

Restraining Effect of Illegitimate Tasks on the Extra-Role Behaviors of High-tech Enterprise Employees: Analysis of a Moderated Mediation Model

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Abstract

Based on the job demands-resources model, this study investigates the restraining effect and boundary conditions of illegitimate tasks on the extra-role behaviors of high-tech enterprise employees, and aims to clarify the mediating role of emotional exhaustion and the moderating role of collectivism. Taking the employees and their supervisors of thirteen high-tech enterprises in Shanghai as the research object, a total of 287 three-stage vertical valid sample data were obtained after leader-subordinate matching. Result shows that, illegitimate tasks have a significant negative impact on the extra-role behaviors of high-tech enterprise employees; Emotional exhaustion plays a completely mediating role between illegitimate tasks and extra-role behaviors of high-tech enterprise employees; Collectivism reversely moderate the relationship between illegitimate tasks and emotional exhaustion. This study further proves the moderate mediation model, that is, collectivism negatively moderate the indirect influence of illegitimate tasks on the extra-role behaviors of high-tech enterprise employees through emotional exhaustion.

Keywords

Illegitimate Tasks; Emotional Exhaustion; Extra-role Behaviors; Collectivism; High-tech Enterprises.

1. Introduction

Talent is one of the important symbols to measure the comprehensive competitiveness of high-tech enterprises. Fully motivating the employees of high-tech enterprises is an effective way to improve individual performance and the innovation performance of high-tech enterprises, so that high-tech enterprises are in an advantageous position in the fierce market competition. With the progress of management practice, more and more managers begin to seek the value of employees beyond their own work, i.e., emphasize the stimulation of employees' extra-role behaviors, so as to seek further improvement of enterprise performance. However, in real-life work situations, managers may assign illegitimate tasks to employees in pursuit of extra-role behaviors that are beyond their professional scope and offensive to their professional identity, thereby undermining their sense of professional identity and self-identity. Existing studies have shown that employees can clearly distinguish between these two types of behaviors[1] and that illegitimate tasks can negatively affect employees' behavioral performance[2]. In addition, employees in high-tech enterprises are more individualized and liberal, so illegitimate tasks may have more serious negative effects on them. Thus, it is an indispensable topic in high-tech enterprise management research to investigate the negative effects of illegitimate tasks on extra-role behaviors.

2. Literature and Theoretical Framework

2.1. Illegitimate Tasks and Extra-role Behaviors

Illegitimate tasks refer to tasks that are beyond the scope of the individual's reasonably expected role and are offensive or threatening to his or her professional identity. The core features of illegitimate tasks include both exceeding the scope of the individual's subjective role and offending the individual's professional identity. The current academic community generally agrees that illegitimate tasks can be divided into two categories: unreasonable tasks and unnecessary tasks.

Extra-role behaviors are those that are spontaneously sought by employees, outside the scope of their professional role responsibilities, and are subjectively expected or perceived to benefit the organization[3]. Although there are different divisions in the current academic community, there is general agreement that extra-role behaviors are a key factor in further improving business performance. Most of the existing research has been devoted to exploring the factors that motivate extra-role behaviors, and little has been done to investigate the factors that restrain the generation of extra-role behaviors. However, for business management practice, only by giving full play to the role of motivators and reducing the role of inhibitors can companies maximize the motivation of extra-role behaviors, so research on inhibitors of extra-role behaviors is necessary and urgent, such as illegitimate tasks.

Both extra-role behaviors and illegitimate tasks emphasize employees' manifestation of values beyond their own work, but the former emphasizes autonomy, while the latter usually shows non-spontaneity or even compulsion. Moreover, illegitimate tasks offend the individual's professional identity, and this offense can demotivate employees, negatively affect task performance[4], and even affect individual work behavior, inducing negative behaviors such as counterproductive work behavior and workplace deviant behavior[5]. In addition, employees in high-tech enterprises have more unique personalities and are more eager to be respected and recognized at work. It is reasonable to assume that the negative effects of illegitimate tasks assigned by superiors will be stronger for employees in high-tech enterprises, and it can be assumed that illegitimate tasks will restrain the generation of extra-role behaviors of employees in high-tech enterprises. Therefore, we hypothesized:

H1: Illegitimate tasks have a negative impact on the extra-role behaviors of employees in high-tech enterprises.

