As compared with other leadership forms which may be conceptually related to each other, IL exhibits a unique characteristic of acceptance, belongingness,

uniqueness, and inclusiveness (Randel et al., 2018). IL emphasizes on accepting employees, allowing them to contribute with unique ideas and capabilities, and encouraging them to participate in organizational activities. IL eases the perception of inclusiveness and accessibility, which differentiates it from other forms of leadership which do not capture all the tenets of IL (Randel et al., 2018). When the leaders support their employees for new ideas, it enhances their IWB (Amabile et al., 2004; De Jong & Den Hartog, 2008). Hence, the leaders who exhibit the characteristics of IL endorse impartiality of input and output to all their employees (Hollander, 2012). This characteristic is mainly found in the inclusive leaders who build quality-based relationships with their employees and create a fair reward system that enables them to meet the job demands like IWB (Reuvers et al., 2008; Karin et al., 2010).

Nembhard and Edmondson (2006) explained IL as a form of relational leadership which refers to the leaders exhibiting openness and accessibility and who are always available to interact with their subordinates and followers. The core concept of IL mainly focuses on the inclusiveness of the leaders to specify their behaviors that lead to appreciate call upon and invite the responses and participation from others which in turn shapes the beliefs of their subordinates and followers. This approach allows others to participate and give feedback to their leaders. As a result, followers' opinions are valued which improves the leader's role. This brings changes in their working style and results in a step toward the innovative behavior. IL being at the core of relational leadership emphasizes on the availability of leaders to the subordinates and listens to their needs.

According to Read et al. (2016), IL is a type of relationship among the leaders and subordinates. They also argued that it would behoove leaders to accept and appreciate the input and worthy behavior from the followers. This strengthens the relationship between the leaders and the followers. The inclusive leaders play an important role in bringing innovation in the work behavior of the subordinates when leading to the IWB in them (Dorenbosch et al., 2005). On the basis of theoretical support from social exchange theory and evidence from this literature, we find many reasons to establish a positive relationship of IL-IWB. Inclusive leaders appreciate and motivate their subordinates to accomplish the challenging tasks and give recognition to their contributions as well as timely response to their problems (Hollander, 2014; Notgrass, 2014). This support, motivation, and appreciation from the leaders give rise to IWB in employees (Aryee et al., 2012).

Previous studies have examined the IWB such as they studied it in the context of multinational organizations of China, Qi et al. (2019) and Schuh et al. (2018) did the same in a sample of engineering companies, and Ma

Prieto and Pilar Perez-Santana (2014) examined IWB in relation with HR practices in the sample of Spanish firms. To our knowledge, only a single study by Javed et al. (2019) examined the direct relationship of IL-IWB in the context of textile industries of Pakistan. Furthermore, to enhance the generalizability of the IL-IWB relationship, we choose to investigate it in the context of R&D employees. Hence, on the basis of past studies and theoretical support, we postulate the following hypothesis:

**Hypothesis 1 (H1):** IL is positively related to IWB.

### *IL and Employee Creativity (EC)*

Creativity is an intricate and complex construct which relates to the creation of novel ideas having useful and innovative implication as well as concerns to the extent to which individuals approach the problems (Amabile et al., 1996; Hon et al., 2014). Several researchers have tried to unravel the structure and temperament of creativity by implying different approaches (Amabile, 1988), mostly in the fields of psychology or sociology (Bailey & Ford, 1996). Some define it as a process, product, or a personality trait. Findlay and Lumsden (1988) defined creativity as a constellation of traits pertaining to the personality and intellectuality of the individuals. Others call it a cognitive process to generate divergent ideas (Drazin et al., 1999). Organizational researchers have mostly evaluated creativity by concentrating on the end products of the creative activities (Oldham & Cummings, 1996; Tierney et al., 1999). However, all these approaches are in no way mutually exclusive. There is still much of the creative behavior within the individuals at workplace which leads to the innovative and useful ideas required to meet the demands of day-to-day work assignments. This is in line with the Simon (1977) perspective about creativity as a tool of discovery useful in solving the problems. Amabile (1988) viewpoint regarding the creativity of individuals as the generation of new and constructive ideas may benefit the individuals and organization.

