

Job Embeddedness and Employees' Creativity: A Moderated Mediation Model

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Abstract. Our research aims to investigate the connection between job embeddedness and employees' creativity, particularly the moderating effect of work engagement and proactive personality, based on the conservation of resources theory and the broaden-and-build theory of positive emotions. With convenience sampling, we collected questionnaire data from full-time employees. The results of Process analysis on the data from 274 employees indicated that 1) Significant was the mediating part job engagement played in the connection between job embeddedness and creativity; 2)The positive correlation between job embeddedness and work engagement was notably strengthened when employees' proactive personality was low, thus moderating the relationship; and 3) proactive personality also negatively moderated the pathway from job embeddedness to creativity through work engagement, that is, this mediational effect was strong when employees' proactive personality was low.

Keywords: job embeddedness, creativity, work engagement, proactive personality

1 Introduction

How job embeddedness affect creativity has been a popular theme in recent years. Studies have shown that when having high job embeddedness, employees will possess more abundant resources, thereby enabling the integration and utilization of resources to exhibit more novel ideas or creative behavior [1]. Our comprehension of the bond between job embeddedness and creativity is bolstered by these findings; however, The moderating effect of proactive personality and work engagement on job embeddedness and creativity, as well as conservation of resources theory and broaden-and-build theory of positive emotions, has been largely overlooked in regards to its effect on creativity. This research endeavors to gain a more thorough understanding of how job embeddedness impacts creativity.

1.1 Job embeddedness and work engagement

Job embeddedness refers to the degree of integration of an individual in terms of work, social, and cultural aspects within an organization [2]. It typically includes factors related to job task requirements, social networks, and organizational culture. Work engagement refers to the state where an individual exhibits a high level of commitment, focus, and enthusiasm, usually encompassing active participation in work tasks, identification with work roles, and a positive work experience [3]. Theory of Conservation proposes that, when making choices and taking action to satisfy necessities for survival and adaptation, people strive to protect and maximize

their restricted mental and emotional resources. This theory highlights the tendency of individuals to conserve, protect, and acquire resources, emphasizing that potential threats to resource loss, as well as actual resource loss, can trigger stress and pressure in individuals. As such, when having high job embeddedness, employees are likely to actively use their resources to engage in their work, aiming to meet both internal and external organizational demands. This, in turn, enables them to protect and maximize their resources. On the other hand, employees with high job embeddedness possess more resources to help them cope with challenges at work, which can also enhance their sense of self-efficacy, leading to increased work engagement [4]. Studies conducted before have demonstrated a correlation between job embeddedness and work engagement that is positive. Based on this, we proposed as the following:

H1: Job embeddedness positively correlates with work engagement.

1.2 Mediating effect of work engagement

Creativity refers to the broadening of thinking and the generation of more ideas that employees exhibit when successfully completing tasks based on existing knowledge and experience [5]. Work engagement reflects an individual's state of being highly committed, focused, and enthusiastic in their work, constituting a pleasurable and positive emotional experience. Theory of broadening and constructing suggests that positive emotions can broaden a person's thought process and increase their drive to act, facilitating them to break free from conventional mental sets and engage in diverse considerations, which in turn can help enhance creativity [6]. Besides, previous study has shown that employees with high work engagement possess stronger cognitive flexibility and demonstrate perseverance [7]. The correlation between cognitive flexibility and persistent perseverance and innovative performance is strong, thus employees with high work engagement are likely to demonstrate greater creativity. Research conducted before has shown a notably beneficial relationship between creativity and job engagement [8]. Proposing the second hypothesis thus:

H2: Employee creativity is positively correlated to work engagement.

Building upon the assumptions discussed earlier, we further raise the mediating hypothesis as the following:

H3: Work engagement mediates the relationship between job embeddedness and creativity.

1.3 Moderating effect of proactive personality

An individual's inclination to take part in novel activities is termed a proactive personality, seek opportunities, and be willing to take on proactive roles [9]. Given that job embeddedness can provide employees with ample resources in their work, a critical question is who benefits the most from job embeddedness. Studies have indicated that when having high level of proactive personality employees can acquire more resources through proactive behaviors, thus reducing their dependence on resources provided by the environment [10]. Meanwhile, when having high level of proactive personality, Employees' involvement in job tasks has grown, as they increasingly consider proactive work conduct a component of their job performance. Indeed, Tims, Bakker, and Derks (2013) proved that proactive individuals were more likely to exhibit proactive behaviors and adapted to the constantly changing work environment [11].

