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THE EFFECTS OF EMPOWERING AND TRANSFORMATIONAL LEADERSHIP ON THE CREATIVITY OF VIETNAM TELECOMMUNICATION ENTERPRISES EMPLOYEES

Thi Phuong Linh NGUYEN^{1*}, Thi Thanh Hoa PHAN¹, Nhat Minh TRAN¹, Thi Phuong Hien TRAN², Trong Nghia VU³, Dinh Trung NGUYEN⁴

¹ Faculty of Business Management, Department of General Business Management, National Economics University, Vietnam.

² Faculty of Business Management, Department of Enterprise Management, National Economics University, Vietnam.

³ Department of Communication, National Economics University, Vietnam.

⁴ Department of Equipment Management, National Economics University, Vietnam.

These authors contributed equally to the work

***Corresponding author:**
E-mail: linhnp@neu.edu.vn

ABSTRACT

This study has been conducted to investigate the effects of transformational leadership and empowering leadership on employee creativity through intrinsic motivation, creative process engagement, and psychological empowerment. Data were collected from 420 employees at 21 telecommunication enterprises in Vietnam by a direct questionnaire survey. Statistical methods, such as structural equation model (SEM) and confirmatory factor analysis (CFA) were used to analyze the data. This paper shows that empowering leadership and transformational leadership indirectly affect employee creativity through mediating variables. Empowering leadership and transformational leadership have a positive relationship with psychological empowerment. Psychological empowerment has a proportional relationship with both intrinsic motivation and creative process engagement. Creative process engagement and intrinsic motivation have positive effects on employee creativity. The findings indicate that leaders in Vietnam telecommunication enterprises need to pay attention to their leadership style and employee creativity is driven by leaders impacting on employees' psychological empowerment, intrinsic motivation, and creative process engagement.

Keywords: *Empowering leadership, transformational leadership, employee creativity, telecommunication, Vietnam.*

INTRODUCTION

In an increasingly competitive environment, many managers realize that they should encourage their employees to innovate (Shalley and Gilson, 2004). Creativity is an important element that helps organizations towards a sustainable competitive advantage (George, 2007). Employee creativity contributes to the organization's innovation, efficiency, and survival (Amabile, 1996; Shalley et al., 2004).

Employee creativity studies suggest that creativity is the result of the interaction between environmental factors and employee characteristics (Woodman et al., 1993). Amabile et al. (2004) concluded a leadership style is a key factor in the working environment that strongly influences employee creativity. Increasing employee creativity based on a specific leadership

style has attracted the interest of many researchers (Reiter-Palmon and Illies, 2004; Mumford et al., 2002; Gupta et al., 2012).

Vietnam is an Asian country so the leadership style is influenced by Asian culture. Leadership in the West and East have different cultural backgrounds and therefore are practiced differently (Chen and Lee, 2008). Zhou (2006) argues that there are some prominent features of leadership styles in Asian countries: authoritarianism, benevolence, and morality. A study of leadership styles in Eastern countries, such as Vietnam, will show other characteristics and influences on enterprises' operations compared to Western ones.

Empowering and transformational leadership are important contemporary theories in leadership research (Avolio et al., 2009). Transformational leadership and empowering are two separate structures. They are two different leadership styles but are all proven to affect the creativity of employees.

Empowering leadership enhances employee creativity, allowing organizations to be fully aware of their employees to seize opportunities and overcome challenges (Zhang and Bartol, 2010) in volatile business environments. It is seen as an incentive to energize, direct, and maintain behaviors that ultimately relate to employee performance (Spreitzer, 1995). Empowering leadership means sharing power that helps employees be more responsible and autonomous, increasing their sense of competence, meaning, agency, and impact (Ahearne et al., 2005; Spreitzer, 1995). Therefore, employees are empowered to be willing to make more efforts to innovate and to show a greater desire to engage in creative activities (Haider et al., 2018). While empowering leadership has been shown to be an important influencing factor of employee creativity, the importance of this relationship is not fully understood. The relationship between them remains elusive and needs further clarification in subsequent studies (Humborstad et al., 2014).

