

Be so creative they can't ignore you! How can entrepreneurial leader enhance the employee creativity?

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ABSTRACT

In the present era, organizations are operating in an unpredictable environment due to rapid developments in technology. These conditions require organizations to use creativity to introduce new products and services in the market. Accordingly, scholars have introduced entrepreneurial leadership as a new leadership theory to cope with the dynamic changes in the 21st century. Therefore, the current study aims to explore the influence of entrepreneurial leadership on employee creativity through employees' knowledge sharing and learning goal orientation through the lens of social learning theory. The data (n = 265) were collected from the manufacturing sector of Pakistan. The results have shown the positive influence of entrepreneurial leadership on employee creativity. Besides, knowledge sharing mediates the relationship between entrepreneurial leadership and employee creativity. Moreover, the learning goal orientation moderates the relationship between knowledge sharing and employee creativity such that the mediation effect of knowledge sharing is stronger with a higher level of the learning goal orientation. Finally, this study has important implications for scholars and practitioners.

1. Introduction

Competition in the global market and rapid transformations in technology have made it challenging for organizations to develop creativity for the innovation and success of modern business (Huang, Krasikova, & Liu, 2016; Kark, Van Dijk, & Vashdi, 2018; Shafi, Lei, Song, & Sarker, 2020). Creativity is the intellectual process of creating new and worthwhile ideas (Hon & Lui, 2016). Considering the assumption that creativity is a core factor in the success of an organization due to the development of valuable outcomes such as production, strategy development, sales, and economic growth, scholars have determined numerous predictors of creativity (Anderson, Potočnik, & Zhou, 2014). Particularly, leaders and employees both play important roles in developing organizational creativity (Uhl-Bien & Arena, 2018). Indeed, leadership is an important factor that develops employee creativity in the workplace (Hughes, Lee, Tian, Newman, & Legood, 2018; Shalley & Gilson, 2004). Recently, scholars have explored the influence of leadership theories on employee creativity (Gu, Hempel, & Yu, 2020; Kim, 2019; Qu, Janssen, & Shi, 2015; Shao, Nijstad, & Täuber, 2019; Tse, To, & Chiu, 2018; Wang, Liu, & Zhu, 2018). Scholars have introduced entrepreneurial leadership as a new leadership theory, which evolved from the leadership and entrepreneurship literature (Gupta, MacMillan, & Surie, 2004; Renko, El Tarabishy, Carsrud, & Brännback, 2015).

The entrepreneurial leadership concept was introduced by Gupta et al. (2004). Entrepreneurial leadership refers to leadership style:

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having the competencies to motivate and direct followers to achieve organizational goals that encompass recognition and exploitation of entrepreneurial opportunities (Renko et al., 2015). Scholars have argued that organizations interested in creativity and innovation should hire entrepreneurial leaders who can motivate and guide employees to recognize and exploit entrepreneurial opportunities and thus achieve a bright future for a business (Huang, Ding, & Chen, 2014). Consistent with that approach, prior research has empirically investigated whether entrepreneurial leadership is positively related to the organizational innovation process and employee innovative behaviour (Bagheri, Newman, & Eva, 2020; Fontana & Musa, 2017; Li, Makhdoom, & Asim, 2020). Moreover, scholars have explored how entrepreneurial leadership plays an important role in developing employee and business performance (Miao, Eva, Newman, & Cooper, 2019; Sarabi, Froese, Chng, & Meyer, 2020). However, there is a scarcity of research on how entrepreneurial leaders develop employee creativity, particularly in established organizations. Thus, the major objective of this study is to examine the effect of entrepreneurial leadership on employee creativity in established organizations. Entrepreneurial leaders are creative, risk-taker, and visionary (Chen, 2007; Gupta et al., 2004). Moreover, these leaders direct and motivate their employees to perform creative tasks that involve recognition and exploitation of entrepreneurial opportunities rather than routine work (Strobl, Bauer, & Matzler, 2020). Therefore, drawing on social learning theory (SLT), which explains that individuals learn from others with whom they have close interactions directly or by observation (Bandura & Walters, 1977; Bandura, 1986), the current study expects that employees may learn new skills and competencies from entrepreneurial leaders and try to perform creative tasks in the manner of their leaders.

However, previous studies have determined various factors that can influence the relationship between leadership and employee creativity (Hughes et al., 2018; Koh, Lee, & Joshi, 2019). Besides, Miao et al. (2019) have emphasized exploring the performance mechanism of entrepreneurial leadership as a new leadership theory. Particularly, knowledge sharing is an important factor in improving employee creativity (Gong, Huang, & Farh, 2009). Knowledge sharing refers to employees' exchanges of knowledge with each other in the organization (Lin & Lo, 2015). Knowledge is a very valuable source to develop competency, solve complex problems, and learn new methods, and it significantly contributes to the organizational development and success when it is shared effectively (Liao & Chen, 2018). Previous studies have determined that knowledge sharing positively influences employee creativity (Gu, Chen, Huang, Liu, & Huang, 2018; Zhou, Zhao, Tian, Zhang, & Chen, 2018). Furthermore, entrepreneurial leaders have strong communication skills, and they share the business vision with employees and guide them as they perform complex tasks (Gupta et al., 2004). In addition, entrepreneurial leaders develop a psychologically safe workplace environment where employees feel relaxed and able to share their information and ideas with co-workers (Miao et al., 2019). Hence, SLT suggests that when employees notice their leaders' information sharing and open communication behaviours, they wish to share their knowledge with other employees, as well as their leader, which promotes employee creativity. Therefore, knowledge sharing is taken to be a mediator between entrepreneurial leadership and employees in this study.