Litchfield et al. (2015) argue that creativity is a significant precedent for innovation as well as a key element to get competitive benefits in the business settings which in turn closely relates to relational leadership (i.e., IL). This type of leadership encourages EC in several ways. First, in line with the concept of social exchange theory, when the inclusive leaders offer compensation and favorable resources to their employees. Employees may feel obligated to repay their leaders. This counter desire motivates the employees to give their best in routine task (Yeh-Yun Lin & Liu, 2012). Second, the support and assertive behavior of inclusive leaders build good relations of social

exchange with their employees and subordinates, which develops expertise, analytical thinking, and motivation to involve them in the creative work assignments (Amabile et al., 1996). Third, the qualities of inclusive leaders to be available for their subordinates, always ready to discuss about their inputs, and new and creative ideas encourage the employees and provide them opportunities to extend knowledge and develop skills and analytical thinking (Ali Taha et al., 2016). Fourth, as the positive perception for leaders and organization is developed within the employees, this boosts their thinking and actions which results in novelty in the form of useful and creative ideas (Fredrickson, 2001). Hollander (2009) also mentioned in his research that, the inclusive behavior of leaders toward their employees develops constructive feelings and emotions in them which encourages them to bring in novelty and come up with creative and useful ideas.

IL is found to have a close association with psychological safety which refers to the perceptions of employees regarding the outcomes of taking relational risks at their workplace (Edmondson, 1999, 2004). It refers to the perception of individuals' extent to which they are comfortable in being themselves (Edmondson, 1999), as well as capable of showing and engaging themselves without any fear of adverse consequences to their self-image, status, and career (Kahn, 1990). If the employees are comfortable in being themselves and share their ideas, they will surely come up with innovative and creative ideas. Hence, psychological safety solely focuses on self, not others, and pertains mainly to a shorter timeframe.

Research suggests that the behaviors of leaders greatly contribute to the feelings of psychological safety (Nembhard & Edmondson, 2006). Explicitly, as per recommendation of Edmondson (2004), when a leader exhibits openness, availability, and is accessible to his employees and subordinates, he is likely to ease and expedite the development of psychological safety among his employees. This in turn leads to encouragement for employees and enables them to identify their potential and develop, motivates them to take risks by means of communicating the prominence of such behaviors, as well as assures them regarding the adverse consequences from such behaviors. The qualities of inclusive leaders, such as openness, availability, and accessibility enable them to communicate such expectations with their employees and subordinates. Detert and Burris (2007) revealed that when the leaders are engaged in considering their employees at the individual level and show motivational behaviors, the employees are probable to show higher levels of psychological safety. According to Edmondson (1999), if the leaders are supportive, training oriented, and have nondefensive responses to the queries and challenges, the followers and subordinates perceive their teams in a safe environment. In addition, when the leaders inspire their subordinates and

encourage them to think and inquire regarding the assumptions (Zhang et al., 2011), the employees perceive it positively and develop a feeling of psychological safety which make them speak and express their viewpoints openly, regardless of the undesirable interpersonal consequences (Kahn, 1990).

Hence, it can be suggested that psychological safety is a crucial psychological state which is dynamic in endorsing the employees' creativity and IWB. They should have a reflexivity on their tasks, a deeper indulgent of what is done, whether it is done properly or not. They should also be aware of why they were engaged in these behaviors, and whether the results are creative and innovative or not. Thus, psychological safety is often developed by relational leadership (IL) and functions as a key sociopsychological mechanism that enables employees to be creative without going through interpersonal coercions and developing defensive orientation against those (Carmeli & Gittell, 2009).