Transformational leadership demonstrates the style of knowledgeable, active, proactive people who is able to lead themselves and their subordinates (Ahangar, 2009). They can change groups or organizations through creating, communicating, and modeling visions and inspiring employees to obtain the intended goals (Mcshane and Von Glinow, 2003). It is a key driver of employee creativity and greatly influences business results, such as survival, success, performance, efficiency, and sustainability. In recent innovation studies, transformation leadership has been prominent in many factors when it comes to employee creativity (Wang et al., 2013; Wang and Rode, 2010; Gong et al., 2009; Gumusluoglu and Ilsev, 2009).

Transformational leaders encourage self-development of subordinates, clarify the vision for the future and take care of the needs of subordinates by showing four types of behaviors: individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Bass and Riggio, 2010). However, unlike empowerment leaders, transformational leaders who have these four acts without the intention of transferring power to subordinates and subordinates are often not allowed to participate in the realization of the vision (Amundsen and Martinsen, 2014a; Sharma and Kirkman, 2015). This difference provides an opportunity for the authors to learn about the effects of empowering and transformational leadership on the creativity of Vietnam telecommunication enterprises employees: the mediating role of intrinsic motivation, creative process engagement, and psychological empowerment.



THEORETICAL BACKGROUND AND HYPOTHESES***Transformational leadership and empowering leadership***

Empowering leadership was viewed from two complementary perspectives (Spreitzer, 1995; Seibert et al., 2011). Firstly, empowering leadership is the collection of behaviors performed by a leader to help subordinates gain self-management. In this view, power shifts from leaders to subordinates (Burpitt and Bigoness, 1997). However, some researchers have argued that the idea of power-sharing does not include the whole nature of the conception of empowerment. Therefore, using a self-efficient viewpoint, a second definition given, empowering leadership is a series of behaviors performed by a leader to increase intrinsic motivation related to the mission of subordinates and reduce their sense of lack of power (Conger and Kanungo, 1988; Thomas and Velthouse, 1990).

Studies of empowering leadership are often conducted in Western countries, focusing primarily on areas such as hotels, telecommunications, health services, pharmaceuticals, manufacturing, insurance, education, etc. (Ahearne et al., 2005; Albrecht and Andreetta, 2011; Bester et al., 2015; Chow, 2018; Humborstad et al., 2014; Raub and Robert, 2010), studies on empowering leadership in Eastern countries are rare.

Transformational leadership is a branch of behavioral theory and was developed by Burns (1978) and adjusted by Bass and Bass Bernard (1985). Transformational leadership is defined as a set of behaviors that include (a) idealized influence, (b) inspirational motivation, (c) intellectual stimulation and (d) individualized consideration can transform people according to their aspirations, identities, needs, interests, and values to move them to a higher level (Bass and Avolio, 1994). For leaders, transformational leadership is considered as a leadership in situations, rather than specific situations such as specific behavior related to making a specific change (Herold et al., 2008).

Employee creativity

Creativity refers to employees creating new and useful ideas related to improving the performance of individuals or groups in the workplace (Hirst et al., 2009; Oldham and Cummings, 1996). Creativity is a process of human activity, based on the awareness of the laws of the objective world, creating new spiritual and material values of substance, meeting the diverse needs of society (Le Huy Hoang, 2002; NooriSepehr & Keikavoosi-Arani, 2019).

From the above concept, it is shown that the two main factors that constitute creativity are novelty and usefulness when applying new ideas into practice (Shalley and Zhou, 2008). Firstly, novelty is when combining existing things in a new way or developing entirely new things (Oldham and Cummings, 1996), novelty is expressed in three forms: (1) creating absolute newness is completely different from previous ones that have been in the organization; (2) combining or synthesizing the existing to create a new, unprecedented product in the organization and (3) improving or changing the existing (Kinicki and Kreitner, 2004). However, novelty, originality but lack of morality or unreality cannot be considered creative (Shalley and Perry-Smith, 2001). Secondly, usefulness is the direct or indirect value that the creative idea brings to the organization, in the short and long term (Shalley et al., 2004). Usefulness is reflected in the practicality and feasibility of implementation, applying that creative idea into practice, and creating value. The value of the creative idea is reflected



first in the ability to solve problems that the organization is facing, and at the same time, helping individuals perform assigned tasks and achieve work goals. Once successfully applied, creative ideas can bring longer-term and greater value to the organization such as improving productivity, streamlining production processes, increasing product/service quality, reducing costs, increasing competitive advantage, or creating new surplus value for the organization, etc (Sergeeva et al., 2020)

The impact of transformational leadership and empowering leadership on employee creativity

The relationship between leadership behavior and creativity has been explored in many studies. Managers and leaders have been considered as the main factor affecting employee creativity (Herrmann and Felfe, 2013; Shalley and Gilson, 2004; Shalley et al., 2004; Qu et al., 2015). Different leadership styles such as empowering and transformational leadership has been identified to have a positive impact on employee creativity (Gong et al., 2009; Zhang and Bartol, 2010).