Furthermore, because creativity is becoming crucial for organizations to grow and become competitive, it is mandatory to understand and explore psychological factors rather than focus only on external factors such as leadership (Huang & Luthans, 2015). SLT argues that employees' psychological factors affect their outcomes along with external factors, e.g., their leadership and knowledge sharing. This proposition has been examined in empirical studies that reveal that factors such as personal control, inner motivation, and uncertainty avoidance orientation can influence employee creativity (Shafi et al., 2020; Tse et al., 2018; Wang, 2020). Similarly, prior research has determined that the learning goal orientation is an important factor in promoting employee creativity (Bakker, Petrou, Op den Kamp, & Tims, 2020; Huang & Luthans, 2015). The learning goal orientation is an employee's wish to enhance his or her competency level by focusing on learning new skills (Gong, Kim, Lee, & Zhu, 2013). Employees with learning goal orientations see challenges as opportunities and try to share and gain knowledge to overcome these challenges and eventually achieve their targets through creativity and innovation (Huang & Luthans, 2015). Therefore, in this study the learning goal orientation is taken as a moderator of the relationship between knowledge sharing and employee creativity, which can affect entrepreneurial leadership, knowledge, and the employee creativity relationship. The proposed research model is shown in Fig. 1.

Finally, the current study explores the influence of entrepreneurial leadership on employee creativity through knowledge sharing and the learning goal orientation from the perspective of social learning theory. Thus, this study significantly contributes to the existing literature on leadership and creativity. First, the major contribution of this study is the empirical determination of the role of entrepreneurial leadership in promoting employee creativity. In contrast, previous studies have extensively explored the role of different leadership theories in developing employee creativity. Second, this study makes theoretical contributions by exploring the performance mechanism of entrepreneurial leadership to develop employee creativity through knowledge sharing and learning goal

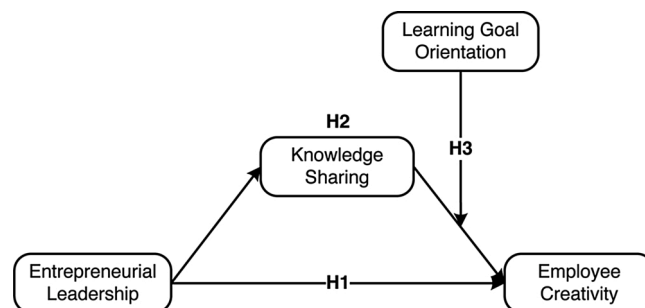


Fig. 1. Research model with hypotheses.

orientation. Further, this study responds to the call of scholars to explore the entrepreneurial leadership mechanism for different organizational outcomes to achieve a better understanding of this new leadership theory (Miao et al., 2019). Third, the current study validates entrepreneurial leadership theory in established organizations; as suggested by eminent scholars of entrepreneurial leadership, this theory is a new leadership theory and is applicable to an organization of any size and nature (Renko et al., 2015). However, previous scholars have mostly recognized entrepreneurial leadership as a leadership style of entrepreneurs and examined its implications in new ventures and small and medium enterprises (Bagheri et al., 2020; Dean & Ford, 2017; Imran & Aldaas, 2020; Leitch & Volery, 2017; Li et al., 2020).

2. Literature review & hypotheses development

2.1. Entrepreneurial leadership theory

Scholars have concluded that leadership and entrepreneurship have some similarities (Cogliser & Brigham, 2004; Reid, Anglin, Baur, Short, & Buckley, 2018). As a result, these scholars developed a new idea of entrepreneurial leadership from the entrepreneurship and leadership literature, and it is still undergoing theoretical and practical development (Leitch & Volery, 2017). The basic theoretical framework of entrepreneurial leadership was developed by Gupta and fellows, and it is based on the following three cross-cultural perspectives of leadership: neo-charismatic, team-oriented, and value-based leadership (Gupta et al., 2004). Despite the importance of entrepreneurial leadership, scholars have two different views on its definition. The first group of scholars has characterized entrepreneurial leaders by their core competencies (Chen, 2007; Gupta et al., 2004; Tlaiss & Kauser, 2019). They argue that entrepreneurial leaders have personal and functional competencies that help them make strategies to develop their business innovation by establishing an inspiring vision and motivating their employees to explore and exploit entrepreneurial opportunities. The second group of scholars has focused on particular behaviours of entrepreneurial leaders (Cogliser & Brigham, 2004; Koryak et al., 2015). These scholars argue that entrepreneurial leaders motivate and direct their group members to achieve organizational goals that entail opportunity recognition and exploitation (Renko et al., 2015). Although, entrepreneurial leadership has similarities in the intellectual stimulation with transformational leadership, however, inspirational motivation and charismatic role modelling are not similar (Renko et al., 2015). Moreover, entrepreneurial leadership has no element of individual consideration, as entrepreneurial leaders focus on the entrepreneurial self-efficacy and passion of their employees (Renko et al., 2015). Prior studies have concluded that entrepreneurial leadership is mainly concerned with opportunity recognition and exploitation (Gupta et al., 2004; Harrison, Burnard, & Paul, 2018; Koryak et al., 2015; Renko et al., 2015; Strobl et al., 2020).