Thus, regardless of whether the external environment provides them with the necessary resources, they will create favorable conditions and seek opportunities to continually improve their work environment in a state of high work engagement. Therefore, the importance of resources from job embeddedness is comparatively lessened for those with a highly proactive personality. On the other hand, in contrast, this is not the case for employees, when having low proactive personality, employees are in dire need of resources provided by the job embeddedness environment to thrive and achieve performance goals, as they only passively adapt to their work environment and are not easily able to identify opportunities. Proposing the fourth hypothesis, we draw upon the above discourse:

H4: The correlation between job embeddedness and work engagement is moderated by a proactive personality, meaning that the lower the proactive personality, the more powerful the connection between job embeddedness and work engagement.

We propose a moderated mediation hypothesis, which is a combination of the previously mentioned mediating and moderating hypotheses:

H5: The positive effect of job embeddedness on creativity through work engagement is moderated by a proactive personality, thus making it more powerful when the traits of this personality are low.

2 Methods

2.1 Participants

This study employed convenience sampling to collect data from full-time employees from various enterprises using an online questionnaire. Altogether, 274 questionnaires were valid. Of these, 192 were female, with an average age of 32.0 (SD = 7.3) and a mean work tenure of 6.3 (SD = 4.8). Furthermore, A bachelor's or master's degree was held by more than 87.6% of the participants.

2.2 Measurements

A Likert-type scale of 7 points, from 1 (totally don't agree) to 7 (total approval), was employed for all items.

Mitchell et al.'s (2001) 7-item scale was employed to evaluate job embeddedness, with an α coefficient of 0.86.

The Utrecht Work Engagement Scale (UWES), composed of seventeen items and created by Schaufeli et al., was designed to gauge work engagement. [12] The 17-item scale was utilized to evaluate work involvement, with an α coefficient of 0.91.

Creativity. The widely used 13-item scale from Zhou and George (2001) [13], employees' creativity was gauged by this. The α coefficient of the scale was 0.92.

Crant et al.'s Proactive Personality Scale (PPS) is a measure of proactive personality. [14] was used in this research. The α coefficient was 0.87.

Gender, education, age, and job tenure were also collected as control variables.

2.3 Data Analysis

SPSS 22 was employed for correlation analysis, descriptive statistical analysis, and regression analysis, while Amos 24 was responsible for confirmatory factor analysis (CFA). Hypothesis testing was conducted using the SPSS Process plugin.

3 Results

3.1 Validation of constructs

Several models were tested for their fits to data by confirmatory factor analysis with Amos 24. As shown in Table 1, the results showed that the model with all four research constructs fit the data best with the lowest chi-square value and adequate fit indexes ($\chi^2 = 131.61$, $df = 48$, $RMSEA = .080$, $SRMR = .0348$, $CFI = .97$, $TLI = .96$). This result supports the discriminant validity for all research constructs.

Table 1 Confirmatory factor analysis (N=274)

Models	χ^2	df	SRMR	RMSEA	CFI	TLI	$\Delta\chi^2$
Two-Factor Model	414.17	53	.0660	.158	.88	.85	282.56
Three-Factor Model	206.89	51	.0467	.106	.95	.93	75.28
Measurement Model	131.61	48	.0348	.080	.97	.96	-
One-Factor Model	430.41	54	.0680	.160	.88	.85	298.8

Note: Baseline Model (Job Embeddedness, Work Engagement, Proactive Personality, Creativity); Three-Factor Model (Job Embeddedness + Work Engagement, Proactive Personality, Creativity); Two-Factor Model (Job Embeddedness + Work Engagement + Proactive Personality, Creativity); One-Factor Model (Job Embeddedness + Work Engagement + Proactive Personality + Creativity).

3.2 Hypothesis testing

Table 2 displays the outcomes of descriptive statistics and correlation. Table 2 reveals a positive correlation between job embeddedness and creativity ($r = .64$, $p < 0.001$) as well as work engagement ($r = .78$, $p < 0.001$); The correlation between work engagement and creativity is strong ($r = .78$, $p < 0.001$), thus affirming the validity of the following hypotheses.