Moreover, despite of its significance, the proper and clear understanding of the behaviors of leaders which lead to the creative performance of the employees is lacking in this literature (Amabile et al., 2004; Mumford, 2002). Most of the prior studies have discussed common ways of leader support, rather than the specific ones which are important to bring creativity in employees (Oldham & Cummings, 1996). Only a few studies are found discussing the particular characteristics and specific behaviors and support of the leaders which bring in and enhance creativity (Amabile et al., 2004). In addition, several mechanisms are there by which the leaders influence and enhance creativity in employees. More research is recommended in this context to understand the mechanisms followed by the leaders to raise creativity, one of which relates to certain mediating effects based on the different leader behaviors. In consistent with this, we draw on the concept of IL and analyze that how it affects creativity among employees specifically by developing the perceptions of intrinsic motivation and the tie to the readiness of employees to put efforts and hard work and get involved in activities which lead to creativity. Based on the aforementioned arguments and theoretical support from the literature, we hypothesize the following:

**Hypothesis 2 (H2):** IL is positively related to EC.

### *Mediating Roles of Intrinsic Motivation*

In the organizations, the employees are usually enthused by intrinsic or extrinsic dynamics to fulfill their duties. Intrinsic motivation relates to the encouragement or inspiration in which the individuals are fascinated toward a task at his/her own interest, rather than the external influence. The other



type refers to peripheral factors which inspire the employees to accomplish their duties (Deci & Ryan, 1985). Intrinsic motivation is discussed as one of the fundamental ingredients of creativity leading to innovation and a mechanism through which leadership influences creativity and brings innovation in individuals (Amabile, 1988; Oldham & Cummings, 1996). Intrinsic motivation has a very close association with employees in a sense that it makes them to be cognitively more formable and determined (McGraw & Fiala, 1982; McGraw & McCullers, 1979), which enables them to find out several alternative solutions of the problems and practice nontraditional and be determined. Employees intrinsically motivated are more likely to be more creative and innovative in their working. According to Amabile (1983), the motivation of an employee's intrinsic task is essential to determine the behaviors which may lead to the creative and innovative outcomes due.

In linking the IL, IWB, and creativity via an indirect path, we further attempt to draw on the literature of both constructs. We then posit a mediation mechanism of high potential explaining the link between IL, IWB, and creativity. It is an exploration of the extent to which the inclusive leaders influence the employees to bring innovation in their working styles within the organizations. Thus, the theoretical arguments suggest that intrinsic motivation can be a good mediator in this framework. However, there seems no any empirical evidence of such relationship yet. To do so, this study is conducted which not only theorizes the mediating impact of intrinsic motivation but also tests directly whether such mediation occurs in the relationship between IL, IWB, and creativity or not. To our knowledge, only a handful of studies have been found which examine the mediating role of intrinsic motivation. Al Harbi et al. (2019) studied the mediating impact of intrinsic motivation in the relationship between transformational leadership and followers' creativity in the context of Saudi Arabia. Zhang and Bartol (2010) did the same in the relationship between empowering leadership and creativity in the IT company of China. Shin and Zhou (2003) studied the intrinsic motivation as a mediator in linking transformational leadership, conservation, and creativity within the Korean companies. Considering these studies, we find our research to be unique and completely different which proves to be a useful contribution to the field.

This assumption is also underpinned by the concept of social exchange theory, which sheds light on the relation between IL, IWB, and creativity of employees. It argues that rewards, compensations, and support from inclusive leaders lead the employees to get more involved in innovative tasks and become more attached to their employer organizations in general and R&D in particular (Carmeli et al., 2010). This ultimately optimizes the durability of the organization (Yeh-Yun Lin & Liu, 2012). In addition, the concept of

intrinsic motivation theory was found to support this study and its main idea that the motivation of employees to perform any task is either intrinsic or extrinsic (Amabile et al., 1996; Deci & Ryan, 1985; Oldham & Cummings, 1996; Zhou, 1998). The first refers to the self-motivation and interest of the employees, while the other is influenced by the external factors. Thus, on the basis of theoretical support from social exchange theory and evidence from the past studies, we posit the following:

**Hypothesis 3 (H3):** Intrinsic motivation mediates relationship between IL and IWB.

**Hypothesis 4 (H4):** Intrinsic motivation mediates relationship between IL and EC.

## Method

### *Sample and Procedure*

The sample for this research is drawn from the 320 R&D employees working in different organizations in Beijing, PR China. A survey questionnaire was adopted from the previous studies to gather the data for testing the proposed hypotheses. To do so, the HR departments of the targeted organizations were contacted to help in collecting the data for the research purpose. They were given a briefing about the purpose of the data collection in face-to-face meetings as well as by email and other modes of communication. A covering letter was also accompanied with the questionnaire indicating the voluntary participation of both the employees and supervisors. They were also ensured for the confidentiality of their particulars and responses. All the participants were requested to read the questions carefully and respond accordingly in their point of view as there was no right or wrong answer for any question in the whole questionnaire. The whole data collection process was carried out in two phases. In the first phase, the employees were asked to complete the questionnaire having the items of IL, and intrinsic motivation according to their perceptions. In the second phase, the supervisors were asked to respond to the questions related to the IWB and EC according to their perceptions. Table 1 illustrates the demographic information of the participants in detail. To minimize the bias, we used the survey method as suggested by Podsakoff et al. (2003) to collect data.

### *Measures*

We used the conventional “translate-back translate” method to convert English language survey questionnaire into Chinese language survey to avoid

**Table 1.** Demographic Information.

Variable	Category	Frequency	Percentage
Gender	Male	180	56.25
	Female	140	43.75
Age	Less than 24 years	60	18.75
	24–30	100	31.25
	30–36	60	18.75
	37–42	50	15.62
	43–48	40	12.50
	49 years and above	10	3.12
Education	Graduate	80	25
	Postgraduate	240	75
Experience	Less than 3 years	78	24.37
	03–08	122	38.12
	09–14	50	15.62
	15–19	39	12.18
	More than 20 years	21	6.56

any inconvenience and enable the Chinese to understand properly before choosing their responses. We used five-point Likert-type scale (1 = “*strongly disagree*” to 5 = “*strongly agree*”) to get responses from the participants.

## IL

We used 9 items from the Carmeli et al. (2010) study to assess the three dimensions of inclusive leaders: openness, availability, and accessibility. The employees were asked to rate these items for their direct supervisors. Sample items include “The manager is open to hearing new ideas” (openness), “The manager encourages me to access him or her on emerging issues” (accessibility), and “The manager is ready to listen to my requests” (availability).  $\alpha$  reliability of this scale was .82.

## IWB

We used a 5-item scale from the study of Janssen (2000) based on Scott and Bruce’s (1994) for individual innovative behavior in the workplace. Sample items included “Creating new ideas for difficult issues” (idea generation), “Acquiring approval for innovative ideas” (idea promotion), and “Transforming innovative ideas into useful applications” (idea realization).  $\alpha$  reliability of this scale was .83.

## EC

EC at work was measured by using the 9-item scale from Tierney et al. (1999). Sample items are “I found new ideas for existing methods or equipment” and “I solved problems that had caused difficulties for other employees.” In this study, Cronbach’s alpha reliability estimate for the EC was .961

### *Intrinsic Motivation*

Employee intrinsic motivation at work was measured with 4 items ( $\alpha = .82$ ) adapted from the work of Grant (2008). Items incorporated “Today, my opinion of myself has gone up when I’ve done this job well” and “I’ve felt a great sense of personal satisfaction when I’ve done my job well today.”

### *Analytical Procedures*

To test the proposed theoretical model for this study, we used partial least squares structural equation modeling (PLS-SEM) path modeling. There are some rationales which let us choose this path modeling. First, this path is being frequently used and has gained extensive application in the field of management and relevant disciplines (Aghmiuni et al., 2019; Real et al., 2014; Siyal et al., 2019). Second, as the objective of this study is to analyze the outcome variables, we found PLS path as an appropriate approach to do the same (Sarstedt et al., 2014). Finally, this approach is reflected to be the most advanced and common method of the SEM techniques that are variance based (McDonald, 1996, Siyal et al., 2020). Consequently, we used SmartPLS 3 for this study (Richter et al., 2016). Before proceeding to test the consistency, rationality and path structures, and numerous assumptions related to the normality as well as multicollinearity, the common method bias is essential to be analyzed (Hair et al., 2017; Podsakoff & Organ, 1986).