2.2. Entrepreneurial leadership and employee creativity

Creativity describes the creation of novel ideas for the development of performance and efficiency (Gong et al., 2009). Furthermore, creativity is the creative thinking of employees based on their skills, qualifications, and experience (Shafi et al., 2020). Consequently, creative employees use their skills to produce new products and services (Shalley & Gilson, 2004). Previous research has recognized the importance of creativity in fostering innovation in organizations (Liu, Liao, & Loi, 2012; Liu, Gong, Zhou, & Huang, 2017; Shafi et al., 2020). Many organizations are searching for ways to promote creative behaviours of employees in the workplace (Gu, Tang, & Jiang, 2015; Liu et al., 2012). Therefore, scholars around the world strive to comprehend the dynamics of creativity, particularly the factors that influence creativity inside organizations (Caniëls, De Stobbeleir, & De Clippeler, 2014; Zhou & Hoever, 2014). Leadership has been explored as a significant predictor of employee creativity (Shalley & Gilson, 2004). Consistent with this, past studies have determined that leadership has a positive influence on employee creativity (Kim, 2019; Tse et al., 2018; Yang, Liu, & Gu, 2017).

Entrepreneurial leaders inspire their employees to perform creative tasks in the workplace that involve opportunity recognition and exploitation (Renko et al., 2015; Strobl et al., 2020). In that vein, Bagheri (2017) found that entrepreneurial leadership had a positive influence on the opportunity recognition abilities of employees. Similarly, Strobl et al. (2020) have found that entrepreneurial leadership is the key driver for opportunity recognition and exploitation. Consequently, performing complex and challenging tasks in the workplace, develop the competencies and confidence of employees to generate new ideas and practices (Renko et al., 2015). The tenants of SLT indicate that employees face different situations in the workplace and they use this learning to make decisions. Furthermore, entrepreneurial leaders direct their employees to perform entrepreneurial behaviours and engage in role modelling by executing creative tasks that entail opportunity recognition and exportation, which in turn inspire employees to create new ideas (Bagheri et al., 2020). SLT also argues that employees learn from the role models with whom they have close interactions. Besides, SLT explains that when tasks are complex, employees need guidance from their leaders to describe courses of actions in addition to employ observational learning, and they use such information to solve future problems. Moreover, entrepreneurial leaders are risk takers and encourage their employees to take risks and perform creative tasks rather than focus on routine duties (Bagheri, 2017; Renko et al., 2015). Based on SLT, it is expected that employees' risk-taking attitude would be enhanced by observing their leaders' risk-taking behaviours. Therefore, SLT posits that employees working under entrepreneurial leaders must develop their competency, confidence, and risk-taking attitude to perform creative tasks.

Prior studies have concluded that entrepreneurial leadership is positively related to employee creativity and innovative behaviour. For instance, Newman, Neesham, Manville, and Tse (2018) have found that entrepreneurial leadership has a positive influence on employee innovative behaviour. Thereafter, Miao and fellows have found that entrepreneurial leadership is positively related to employee innovative behaviour in public sector organizations, and psychological empowerment mediates this relationship (Miao,

Newman, Schwarz, & Cooper, 2018). Furthermore, Li et al. (2020) have revealed that entrepreneurial leadership positively influences employee innovative behaviour. Besides, these authors find that the innovative environment of a firm mediates the relationship between entrepreneurial leadership and innovative behaviour. Moreover, entrepreneurial self-efficacy moderates the relationship between entrepreneurial leadership and employee innovative behaviour such that the influence of entrepreneurial leadership on employee innovative behaviour is stronger when entrepreneurial self-efficacy is high. Similarly, Bagheri et al. (2020) have discovered that entrepreneurial leadership has a positive influence on employee innovative behaviour through creative self-efficacy and a passion for inventing. Following the same streamline, Cai, Lysova, Khapova, and Bossink (2019) have found that entrepreneurial leadership is positively related to employee creativity. Based on the above discussion, the following hypothesis is proposed.

H1. Entrepreneurial leadership is positively related to employee creativity.

2.3. Mediating role of knowledge sharing

Recently, knowledge management has become an important factor for organizations to gain a competitive advantage (Le & Lei, 2018; Zhang & Jiang, 2015). However, an organization's success depends on the employees' motivation to share their knowledge (Bavik, Tang, Shao, & Lam, 2018). Therefore, knowledge sharing is a core activity of knowledge management, and it emerges through social interactions among employees in the workplace (S. Wang & Noe, 2010). Knowledge sharing describes the activities of employees to share their knowledge with each other to create new knowledge (Van Den Hooff & De Ridder, 2004). However, developing knowledge sharing practices in an organization is difficult, as employees share their knowledge under favourable conditions (Le & Lei, 2018). Previous research explored many factors that affect knowledge sharing, such as interpersonal trust, organizational culture, and motivation (Curado & Vieira, 2019; Razmerita, Kirchner, & Nielsen, 2016).