Empowering leadership empowers subordinates to take control of their work (Srivastava et al., 2006), helping to increase intrinsic motivation to take risks and try new things (Zhang and Bartol, 2010). Employees are empowered to spend more time and effort solving problems and are more likely than their non-empowered colleagues to create novel and useful ideas (Zhang and Bartol, 2010; Zhang and Zhou, 2014). Li and Zhang (2016) claim that empowering leadership is related to individual creativity. Firstly, empowering leadership empowers by emphasizing the meaning of the work to persuade employees to love their work and strive for better work results. Secondly, employees with an awareness of autonomy and participation in decision-making are critical to promoting creativity (Amabile et al., 2004). Thirdly, empowerment means removing the constraints associated with the outcome of work that forms an environment in which employees are encouraged to be creative when solving problems.

Empowering leadership has an indirect effect on employee creativity through the number of intermediary variables. Zhang and Bartol (2010) point out that empowering leadership positively affects psychological empowerment, which in turn affects both creative process engagement and intrinsic motivation; intrinsic motivation and creative process engagement have a positive impact on employee creativity. Slåtten et al. (2011) show that empowering leadership and a humorous working environment affect employee creativity. Amundsen and Martinsen (2015) show that empowerment of leadership has a positive effect both directly and indirectly through self-leadership; psychological empowerment affects both job satisfaction and work effort, but do not affect creativity; while self-leadership affects creativity and work effort but do not affect job satisfaction. Li and Zhang (2016) show that individual and group learning mediate the effects of empowering leadership on the team and individual creativity. Chow (2018) conclude the indirect effect on the relationship between creativity and empowering leadership through the motivation for learning just happen to employees who are open to lower experience while communicating through trust in leadership only happens to employees who are open to a higher experience.

Transformational leadership stimulates critical thinking and encourages their followers to take risks and initiatives most of the time (Mayer et al., 1995). Transformational leadership develops new models to get things done and wants to face ever greater challenges, helping to develop the creativity of followers (Howell and Avolio, 1993), through motivation and



intellectual stimulation (Mumford et al., 2002; Jung et al., 2003). Sosik et al. (1997) show that compared to other forms of leadership, transformational leadership is more effective in encouraging followers to think more differently, more widely accepted and the discovery thinking process brings more ideas and creative solutions.

Transformational leadership has an indirect effect on employee creativity through the number of mediating variables. Jyoti and Dev (2015) point out that there is a meaningful positive relationship between employee creativity and transformational leadership with a mediating variable that is learning orientation. Jaiswal and Dhar (2015) conclude the positive relationship between employee creativity and transformational leadership with the the mediating variables as innovative climate and the moderator variable as creative self-efficacy. Henker et al. (2015) confirm meaningful positive relationship between employee creativity and transformational leadership with the mediating effect of motivating focus and participation in the creative process. In this study, the authors explored the indirect effect of empowering leadership and transformational leadership on employee creativity with several mediating variables: intrinsic motivation, creative process engagement, psychological empowerment.

The mediating role of psychological empowerment, creative process engagement, intrinsic motivation

Psychological empowerment is a psychological state expressed through four cognitive factors: impact, self-determination, competence, and meaning (Spreitzer, 1995). Psychological empowerment is the state of the employees who experience power in their jobs (Menon, 2001; Spreitzer, 1995). Psychological empowerment is related to employees' perceptions of their ability to handle events, situations, and problems (Thomas and Velthouse, 1990). Psychological empowerment is a continuous variable that reflects the degree of perceived empowerment (Spreitzer, 1995).