A two-step process is used in this study, that is, (a) the assessment of the measurement model and (b) assessment of the structural model, to evaluate and report the results drawn by the PLS-SEM (Henseler et al., 2009; Sarstedt et al., 2014).

### *Measurement Model Assessment*

According to Henseler et al. (2009) and Sarstedt et al. (2014), the assessment of measurement model requires calculating the reliability of each item, internal consistency, and content validity. In addition, it is also necessary to measure the convergent and discriminant validity. A rule of thumb suggests that the reliability of individual items should range in between .40 and .70 (Duarte

**Table 2.** Measurement Model.

Constructs	Item	Loadings	Cronbach's alpha	CR	AVE
IL	IL1	0.743	0.828	0.927	0.523
	IL2	0.825	—	—	—
	IL3	0.851	—	—	—
	IL4	0.786	—	—	—
	IL5	0.532	—	—	—
	IL6	0.785	—	—	—
	IL7	0.719	—	—	—
	IL8	0.541	—	—	—
	IL9	0.528	—	—	—
IWB	IWB1	0.667	0.854	0.836	0.725
	IWB2	0.567	—	—	—
	IWB3	0.868	—	—	—
	IWB4	0.772	—	—	—
	IWB5	0.932	—	—	—
EC	EC1	0.584	0.794	0.844	0.562
	EC2	0.605	—	—	—
	EC3	0.648	—	—	—
	EC4	0.604	—	—	—
	EC5	0.790	—	—	—
	EC6	0.690	—	—	—
	EC7	0.650	—	—	—
	EC8	0.614	—	—	—
	EC9	0.667	—	—	—
IM	IM1	0.564	0.931	0.932	0.736
	IM2	0.545	—	—	—
	IM3	0.724	—	—	—
	IM4	0.754	—	—	—

Note. AVE = average variance extracted; IL = inclusive leadership; IWB = innovative work behavior; EC = employee creativity; IM = intrinsic motivation; CR = composite reliability.

& Raposo, 2010; Hair et al., 2012; Henseler et al., 2014). In consistent with this rule, the outer loadings of all the items of the studied measures are not less than 0.5 (see Table 2). Thus, it is clear from the results that our study fulfills the minimum levels of acceptability in terms of reliability of individual items. For the internal consistency, the coefficients of composite reliability (CR) vary from 0.836 to 0.932 which satisfy the minimum acceptable levels (Hair et al., 2011). The detailed values are given in Table 2. The average variance extracted (AVE) values of the all the measures are above 0.50 which

**Table 3.** Discriminant Validity.

Constructs	1	2	3	4
Inclusive leadership	<b>0.74</b>	—	—	—
Innovative work behavior	0.345	<b>0.782</b>	—	—
Employee creativity	0.429	0.499	<b>0.872</b>	—
Intrinsic motivation	0.521	0.637	0.653	<b>0.841</b>

Note. Values in bold at diagonal are the discriminant validities.

**Table 4.** Path Coefficients.

Path	$\beta$	SE	t value
Inclusive leadership $\rightarrow$ IWB	.505	0.079	3.400**
Inclusive leadership $\rightarrow$ EC	.270	0.049	10.375**
Inclusive leadership $\rightarrow$ IM $\rightarrow$ IWB	.241	0.076	3.152**
Inclusive leadership $\rightarrow$ IM $\rightarrow$ EC	.399	0.050	8.033**

Note. IWB = innovative work behavior; EC = employee creativity; IM = intrinsic motivation.  
\*\* $p < .01$

confirms that the convergent validity meets the acceptable levels. Moreover, the square root of AVE is suggested to be greater than the correlation among all the constructs (refer Table 3). Hence, our study results satisfy all the minimum acceptable levels.

### Structural Model

After assessing the validity and reliability, we proceed to the next step, that is, assessment of the structural model. In this step, the bootstrapping along with 500 samples is applied to calculate the  $t$  values which are shown in Table 4. The results indicate a positive relationship of IL with both the outcome variables, that is, IWB ( $\beta = .505, p < .01$ ) and EC ( $\beta = .270, p < .01$ ; refer Table 4). Thus, the results confirm that the H1 and H2 are supported for the present study.