Leadership is a key factor in promoting knowledge sharing in organizations (Bavik et al., 2018; Le & Lei, 2018). Previous studies have explored the effect of different leadership theories on employees' knowledge sharing behaviours (Bavik et al., 2018; Carmeli & Paulus, 2015; Dong, Bartol, Zhang, & Li, 2017; Zhou et al., 2018). Leaders can serve as main information sources due to their dominant position, direct participation, and interaction with their employees (Chiu, Owens, & Tesluk, 2016). Similarly, entrepreneurial leaders share their business vision with employees, which entails opportunity recognition and exploitation activities (Fontana & Musa, 2017). These leaders also direct their employees to perform tasks that involve opportunity recognition and exploitation to achieve the business vision (Renko et al., 2015). Consequently, leaders and employees have common interests that develop mutual trust, and these trusting relationships allow employees to share their knowledge and ideas with their leaders and fellow employees without fear of rejection or embarrassment (Gu et al., 2018). Entrepreneurial leaders also have strong communication skills and team-building capabilities, and they motivate their employees to work together to improve the overall performance of the organization (Gupta et al., 2004; Harrison et al., 2018). As a result, these behaviours of leaders can lead to mutual trust development among leaders and employees, which promotes employees' knowledge sharing behaviours (Le & Lei, 2018). Furthermore, entrepreneurial leaders develop an organizational climate that is supportive of innovation (Li et al., 2020). This type of climate encourages employees to share their knowledge and thereby has a positive influence on their knowledge sharing behaviours (Edú-Valsania, Moriano, & Molero, 2016).

The knowledge sharing process provides the basic means to learn a wide range of information and ideas that enhance the abilities of employees to perform more creative tasks (Wang et al., 2018). Knowledge sharing promotes employees' coordination to perform tasks, which develops their abilities to create new ideas (Jia, Shaw, Tsui, & Park, 2014). However, it is difficult to produce new ideas without knowledge sharing, as knowledge sharing provides a basic resource for creating new ideas with internal and external information (Carmeli, Gelbard, & Reiter-Palmon, 2013). Particularly, knowledge sharing allows employees to discuss their problems and understand these problems deeply, which enables them to find new solutions. Moreover, during the knowledge sharing process, employees are likely to develop common beliefs that develop mutual trust, which ultimately fosters creativity (Zhou et al., 2018). Previous studies have concluded that knowledge sharing promotes employees' creativity. For instance, Bai, Lin, and Li (2016) researched in China and found that knowledge sharing was positively related to employees' creativity. Wang et al. (2018) determined that knowledge sharing positively influenced employee creativity in a psychologically safe environment. Gu and colleagues found that knowledge sharing had a positive influence on individual and team creativity; furthermore, task interdependence moderated the relationship between knowledge sharing and team creativity positively, but did not moderate the relationship between knowledge sharing and employee creativity (Gu et al., 2018). Rooted in SLT, this study expects that by observing behaviours of entrepreneurial leaders and working with them, employees may feel motivated to share their knowledge, which develops employees' creativity. Therefore, based on SLT and the above discussion, the following hypothesis is developed.

H2. Knowledge sharing mediates the relationship between entrepreneurial leadership and employee creativity.

2.4. Moderating role of learning goal orientation

Goal orientation theory explains how individuals adapt or abandon self-managed behaviours to achieve something. The goal orientation has three types: learning goal orientation, i.e., developing competence through learning and seeking new skills; performance goal orientation, i.e., a desire to develop competence to gain appreciation from others; lastly, avoidance goal orientation, i.e., a desire to hide incompetency and to avoid negative judgements (Brett, Uhl-Bien, Huang, & Carsten, 2016; Gong et al., 2013). The learning goal orientation is a motivational factor that permits employees to use their full potential to solve complex problems and obtain new skills, which leads to employee work engagement and the development of abilities to perform creative tasks (Bakker et al., 2020). For this reason, employees with a learning goal orientation are interested in knowledge sharing with other employees to gain new knowledge and develop their competency (Zhou et al., 2018). This proposition has been empirically proved by Zhang, Wang, and

Zhang (2018): employees' learning goal orientation is positively related to their knowledge sharing behaviours. In short, learning-oriented employees prefer to share their knowledge to acquire new knowledge and thereby fulfil their learning goals (Rhee & Choi, 2017). In contrast, employees who have a low learning goal orientation will spend their time performing routine tasks in the workplace rather than seeking out new ways to make their projects more rich and exciting (Bakker et al., 2020). Therefore, employees with a learning goal orientation gain new knowledge and skills by knowledge sharing with co-workers, which leads to the development of employee creativity.

Previous studies have concluded that an employee learning goal orientation has a positive influence on knowledge sharing and employee creativity. For instance, Huang and Luthans (2015) found in China that a learning goal orientation was positively related to employee creativity and that relationship was partially mediated by psychological capital. Furthermore, Song and fellows found that a learning goal orientation had a positive influence on employee creativity, and a creative role identity mediated that relationship (Song, Yu, Zhang, & Jiang, 2015). Later, Zhou et al. (2018) found that the intervening influence of knowledge sharing on the relationship between leadership and employees' creativity became stronger with increasing levels of learning goal orientation. Further, Bakker et al. (2020) have researched in Dutch companies and find that a learning goal orientation strengthens the relationship between employees' work engagement and their creativity. Moreover, the indirect effect of intrinsic motivation on perceiving cognitive diversity and employees' creativity becomes stronger with increasing levels of learning goal orientation (Kim, David, & Liu, 2020). Hence, this study expects that knowledge sharing and learning goal orientation have a joint influence on employee creativity. In other words, employee creativity will be the highest in the presence of knowledge sharing, a learning goal orientation, and entrepreneurial leadership. Therefore, based on the above discussion and the referenced studies, the following hypothesis is proposed.