Empowering leadership is confirmed as an important premise of psychological empowerment by empowering leadership that can enhance the meaning of work by providing subordinates information on overall goals and tasks of organizations (Conger and Kanungo, 1988). Empowerment leaders empower the sharing of power and delegate responsibilities to subordinates more autonomy and influence their work (Amundsen and Martinsen, 2014). Empowerment leaders can help subordinates feel a sense of competence by providing emotional support, encouragement, positive persuasion, and acting as a role model for mastering tasks with success (Bandura, 1986). They empower subordinates to participate in decision making (Manz and Sims, 1987) and listen to their ideas, opinions, and proposals (Amundsen and Martinsen, 2014).

Therefore, the proposed hypothesis is as follows:

H1: Empowering leadership has a positive effect on psychological empowerment.

A number of previous studies have demonstrated a strong relationship between transformational leadership and psychological empowerment (Avolio, 1999; Avolio et al., 2004; Blase and Blase, 1997; Bono and Judges, 2004; Luthans and Avolio, 2003). These authors have argued that followers who work with transformational leadership are more likely to be empowered as leaders who tend to transform the value and behavior of their followers to those who following them can unleash their full potential. Furthermore, transformational



leadership effectively encourages the followers to feel that they can have an impact on their organizations, through improvements to empower (Laschinger et al., 2009). Transformation leaders may be particularly appropriate in developing the psychological strength of their employees. Through inspiring stories of collective purpose and compelling vision for the future, employees show awareness of meaning and impact, and through personal coaching and promoting creative problem solving, employees demonstrate an awareness of competence and self-determination (Grant, 2012).

Given these findings from earlier studies, we proposed the following hypothesis:

H2: Transformational leadership has a positive impact on psychological empowerment.

The majority of creative research has focused on the outcome of creativity (Amabile et al., 2005). The focus on the results of creativity does not explain the activities that lead to creative results (Gilson and Shalley, 2004). These activities form the creative process and precede creative results (Gilson and Shalley 2004). Creative process engagement is defined as employee engagement in creative processes or methods, including (1) problem identification, (2) information searching and coding, (3) generations and ideas (Amabile, 1983; ReiterPalmon and Illies, 2004). Psychological empowerment has an important impact on employees' willingness to participate in a creative process (Zhang and Bartol, 2010). When the employees believe that they can carry out a successful task, have a certain degree of self-determination in doing the job, the employees have the ability to focus on an idea or a problem longer (Deci and Ryan, 1991; Spreitzer, 1995). These findings lead to the third hypothesis:

H3: Psychological empowerment has a positive impact on creative process engagement.

Intrinsic motivation describes the degree to which an individual is interested in a task and participates in it for its own benefit (Utman, 1997). According to psychological empowerment theory, employees are only aware of empowerment when their psychological state can influence their intrinsic motivation (Mishra and Spreitzer, 1998; Quinn and Spreitzer, 1997; Wilkinson, 1998). Psychological empowerment contributes to employee creativity by positively influencing employees' intrinsic motivation (Spreitzer, 1995; Amabile, 1996), but empirical evidence for this effect is lacking (Shalley et al., 2004; Zhang and Bartol 2010). The proposed hypothesis is as follows:

H4: Psychological empowerment has a positive impact on intrinsic motivation

In the first stage of the creative engagement process, employees must structure the problem and must identify the goals, procedures, limitations and relevant information for the solution of the problem (Bin Saeed et al., 2019). The second phase involves searching for information and concepts related to advanced understanding of the identified problem (Mumford, 2000). Searching and coding information involves both reviewing existing concepts and the development of new concepts using information from memory and external sources (Reiter-Palmon and Illies, 2004). The time spent on searching and coding information have a positive impact on the quality of the solution, therefore, potentially increases creativity (Bin Saeed et al., 2019). Review and develop concepts related to the problem and integrate relevant information, triggering the final stage of creative engagement process (Zhang and Bartol, 2010). The combination and reorganization of collected information fosters a new understanding, and the exploration of applications and the implications of this new understanding ultimately results in a series of new ideas (Mumford, 2000). Therefore, employees tend to be more creative when they are involved in the creative process (Zhang and Bartol, 2010). Participating in the



creative process represents the first step necessary for creativity (Gilson and Shalley 2004). The creativity of employees is influenced by the process of participating in creative activities (Amabile, 1988, 1996). From there, the proposed hypothesis is as follows:

H5: Creative engagement process has a positive impact on employee creativity

Intrinsic motivation is one of the most important and influential influences on employee creativity (Amabile, 1988, 1996). Psychological mechanisms such as intrinsic motivation are proven to be the fundamental driving force of creativity (Amabile, 1985; Amabile et al., 1996). According to this line of research, a number of scholars have shown that intrinsic motivation plays a key mediating role between leadership and creativity (Shin and Zhou, 2003; Zhang and Bartol, 2010). Studies of intrinsic motivation are becoming increasingly important, especially when intrinsic motivation has been shown to have a positive impact on learning, creativity, happiness and perseverance (Ryan and Deci, 2000). Zhang and Bartol (2010) also suggest that intrinsic motivation is an intermediary that links empowering leadership and creativity, a connection between psychological empowerment and creativity. Intrinsic motivation is the factor forming creativity (Shalley et al., 2004; Amabile, 1996). Therefore, based on the above statements, we proposed the following hypothesis:

H6: Intrinsic motivation has a positive impact on employee creativity

METHODS

Sample and procedure

To collect accurate data, we went directly to the telecommunication enterprises to contact and guide each employee to answer the survey. The questionnaire was divided into two parts: the first part explored the respondents' perceptions of empowering leadership, employee creativity, intrinsic motivation, transformational leadership, creative process engagement, and psychological empowerment; the second part explored personal information such as gender, age, education, job tenure.

With the survey, we collected data from 500 employees at 21 telecommunication enterprises in Vietnam. After screening, 420 questionnaires were used for the study. Sample statistics showed that 188 male employees and 232 female employees participated in the survey, respectively 44.8% and 55.2% of the total. Of 420 surveys, 64.5% of employees are between 20 and 30 years old; 30.2% of employees are aged between 31 and 40; other age groups are not significant. The sample of 79.8% with college/university degree; 55.6% have a job tenure of 1 to 5 years, 17.9% have a job tenure of 6 to 10 years.

Measures

Empowering leadership. We used the 12-item measure by Ahearne *et al.* (2005) to assess empowering leadership. These 12 items are divided into 4 dimensions: enhancing the meaningfulness of work, fostering participation in decision making, expressing confidence in high performance, and providing autonomy from bureaucratic constraints. (α 's = 0.856, 0.777, 0.867 and 0.860, respectively). A sample item is, "My manager helps me understand how objectives and goals relate to that of the company". Each item was rated from 1 (strongly disagree) to 5 (strongly agree). A confirmatory factor analysis (CFA) was conducted for the scale, and the result demonstrated that this model was acceptable ($\chi^2(50) = 121.146, p <$



0.001; CFI = 0.969, GFI = 0.955, RMR = 0.072, RMSEA = 0.058), indicating that the dimensions are distinct and the notion is valid.

Transformational leadership. Transformational leadership was adapted from Avolio *et al.* (1999), 20-item scale as manifested in four dimensions of 5 items each: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (α 's = 0.812, 0.862, 0.833 and 0.873, respectively). A sample item is, "I feel proud to be associated with my team leader". Each item was rated from 1 (strongly disagree) to 5 (strongly agree). A CFA was conducted for the scale, and the result demonstrated an acceptable model fit ($\chi^2(131) = 169.421, p < 0.001$; CFI = 0.989, GFI = 0.958, RMR = 0.040, RMSEA = 0.026), suggesting that the dimensions reflected the overall construct.

Psychological empowerment. 12-item scale by Spreitzer (1995) was used to study psychological empowerment. These 12-item scale as manifested in four dimensions of 3 items each: impact, self-determination, competence, and meaning (α 's = 0.808, 0.762, 0.798, and 0.829 respectively). A sample item is, "The work I do is very important to me". Each item was rated from 1 (strongly disagree) to 5 (strongly agree). A CFA was performed for the scale, and the result demonstrated an acceptable model fit ($\chi^2(50) = 67.303, p < 0.001$; CFI = 0.990, GFI = 0.987, RMR = 0.065, RMSEA = 0.029), suggesting that the dimensions reflected the overall construct.

Creative process engagement. Creative process engagement was measured with Zhang và Bartol (2010). This measure contains three dimensions: problem identification, information searching, and encoding and idea generation (α 's = 0.793, 0.770 and 0.866 respectively). A sample item is, "I spend considerable time trying to understand the nature of the problem". Each item was rated from 1 (strongly disagree) to 5 (strongly agree). A CFA was carried out for the scale, and the result demonstrated an acceptable model fit ($\chi^2(41) = 45.712, p < 0.001$; CFI = 0.997, GFI = 0.980, RMR = 0.052, RMSEA = 0.017), showing that the scale is perfectly suitable for further analysis.