For the mediating H3 and H4, we applied the Preacher and Hayes (2004, 2008) rule of thumb to assess the mediation effect intrinsic motivation in the relationship of IL with IWB and EC. As a result of bootstrapping, the positive effects of mediation effect were found for IWB ( $\beta = .241, p < .01, t = 3.152$ ) and EC ( $\beta = .399, p < .01, t = 8.033$ ). In addition, the indirect effects having 0.147, 95% boot confidence interval (CI; for IWB, lower

**Table 5.** Results of Mediation.

Hypotheses	Relationship	$\beta$	SE	t value	CI		Decision
					5.00%	95.00%	
H3	Inclusive leadership → IM → IWB	.241	0.076	3.152**	0.034	0.125	Supported
H4	Inclusive leadership → IM → EC	.399	0.050	8.033**	0.037	0.146	Supported

Note. CI = confidence interval; IM = intrinsic motivation; IWB = innovative work behavior; EC = employee creativity.

\*\* $p < .01$

**Table 6.** Construct Cross-Validated Redundancy.

Constructs	SSO	SSE	$Q^2 (=1 - SSE / SSO)$
IWB	995.000	964.042	0.126
EC	1791.000	1,677.616	0.135
IM	796.000	723.253	0.121

Note. IWB = innovative work behavior; EC = employee creativity; IM = intrinsic motivation; SSE = sum of square of observation; SSO = sum of square of observation.

limit [LL] = 0.034, upper limit [UL] = 0.125; for EC, LL = 0.037, UL = 0.146), are recommended not to have a zero in between (refer Table 5). The results hereby confirm that both the mediation hypotheses are supported for this research.

In addition, predictive relevance of the model is validated due to the reflective nature of the endogenous variables. To do so, we calculated the cross validated measure of redundancy ( $Q^2$ ) as suggested by Hair et al. (2013) and Ringle et al. (2012). Moreover Henseler et al. (2009) recommended that the research models having a good predictive relevance should have the  $Q^2$  value greater than zero. Consistently, the results of our study confirm that the present model has a good predictive relevance (refer Table 6).

## Discussion

This literature suggests that a specific style of leadership is an important factor to motivate and influence workforce (Bakker et al., 2011); however, little is known in detail. Through our research, we concluded that IL style is the

most effective style to boost up employees and strive for the innovation and creativity because it includes all the characteristics (such as openness, availability, and accessibility) which motivate employees to complete their tasks and assignments. This also allows them to address issues in the workplace which leads to IWB and creativity within the organizations. By doing so, this research responded to the research calls from Mumford (2002), Tierney (2008), and Zhou and Shalley (2007) recommending to extend the knowledge of leadership and creativity and their relationship. The employees having good inclusive leaders were found to have more innovation in their working behavior and creativity as compared with the ones whose leaders were not good with them. Thus, the role of leaders was found to be very important to facilitate IWBs in employees. Similarly, the IL proved to be fundamental generally and specifically in the knowledge and research-intensive organizations (Mumford, 2002) similar to the one as the study sample of our research, wherein the leaders and organizations are much dependent on their employees to come up with innovative and valuable ideas which may prove to be vital in the development of innovative technological products and enable the organizations to remain competitive and cope with the emerging issues.

Besides, illuminating the IL and its impact on IWB and creativity, we further extend the knowledge by exploring the mechanism which may affect the link between IL, IWB, and creativity through intrinsic motivation. In doing so, the study findings revealed that the intrinsically motivated employees enjoyed creative tasks rather than the normal routine tasks due to the reason that their creative output level is higher than that of others. In addition, when these employees have good inclusive leaders having alike intrinsic motivation, the chances of creative performance become maximum. These findings are in line with the concept of social exchange theory (Blau, 1964; Siyal, 2018; Siyal & Peng, 2018), whose main tenet is that if the employees get favor and support from their leaders, they develop a feeling of paying back (reciprocation), which in turn, proves useful in building a good relationship between leaders and employees. Moreover, when the inclusive leaders facilitate employees with socioemotional support, the employees feel obligated to repay their leaders. Thus, IWB and creativity are one of the possible ways of such repayments.