H3. A learning goal orientation moderates the indirect relationship between entrepreneurial leadership and employee creativity via knowledge sharing. This moderation occurs such that the indirect effect is stronger with increasing levels of learning goal orientation and vice versa.

3. Research methodology

3.1. Sample and procedure

The data were collected from the manufacturing sector of Pakistan including textile, chemical, and electronic industry. The managers from different departments were contacted via emails or personnel contact to explain the purpose of the research and assured that their data would remain confidential. The data were collected in two phases with a one-month time interval to reduce common method biases. At time 1, the employees rated the statements about the entrepreneurial leadership behaviours of their managers, self-knowledge sharing behaviours, and learning goal orientation. Finally, at time 2 managers rated a statement related to their employees' creativity. Survey forms were sent to 100 managers and 400 employees working under their supervision. An identity code was used for each pair of the questionnaire for the manager and related employees. After the data collection questionnaires were matched through coding numbers, the final sample included responses from 64 leaders with a response rate of 64 % and responses from 265 employees with a response rate of 66.2 %. The leaders' sample was comprised of 87.5 % males. Moreover, 46.9 % of the leaders were over the age of 30 years, 95.3 % had a bachelor's or master's degree, and 46.8 % had more than 10 years of experience. Among the employees, 89.1 % were male, 41.5 % were over the age of 30 years, 90.2 % had a bachelor's or master's degree and 15.8 % had greater than 10 years of experience.

3.2. Measures

The measures used in this study have been adopted from existing studies. All of the items were measured using a 5-point Likert scale.

Entrepreneurial leadership: An eight-item scale was used to measure entrepreneurial leadership developed by Renko et al. (2015). Employees were asked to report the statements based on their perception about their managers leadership behaviors. Sample item included "My manager has creative solutions to problems" and "My manager takes risks".

Knowledge sharing: An eight-item scale was used to measure knowledge sharing developed by Lu, Leung, and Koch (2006). Employees were asked to report the statements about knowledge sharing. Sample item included "I share with others useful work experience and know-how" and "In daily work; I take the initiative to share my work-related knowledge to my colleagues".

Learning goal orientation: A five-item scale was used to measure learning goal orientation developed by VandeWalle (1997). Employees were asked to report the statements based on their willingness about learning goal orientation. Sample item included "I prefer to work in situations that require a high level of ability and talent" and "I often look for opportunities to develop my skills and knowledge".

Creativity: A thirteen-item scale was used to measure creativity developed by Zhou and George (2001). Managers were asked to report the statements about their employee creativity. A sample items included "This employee is a good source of creative ideas" and "This employee suggests new ways of performing work tasks".

Control variables: Demographic variables can affect creativity (Shalley, Zhou, & Oldham, 2004). Therefore, in this study the demographic variables, i.e., age, gender, education, and experience, were controlled. Accordingly, previous empirical studies used demographics as controlled variables (Cai, Lysova, Khapova, & Bossink, 2018; Tse et al., 2018).

3.3. Analytic strategy

SPSS 22 and AMOS 22 were used for the data analysis. A two-step analytical strategy was adopted (Hair, Black, Babin, & Anderson, 2010), and we used it to validate the measurement model by using confirmatory factor analysis and structural equation modelling to estimate the structural model to fit data. The bootstrapping method of Preacher and Hayes (2008) was applied to test the mediation analysis.

4. Results

4.1. Common method biases testing

To test whether there is serious common method deviation in the data, the Harman single factor method (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), which sets a common factor, was used for the test. If the common factor can explain all or most of the variation, then the data are considered to have a serious common deviation. Thus, we set the four latent variables, i.e., entrepreneurial leadership, psychological safety, psychological empowerment and employee creativity, as a common factor. The results showed that the single-factor model was difficult to fit ($\chi^2/df = 15.43$, RMSEA = 0.153, CFA = 0.789, TLI = 0.634, and GFI = 0.611), indicating that there were no serious common methodological biases in the current study (Podsakoff et al., 2003).

4.2. Missing values treatment

Little (1988) believes that “missing data is a pervasive problem in sample surveys” (p.287) and handling this phenomenon has been a challenge in social sciences (Rezaei, Amin, & Jayashree, 2016). Though there are several remedies to address this issue – the method of multiple imputations is considered as most reliable (Rezaei & Ghodsi, 2014). The method of multiple imputation is “a simulation technique that replaces each missing datum with a set of complete data > 1 plausible values”. This study used Little’s (1988) expectation maximization algorithm (EMA) generated by SPSS version 22 to achieve the purpose of imputation of missing values. The findings confirmed that missing values in our data are at random ($\chi^2 = 232.59$, $df = 189$, $p = 121$).

4.3. Descriptive statistics and correlations

The means, standard deviations, and correlations for all of the measures are presented in Table 1. Initially, the results of the correlation analysis were used to identify the hypotheses’ relationship. Table 1 shows that there are significant and positive correlations between entrepreneurial leadership and knowledge sharing ($r = 0.38$, $p < .01$), the learning goal orientation ($r = 0.49$, $p < .001$), and employee creativity ($r = 0.28$, $p < .01$). Furthermore, the learning goal orientation is positively correlated with creativity ($r = 0.23$, $p < .01$). According to the results of the relevant analysis, all of the hypotheses were supported.