Intrinsic motivation. 3-items was used to measure intrinsic motivation scale (α 's = 0.758) adapted from the work of Amabile (1985) and Tierney *et al.* (1999). A sample item is, "I enjoy finding solutions to complex problems". Each item was rated from 1 (strongly disagree) to 5 (strongly agree).

Employee creativity. Employee creativity was measured with a 13-item creativity scale (α 's = 0.885) developed by Zhou and George (2001). A sample item is, "Suggests new ways to achieve goals or objectives". Each item was rated from 1 (strongly disagree) to 5 (strongly agree).

Control variables. According to previous literature, we selected five demographic variables which may affect the statistical result as control variables: gender, age, educational level, job tenure (e.g., Bin Saeed *et al.*, 2019; Dust *et al.*, 2014; Jada *et al.*, 2019; Li *et al.*, 2015; Raub and Robert, 2010; Zhang and Bartol, 2010). Gender was measured and encoded as 1 for male and 2 for female. Age was measured in years. Education was measured by qualifications. Job tenure was measured as the number of years that an employee had been in the company.

ANALYSES AND RESULTS



To test the hypothesis model, we used the structural equation model (SEM) with AMOS 22.0. Using two comprehensive steps Anderson and Gerbing (1988) to test the hypothesis model, we first conducted CFA to check the convergence validity of the scales; we then performed SEM based on the measurement model to estimate the relevance of the hypothetical model to the data.

Factor analyses

We conducted exploratory factor analysis (EFA) with 6 main factors: employee creativity, intrinsic motivation, creative process engagement, psychological empowerment, transformational leadership, and empowering leadership. All coefficients are relevant and significant in this study when KMO = 0.834 and sig. = 0.000. To define how many factors to retain, the number of issues were considered. Using Kaiser's criterion, eigenvalue = 1.170 greater than one was suitable with all 17 total components recorded. These 17 components explain 68.042 percent of the variance.

Confirmatory factor analysis (CFA) using AMOS 22.0 was conducted to compare the hypothesized six-factor model employee creativity, intrinsic motivation, creative process engagement, psychological empowerment, transformational leadership, and empowering leadership with 17 total components. The fit indices indicate that our hypothesized 6-factor model fit the data best ($\chi^2 = 2,431.294$, $df = 2008$, $RMSEA = 0.022$, $CFI = 0.966$, $TLI = 0.963$), proving the suitability of the hypothesized six-factor model and therefore the difference of the variables in this study. The CFA results are presented in Table I.

To verify the research model, we tested three models by analyzing SEM. Model 1 is a six-factor model that studies the impact of both empowering leadership and transformational leadership on employee creativity through mediating variables: intrinsic motivation, creative process engagement, and psychological empowerment. Model 2 is a five-factor model that studies the impact of empowering leadership on employee creativity through mediating variables: intrinsic motivation, creative process engagement, and psychological empowerment. Model 3 is a five-factor model that studies the impact of transformational leadership on employee creativity through mediating variables: intrinsic motivation, creative process engagement, and psychological empowerment.

Table 1 shows that the hypothetical model (model 1) is more relevant to the data than the remaining models in terms of matching model and error. The difference in the χ^2 statistic between model 1 and model 2 and 3 is significant.

Table 1. Comparison of measurement models

Models	Factors	χ^2	df	CFI	TLI	RMR	RMSEA
Model 1		2,831.120	2123	0.953	0.950	0.073	0.028
Model 2		1,584.561	1111	0.947	0.943	0.075	0.032
Model 3		1,883.233	1414	0.943	0.941	0.077	0.028

Descriptive statistics and correlations of the study variables are presented in Table 2. Table 2 shows that empowering leadership and transformational leadership having positive effect on

psychological empowerment ($r = 0.248$ and 0.447 respectively). Psychological empowerment has a significant relationship with creative process engagement and intrinsic motivation ($r = 0.302$ and 0.178 , respectively), all of which are absolutely related to employee creativity ($r = 0.292$ and 0.305 , respectively).