Table 2 Descriptive Statistics and Correlation Analysis (N=274)

	Mean	SD	1	2	3	4
1. Job Embeddedness	5.61	.85	.86			
2. Work Engagement	5.62	.77	.78***	.91		
3. Creativity	5.87	.71	.64***	.78***	.92	
4. Proactive Personality	5.79	.69	.66***	.76***	.87***	.87

Note: *** $p < 0.001$

Table 3 reveals a significant correlation between job embeddedness and work engagement ($M1$, $\beta = .73$, $p < .001$), as demonstrated by the hierarchical regression examination results; thus,

Hypothesis H1 was supported. The results of Model 3 show that job embeddedness is significantly positively correlated with employees' creativity (M3, $\beta = .59$, $p < .001$). After entering work engagement into this regression model, work engagement is significantly positively correlated with employees' creativity (M4, $\beta = .71$, $p < .001$); thus, H2 was supported. Then, mediation analysis was conducted using PROCESS 3.1 with model 4. The corresponding results indicated that the mediation effect is significant (Effect = .55, 95% CI = [.40, .70]); thus, H3 was supported.

Table 3 Analysis Results of the Mediation Model (N=274)

	Work Engagement		Creativity	
	M1	M2	M3	M4
Gender	.04	.04	-.00	-.04
Age	.02	.01	.15	.14
Highest Education	.05	.03	.08	.05
Years of Work Experience	.15*	.12	-.00	-.11
Job Embeddedness	.73***	.45***	.59***	.07
Proactive Personality		.39***		
Work Engagement				.71***
Job Embeddedness * Proactive Personality		-.08*		
R^2	.63	.74	.44	.62
ΔR^2	.63***	.11***	.44***	.18***
F	92.60***	107.45***	41.10***	71.46***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Furthermore, Table results demonstrated a noteworthy interaction effect (M2, $\beta = -.08$, $p < .05$), thereby confirming H4. Further simple slope analysis showed that when proactive personality was high (mean+1 SD), the regression results were significant, the positive effect of job embeddedness on work engagement was demonstrated in Figure 2, with a more pronounced slope ($\beta = .55$, $p < .001$) when the mean was low (mean -1 SD). This was evidenced by a β of .396 and a p-value of less than .001.

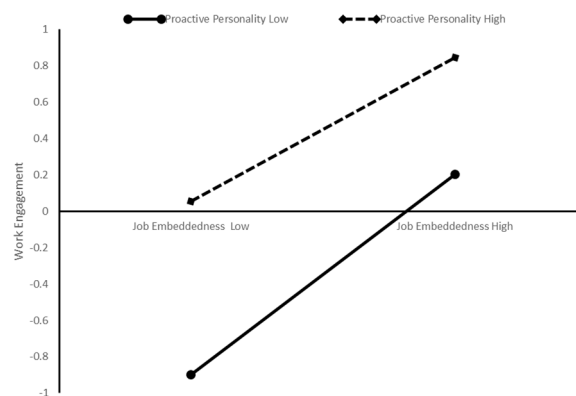


Figure 1 Simple slope plot

Finally, Model 7 was employed to evaluate the moderated mediation effect through PROCESS 3.1. Significant was the moderated mediation effect of proactive personality, as indicated by the results, with zero excluded from the 90% CI of effect (Index = -.055, SE=.030, 90% CI [-.105, -.006]); thus, H5 was supported.

4 Conclusions

The results of process analysis on the data from 274 full-time employees provide sufficient support for our propositions. That is, the positive effect of job embeddedness on employees' creativity was completely mediated by their work engagement; proactive personality negatively moderated this mediation effect. Specifically, this mediation effect will be higher when employees have a lower proactive personality.

Our research has several implications for the job embeddedness and creativity literature. First, exploring the mediating role of work engagement between job embeddedness and creativity, our research stands as the first of its kind. It provides a new potential mechanism for the positive effect of job embeddedness on creativity. Furthermore, our study includes proactive personality as the possible boundary conditions for this meditation process. The results of our study suggested that resources stemming from job embeddedness may be less significant for those with a highly proactive character, as they could acquire all kinds of resources during their job.

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