4.4. Reliability and validity analysis

Cronbach’s alpha and composite reliability were used to test the reliability of the proposed study. According to Hair et al. (2010), Cronbach’s α and the composite reliability values must be above 0.7. The reliability analysis results are shown in Table 2 and indicate that Cronbach’s α and the composite reliability values for all of the variables were greater than 0.7. The convergent validity and discriminant validities were measured by utilizing the average variances extracted (AVEs) and the square roots of the AVEs. The recommended value of the average variance extracted must be greater than 0.05 (Fornell & Larcker, 1981). Table 2 indicates that the values of the AVE demonstrated good convergent validity. The discriminant validity is obtained by taking the square root of the AVE, and it must be greater than the inter-correlation values. The diagonal values of Table 2 demonstrate sufficient proof of the discriminant validity. Finally, Variance inflation factor (VIF) was determine and achieve the satisfactory level.

Table 1
Means, Standard deviations and Correlations.

#	Variables	M	SD	1	2	3	4	5	6	7	8
1	Age	4.76	0.43	1							
2	Gender	3.29	0.86	0.23	1						
3	Education	4.11	0.34	0.47	0.42	1					
4	Experience	4.56	0.84	0.86	0.54	0.73	1				
5	EL	3.68	0.6	0.46	0.68	0.83	0.52	1			
6	KS	4.98	0.36	0.52	0.69	0.66	0.48	0.38**	1		
7	LGO	4.19	0.57	0.76	0.78	0.59	0.65	0.49***	0.64**	1	
8	Creativity	3.94	0.73	0.82	0.72	0.49	0.72	0.28**	0.54*	0.23**	1

Note: n = 265; ***P < 0.001, **p < 0.01, * < 0.05; EL = Entrepreneurial leadership; KS = Knowledge sharing; LGO = learning goal orientation.

Table 2
Reliability and validity estimates.

Constructs	Items	Item Loading	CR	Cronbach's α	AVE	VIF
Entrepreneurial leadership	8	0.78–0.91	0.846	0.877	0.632	1.23
Knowledge sharing	8	0.73–0.88	0.872	0.798	0.710	1.21
Learning goal orientation	5	0.78–0.92	0.891	0.897	0.658	1.54
Employee creativity	13	0.75–0.91	0.911	0.811	0.651	1.76

Note: CA = Cronbach alpha; CR = Composite reliability; AVE = Average extracted variance; VIF = Variance Inflation Factor.

4.5. Confirmatory factor analysis

Confirmatory factor analysis was conducted to measure the proposed variables in this study: entrepreneurial leadership, knowledge sharing, the learning goal orientation and creativity. With the consideration of the small sample size compared with the measurement items, we reduced the number of items by following a frequently used procedure. According to the results of the factor analysis, we first combined the items with the highest and lowest loading of each variable, and then, we combined the items with the second highest and lowest loading. By following this procedure, all of the items of the variable were assigned to one of the indicators for each variable. Later, the mean scores of the items and the scores of each indicator were computed. The CFA results are shown in Table 3 and demonstrate that our four-factor model fits the data well with $\chi^2 = 750.21$, $df = 193$ ($p < 0.05$), confirmatory fit index (CFI) = 0.92, Tucker-Lewis index (TLI) = 0.91, and root mean square error of approximation (RMSEA) = 0.05. Furthermore, all of the scores of the factor loadings are significant and higher than 0.6.

4.6. Hypotheses testing

Before testing the hypothesis, structural equation modelling was applied to estimate the hypothesized model fit. Following the guidelines of Hair et al. (2010), an acceptable model fit was attained: Chi-square (χ^2) 745.67, $df = 312$, CFI = 0.918, GFI = 0.845, AGFI = 0.91, and RMSEA = 0.04. The results of the direct effects are shown in Table 4. Entrepreneurial leadership positively influences employee creativity ($\beta = .54$, $p < 0.01$); thus, H1 is supported. Further, our results show that entrepreneurial leadership has a positive effect on knowledge sharing with ($\beta = 0.42$, $p < 0.001$), and there is a significant positive effect on learning goal orientation ($\beta = 0.41$, $p < 0.001$). As reported in Table 4, learning goal orientation moderated the relationship between knowledge sharing and employee creativity. SEM was applied to identify the moderating effects. The learning goal orientation (M) significantly moderated the relationship between knowledge sharing (X) and employee creativity (Y) with a coefficient of 0.11 and $p < 0.001$. According to the positive coefficient value, the learning goal orientation strengthened the relationship between knowledge sharing and employee creativity. Therefore, H3 was supported.

Finally, H2 comprised the mediating roles of knowledge sharing between entrepreneurial leadership and creativity. The latest bootstrapping method prescribed by Preacher and Hayes (2008) was followed to examine the mediation. This method utilizes a process macro with bias-corrected confidence estimates. Accordingly, 5000 bootstrap resamples with lower and upper confidence intervals were obtained for estimating the indirect effects of psychological empowerment and psychological safety. Table 5 shows the bootstrapping results. The results indicate that when knowledge sharing is entered into the model, the effects of entrepreneurial leadership on employee creativity ($\beta = 0.21$) are significant. In the bootstrapped confidence interval process, the mediation is indicated by the exclusion of zero from the confidence intervals for determining the unstandardized indirect effect. The confidence intervals for the indirect effects of knowledge sharing [LLCI 0.192, ULCI 0.294] on creativity does not include zero. Hence, the indirect effect is significantly different from zero at $p < 0.05$, which indicates that knowledge sharing significantly mediates the relationship between entrepreneurial leadership and creativity. Thus, the results support H2.