Table 2. Means, standard deviations, and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.550	0.498	1									
2. Age	1.410	0.597	-0.209**	1								
3. Education	2.030	0.449	0.062	-0.030	1							
4. Job tenure	2.340	0.944	-0.179**	0.667**	-0.019	1						
5. Empowering leadership	3.564	0.565	-0.033	0.009*	-0.031	-0.048	1					
6. Transformational leadership	3.320	0.520	-0.060	-0.036	-0.016	-0.034	0.056	1				
7. Psychological empowerment	3.504	0.694	0.018	-0.007	-0.045	0.006	0.248**	0.447**	1			
8. Creative process engagement	3.203	0.737	-0.001	0.017	-0.017	0.010	0.437**	0.134**	0.302**	1		
9. Intrinsic motivation	3.673	0.871	-0.045	0.088	0.050	0.112*	0.378**	0.032	0.178**	0.473**	1	
10. Employee creativity	3.655	0.516	-0.010	0.025	0.070*	0.017	0.227**	0.093	0.120*	0.292**	0.305**	1

Notes: $n = 420$; * $p < .05$; ** $p < .01$

Test of hypotheses

The structure model results show that the hypothesis model is suitable for the data ($\chi^2 = 2,831.120$, $df = 2123$, $CFI = 0.953$, $TLI = 0.950$, $RMR = 0.073$ and $RMSEA = 0.028$). The authors have compared 3 models including a hypothetical model and two alternative models. In particular, the hypothetical model with the coefficients is considered to be the best. The



hypothetical model demonstrates the relationship between empowering leadership and transformational leadership with employee creativity, through mediating variables.

Figure 1 shows the overall structure model with standard line estimates. Hypotheses H1, H2, H3, H4, H5, and H6 are accepted. Empowering leadership and transformational leadership both have a definite relationship with psychological empowerment ($\beta = 0.274$ and 0.580 , respectively, $p < 0.01$). Psychological empowerment has a convinced relationship with creative process engagement and intrinsic motivation ($\beta = 0.321$ and 0.224 , respectively, $p < 0.01$). Creative process engagement and intrinsic motivation both have significant relationships with employee creativity ($\beta = 0.134$ and 0.127 , respectively, $p < 0.01$).

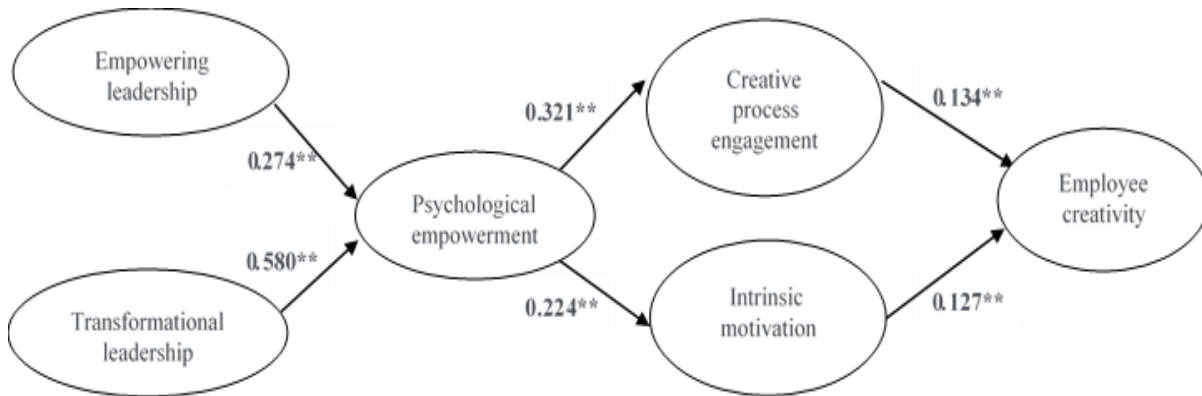


Figure 1. Results of a structural equation modeling

Note: ** $p < 0.01$

DISCUSSION AND CONCLUSION

Discussion

The purpose of this study was to understand the influence of leadership styles on employee creativity through mediating variables. All assumptions of the study are accepted with $p < 0.01$.