Moreover, few methodological strengths of this research increased the confidence of findings. First, the data have been collected from the multiple sources (i.e., leaders and employees) which minimize the chances of bias in this research. Second, the sample size used is large ( $N = 320$ ) which gave more stable results. Third, the response rate was favorably high (88%) which confirms that self-selection bias does not exist in our research. Fourth, this is



the first study to investigate impact of IL on IWB and creativity directly and via intrinsic motivation in the context of R&D employees in China. Up to the knowledge of authors, no study has examined the influence of IL on IWB and creativity directly and indirectly through the intrinsic motivation in the context of Chinese R&D employees.

### *Theoretical Implications*

This research contributes theoretically to the literature of IWB, EC, intrinsic motivation, and IL in several ways. First, the outcomes of this research add to the literature of IWB, creativity of the employees, and IL of the R&D institutions of China. Second, we examined the mediating role of intrinsic motivation in the relationship of IL with IWB and creativity in the context of R&D employees, which is very different from the current studies. Third, the data for this research were collected in two steps (i.e., in the first step, from the leaders and in the second step, from the leaders/supervisors). This is unlike the past studies of the IL-IWB and creativity in the same context as they have collected the data from a single source which might have the chances of common method bias. Fourth, we fulfill the shortcoming in studies of creativity from a single perspective of leadership as highlighted by Woodman et al. (1993), by focusing on all the three dimensions of IL (openness, availability, and accessibility). By doing so, the results present a more encompassing perception as compared with the previous studies. Fifth, we investigated mediating effects of intrinsic motivation in an interactive framework of IL, IWB, and creativity, which represents this research as a unique study. Moreover, the findings indicate that an IL paradigm may apply to the innovativeness and creativity in R&D employees directly and through intrinsic motivation.

### *Practical Implications*

The results of the present study illustrate certain practical implications for the supervisors regarding their leadership of the R&D employees. As the employees working in the R&Ds in China seem to have certain issues regarding the leadership of their immediate boss or supervisor which play an important role in keeping them engaged in their job, bringing IWB and creativity in them is ultimately in the favor of the institutions as a whole. The findings of this study will be effectual for the inclusive leaders to build and maintain good relations with their R&D employees based on the reciprocation. To make them understand the importance of IWB, creativity, and intrinsic motivation, the employees may be allowed to act as supervisors for a time being to experience the situations. This may enhance their understanding regarding the

importance of IWB and creativity. In addition, the findings indicate intrinsic motivation as a mediator in the relation between creativity, IWB, and IL, which indicates the significance of intrinsic motivation herein. Moreover, our research also answers the calls to extend the knowledge regarding leadership and creativity (Tierney, 2008) by revealing IL as a relational leadership form which plays an important role in engaging the employees in IWBs leading to creativity. In addition, we extend the knowledge by exploring the mechanisms by which the involvement of employees in creative tasks is increased to maximum (i.e., intrinsic motivation).

### ***Limitations and Future Directions***

Although our study has several encouraging results, it is still noteworthy to mention the limitations. First, despite of collecting the data from multiple sources, it was hard to analyze the cause–effect relationship of the studied constructs. The future researchers are advised to go for longitudinal or experimental design to find out the causal relationships of this framework. Second, this study is conducted with the R&D employees in Chinese context. The future research is recommended in other types of organizations (i.e., high-tech, manufacturing industries, and hospitality sector) in other countries and cultures to increase the generalizability of our model. Third, we focused on IL and intrinsic motivation to bring IWB and creativity in employees. In doing so, we recognized that there might be some other factors which could possibly affect IWB and creativity. The future studies may take other leadership styles to investigate the IWB and EC directly and indirectly.

### **Conclusion**

Our research provides an essential step toward understanding a less studied form of leadership style and its contribution in bringing the IWB and creativity in employees. In addition, we incorporated the mediating effects of intrinsic motivation which provided additional support in these relationships. We hope that the outcomes of this research will be effectual for the leaders of R&D organizations to enhance IWB and creativity in their employees.

### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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