5. Discussions

In the present study, an incorporation model was developed to explore the relationships between entrepreneurial leadership, knowledge sharing, the learning goal orientation, and employee creativity. The results of this study support H1, i.e., entrepreneurial

Table 3
Confirmatory factor analysis of discriminate validity.

#	Factors loaded	χ^2	Df	TLI	GFI	CFI	RMSEA
1	4-Factors: The base line model	750.21	193	0.92	0.92	0.91	0.04
2	3-Factors: EL and KS combined	1431.11	211	0.71	0.75	0.72	0.13
3	3-Factors: KS and CRE combined	1411.31	215	0.72	0.71	0.74	0.13
4	3-Factors: EL and LGO combined	1487.25	221	0.75	0.78	0.71	0.15
5	3-Factors: KS and LGO combined	1521.12	287	0.76	0.75	0.73	0.15
6	1-Factors: All variables combined	1781.56	312	0.45	0.71	0.69	0.21

Note: EL = Entrepreneurial leadership; CRE = Creativity; KS = Knowledge Sharing; LGO = learning goal orientation; TLI = Tucker-Lewis index, GFI = Goodness of fit index, CFI = Comparative fit index; RMSEA = Root mean square error of approximation.

Table 4
Results of structure model.

Paths	Estimates	SE	CR
Entrepreneurial leadership → Creativity	0.54	0.321	4.98**
Entrepreneurial leadership → Knowledge sharing	0.42	0.634	2.34***
Knowledge Sharing → Creativity	0.33	0.764	2.65***
Entrepreneurial leadership → Learning goal orientation	0.41	0.479	2.98***
Learning Goal Orientation → Creativity	0.57	0.512	2.14**
Moderation Analysis			
Knowledge Sharing (X)*Learning goal orientation (M) on Creativity (Y)	0.11	0.431	2.31***

Note: SE = Standard error; CR = Critical ratio. **p < 0.01, ***p < 0.001.

Table 5
Mediation results.

DV	Effect of IV on M (a)		Effect of M on DV (b)		Total effect of IV on DV (c)		Direct effect of IV on DV (c')		Bootstrap results for indirect effects through mediator	
	B	t	B	t	B	t	B	t	LL 95 % CI	UL 95 % CI
CRE	0.42**	12.87	0.68**	12.07	0.46**	19.34	0.21*	9.29	0.192	0.294

Note: IV: Entrepreneurial Leadership; DV: Creativity (CRE), Mediator: Knowledge Sharing. **p < 0.01; *p < 0.05.

leadership and employee creativity are positively correlated. These findings support the results of a previous study (Cai, Lysova, Khapova, & Bossink, 2019). Moreover, the results are also consistent with arguments of scholars who have suggested that entrepreneurial leaders are creative and develop the creative abilities of their employees by motivating and involving them in creative tasks that entail exploration and exploitation of new entrepreneurial opportunities (Gupta et al., 2004; Renko et al., 2015). Likewise, the results complement the tenants of SLT, which explains that when employees work with creative leaders, they learn from their leaders how to promote their creative skills; consequently, this type of environment improves their creativity.

Further, the results of this study support H2, i.e., knowledge sharing mediates the relationship between entrepreneurial leadership and employee creativity. The results support the comparable conclusions of previous studies that knowledge sharing mediates the relationship between leadership and employee creativity (Bai, Lin, & Li, 2016; Gu et al., 2018; Zhou et al., 2018). Entrepreneurial leaders act as role models for their followers and guide them on how to perform creative activities (Renko et al., 2015). In addition, entrepreneurial leaders develop a psychologically safe environment where employees can share their information and ideas (Cai et al., 2019). Consequently, employees would feel safe sharing and discussing their ideas with other employees and leaders, which in turn develops their creativity.

The results of the present study support H3, i.e., the learning goal orientation moderates the indirect relationship between entrepreneurial leadership and employee creativity via knowledge sharing such that the indirect effect is stronger with increasing levels of learning goal orientation and vice versa. These results match those of a previous study, which concluded that the learning goal orientation increases employee creativity (Huang & Luthans, 2015). Indeed, this finding supports the findings of another study showing that employees' learning orientation can improve their knowledge sharing behaviours, which in turn develops their creativity (Zhou et al., 2018). The results also support the premises of SLT; i.e., employees who observe their leaders' information-sharing and creative behaviours are more likely to share their knowledge to develop their competency and skills to perform creative tasks in the workplace.

5.1. Theoretical implications

This study makes important theoretical contributions. First, a major contribution is the proposed model that explores how entrepreneurial leadership enhances employee creativity through knowledge sharing and the learning goal orientation. Moreover, the present study explores the employee creativity mechanism with new leadership theory and through the lens of social information processing theory, which differs from a previous study that used social cognitive theory to explore the links between entrepreneurial leadership and employee creativity (Cai et al., 2019). In this empirical research, the importance of entrepreneurial leadership on employee creativity has determined that entrepreneurial leaders play vital roles in developing team creativity, which is important for sustaining organizational performance.