The study results demonstrate that empowering leadership and transformational leadership affect employee creativity through mediating variables. Firstly, empowering leadership and transformational leadership have a positive relationship with psychological empowerment, transformational leadership effects on psychological empowerment are stronger than empowering leadership. This result is consistent with some previous studies of Amundsen and Martinsen (2015); Chen et al. (2011); Dust et al. (2014); Joo and Lim (2013); Kundu et al. (2019); Raub and Robert (2010); Tung (2016); Zhang and Bartol (2010). Secondly, psychological empowerment has a proportional relationship with both intrinsic motivation and creative process engagement, in which the impact of psychological empowerment on creative process engagement is not much stronger than the impact on intrinsic motivation. Zhang and Bartol (2010) agree with psychological empowerment's positive relationship with creative process engagement and intrinsic motivation; however, according to these authors, the effect of psychological empowerment on intrinsic motivation is stronger than that of creative process engagement. Thirdly, intrinsic motivation and creative process engagement have been shown to have significant effects on employee creativity, the difference in the level of this

influence is not much. This recognition is consistent with the research of Zhang and Bartol (2010) but according to these authors, creative process engagement and intrinsic motivation both have a strong impact on employee creativity, creative process engagement is more powerful than intrinsic motivation.

Among the demographic variables included in the study, empowering leadership has a certain relationship with age (Dust et al., 2014; Raub and Robert, 2010); employee creativity has an absolute relationship with education (Jiang and Yang, 2015).

Theoretical implications

Firstly, the research enriches leadership theory and creative theory by focusing on understanding the relationship between the two leadership styles: empowering leadership and employee creativity and transformational leadership. Such leadership styles help employees learn and evoke behaviors that are consistent with the culture of experimentation and innovation (Lee et al., 2014).

Secondly, our results show that empowering leadership and transformational leadership are contextual factors that should not be ignored in theory when researching employee creativity. This suggests that, in accordance with Bandura's social cognitive theory (Bandura, 1986) that intrinsic motivation and cognitive processes can be significantly influenced by environmental factors, such as leadership characteristics. Therefore, our findings extend to previous studies that emphasize the significance of leadership style for employee creativity (Oldham and Cummings, 1996; Tierney et al. 1999), especially the transformational leadership style (Shin and Zhou, 2003).

Thirdly, the conclusions of the study contribute and expand the research model of Zhang and Bartol (2010) when they only refer to empowering leadership. We have demonstrated a significant relationship between two leadership styles and employee creativity through mediating variables such as intrinsic motivation, creative process engagement, and psychological empowerment.

Practical implications

Firstly, leaders in enterprises need to pay attention to their leadership style because leadership style positively affects the creativity of employees through mediating variables. For the enterprises in the telecommunications industry, an industry associated with technological innovation should refresh products and implement innovations to gain market share in the market (Ali and Ibrahim, 2014).

Secondly, employee creativity is driven by leaders impacting on employees' creative process engagement, intrinsic motivation, and psychological empowerment. Changing leadership styles will impact psychological empowerment, from psychological empowerment will affect creative process engagement and intrinsic motivation, thereby affecting employee creativity. The findings confirmed that two leadership styles: empowering leadership and transformational leadership have a convincing influence on psychological empowerment, with transformational leadership being more influential. Therefore, telecommunication enterprise leaders should consider applying these leadership styles, especially the transformational leadership style.



Limitations

This study was constrained by three important limitations. Firstly, the study found the connection between empowering leadership and transformational leadership, two leadership styles among many leadership styles, with employee creativity through a number of mediating variables. A full study should be done in the future with other leadership styles to see how these leadership styles impact employee creativity. Secondly, the study did not investigate the direct relationship between empowering leadership and transformational leadership with employee creativity although empowering leadership and transformational leadership in some studies have been shown to have a direct relationship with employee creativity such as Jyoti and Dev (2015), Özarallı (2015), Slåtten et al. (2011). Thirdly, we did not survey all telecommunication enterprises in Vietnam, the study stopped at about 20% of the number of telecommunication enterprises currently operating.

Conclusion

This research has expanded our understanding of the indirect impact of empowering leadership and transformational leadership on employee creativity through intrinsic motivation, creative process engagement, and psychological empowerment. Based on the relationship and the degree of impact of each leadership style on the creativity of employees, telecommunication enterprise leaders may choose to change the leadership style to suit the direction of innovation and creativity of the future business. At the same time, the relationship of mediating variables with each other and with employee creativity also reinforces the indirect influence between leadership style and employee creativity.

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