Second, though leadership has been established as an important factor for promoting employees' creativity (Carmeli et al., 2013), there is a scarcity of research on how entrepreneurial leaders influence employee creativity. Besides, Miao et al. (2019) have stated that entrepreneurial leadership is a new leadership theory and recommended further research to explore its mechanisms. By confirming that knowledge sharing is a mediator, the current study explores the mechanism of how entrepreneurial leaders develop employees' creativity by promoting their knowledge sharing behaviours. Third, the present study explores the importance of the co-existence of employees' knowledge sharing behaviours and the learning goal orientation to promote employee creativity while working under entrepreneurial leaders.

Fourth, whereas the current study explored the entrepreneurial leadership's influence on employee creativity, previous studies

have mostly examined the entrepreneurial influence on innovation and other organizational outcomes (Huang et al., 2014; Li et al., 2020; Sarabi et al., 2020; Strobl et al., 2020; Wahab & Tyasari, 2020). Studies have been conducted on the theoretical and scale development of entrepreneurial leadership (Harrison et al., 2018; Koryak et al., 2015; Leitch & Volery, 2017; Renko et al., 2015). Fifth, this study was conducted in an established organization to explore the entrepreneurial leaders' influence on employee creativity, as advised by an eminent scholar, that is, entrepreneurial leadership can be implemented in all forms of the organization regardless of the nature and size of the business (Renko et al., 2015). In contrast, previous scholars considered entrepreneurial leadership to be based on the leadership style of entrepreneurs; thus, they examined the implication of this style in new ventures or small and medium enterprises (Leitch & Volery, 2017; Miao et al., 2019). Therefore, this study makes important contributions by exploring the influence of entrepreneurial leadership on employee creativity in established organizations where they are necessary for corporate entrepreneurship.

5.2. Managerial implications

Today's global competition and dynamic business environment due to social, economic, and technological changes have made it challenging for organizations to develop the creative potential of their employees (Shafi et al., 2020). Therefore, the current study has valuable implications for entrepreneurs and leaders. First, the findings of this study are very important, as they explain the mechanisms of how entrepreneurial leaders promote employee creativity. Thus, organizations that want to develop creativity should recruit leaders who exhibit entrepreneurial behaviours. Besides, organizations should conduct psychological tests to determine the capabilities of their managers and employees. Furthermore, organizations should organize training and development programmes for their leaders' development. However, entrepreneurial leaders' influence on individual and organizational outcomes can be affected by the followers' characteristics (Renko et al., 2015). Therefore, organizations should also organize training programmes for employees to improve their entrepreneurial skills and creative behaviours.

Second, knowledge sharing is an important factor to promoting creativity (Gu et al., 2018; Wang et al., 2018). However, knowledge sharing involves complicated practices and multiple factors that hinder employees' knowledge sharing behaviours with other employees and leaders. In addition, leaders' behaviours can affect the information sharing available in the workplace (J. Zhou & Hoever, 2014). Therefore, organizations should focus on the knowledge management systems that facilitate knowledge sharing practices in the workplace, and leaders should motivate employees with respect to knowledge sharing. Because knowledge sharing involves employees sharing their information with other employees and leaders, it is expected that employee creativity increases in the presence of knowledge sharing.

Third, organizations should hire employees with a higher learning orientation. In addition, to promote employee creativity, organizations should develop a knowledge-sharing culture within organizations. Further, organizations should manage training programmes to build the employees' learning orientation, which in turn will develop their knowledge sharing behaviours and creativity. Moreover, such training programmes develop employees' passion to learn skills and knowledge that enables them to share their information and ideas with their co-workers.

5.3. Limitations and future opportunities

Although the present study makes important theoretical and managerial contributions, it also has the following limitations. The current study focused on employee creativity. However, scholars should consider exploring other outcomes of entrepreneurial leadership in organizations, e.g., team performance, product and services innovation, and organizational innovation. Besides, the scholars should conduct more studies by using other intervening and moderating variables such as job satisfaction, organizational commitment, job autonomy, status conflict, and inner motivation at the employees' level. Variables such as organizational learning culture, social capital, and the organization's long-term orientation should be considered at the organizational level. Furthermore, the current study is based on the basic tenants of SLT. Potential scholars can use other relevant theories such as social cognitive theory and situational theory of leadership to explain the relationships incorporated into this study and other relationships.

Furthermore, data were collected from one country with small sample sizes, which may hinder the generalizability of the findings, although this study's results align with those of the earlier studies (Cai et al., 2019). Because cross-sectional data were used in this study to analyse casual relationships, the link between entrepreneurial leadership and its outcomes can be affected due to contextual factors that could influence these variables. Thus, future studies should consider longitudinal data to intensively analyse the casual inferences of the relationships that have been examined in this study. Similarly, there are limitations related to the generalizability of the results in that the sample consisted exclusively of managers and employees. However, the results may have differed if the sample had included people from multiple levels. Thus, to conduct a more in-depth analysis of such relationships, future studies should consider participants from different levels in organizations.

As the data were collected from only a single country, in the future scholars should attempt to gather data from many different countries to analyse cross-cultural effects. Therefore, upcoming studies should validate this new concept in different cultures as recommended by scholars (Miao et al., 2019). For instance, the same model can be used for a comparative study between China, the USA, Germany, and France. Similarly, the same model can be used to analyse the comparative effect of entrepreneurial leadership in developing and developed nations. Furthermore, Renko et al. (2015) stated that entrepreneurial leadership is a leadership style similar to other leadership theories and is applicable to organizations of every type and size. Accordingly, future studies can be conducted in new ventures and non-profit organizations to analyse the effectiveness of entrepreneurial leadership.

Authors statement

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