2.2. Emotional Exhaustion

Emotional exhaustion is a state in which an individual's emotional resources are depleted but cannot be replenished in a timely and sufficient manner[6]. According to the core viewpoint of Job Demands-resources Model(Hereinafter referred to as JD-R model),illegitimate tasks as an additional, unnecessary and unreasonable work requirements, requiring a high level of employee work commitment, and the offense of illegitimate tasks to the dignity and professional identity of the individual will also discourage the employee's work enthusiasm and further damage the individual's emotional resources. Therefore, illegitimate tasks can lead to a high demand-low resource imbalance and generate negative emotions such as fatigue and boredom[7], which will continue to lead to emotional exhaustion[8].

Existing studies have shown that when employees are in a state of emotional exhaustion, they will reduce their work concentration, engagement, and emotional involvement[9], and even adopt behaviors such as negativity, production deviation, and reduced work performance to alleviate work demands and resource imbalance. Bringing into the present study scenario, extra-role behaviors are spontaneously generated work behaviors of employees, which require a high degree of autonomy and work engagement[10]. And a series of negative work behaviors

performed by employees to protect and restore their emotional resources after they fall into the emotionally depleted state will obviously inhibit extra-role behaviors.

Based on the above discussion, it is easy to find that emotional exhaustion can be treated as a bridge between illegitimate tasks and extra-role behaviors of employees in high-tech enterprises. Therefore, we infer that emotional exhaustion plays an important mediating role between illegitimate tasks and extra-role behaviors, and we hypothesized:

H2: Illegitimate tasks have a positive effect on emotional exhaustion.

H3: Emotional exhaustion plays a mediating role between illegitimate tasks and employee extra-role behaviors; Illegitimate tasks can lead to emotional exhaustion and inhibit employee extra-role behaviors.

2.3. Collectivism

Most of the current academic research on illegitimate tasks boundary conditions is based on Western cultural contexts, and there is an extreme lack of relevant research based on Chinese cultural contexts. China is one of the typical collectivism countries in the world[11], and there are many previous studies focusing on the individual-level collectivism of Chinese people. In this context, collectivism becomes an important breakthrough to study the impact of illegitimate tasks in the context of different cultural value orientations of power change.

Collectivism emphasizes the importance of collective interests and focuses on the collective consciousness of individuals, which is manifested in the sense of collective identity, belonging, and honor[12], and is a valid measure of the degree of individual concern for others and the collective[13]. Faced with the assigned illegitimate tasks, employees with high collectivism see themselves as part of the collective, all in the interest of the organization and the collective, and subjectively submit to the arrangements of the leaders and the organization[14]. This will reduce the generation of their negative emotions such as dissatisfaction, anger, and irritability, and weaken employees' level of emotional exhaustion, thus have a positive impact on extra-role behaviors. In addition, employees with high collectivism will prioritize the accomplishment of collective goals and consider the extra work commitment for this purpose as a part of their job, thus showing more extra-role behaviors at work that are conducive to achieving organizational goals[15]. Based on the above analysis, we hypothesized:

H4: Collectivism plays a negative role in regulating the relationship between illegitimate tasks and emotional exhaustion.

H5: Collectivism negatively regulates the indirect influence of illegitimate tasks on employee extra-role behaviors through emotional exhaustion.

3. Research Design

The sample data were collected from 13 high-tech companies in Shanghai, and the study was conducted with the cooperation of the human resource departments of these 13 companies, including employees and their managers. Before the study began, we provided participants with a detailed introduction of the specific content of the question items and the purpose of the study, clearly stating that the data would not be disclosed to their leaders and outsiders, ensuring the confidentiality of the study and emphasizing the importance of truthful responses to reduce the influence of subjective emotions on the sample results. To reduce common method biases, we conducted data collection in three phases, with 45-day intervals between each phase.

After checking, the final questionnaires obtained successfully passed the trap questions and there were no consecutive responses with the same option and regular responses. After comparison, the illegitimate tasks measured in the second and third stages did not differ significantly from those measured in the first stage, so the results of the first stage were used.

Similarly, the second stage data were used for emotional exhaustion, and the first and third stage data were used for collectivism and extra-role behaviors, respectively.

Table 1. Measurement model

Measured variables	Measurement Items	References
Illegitimate tasks	Do you have work tasks to take care of, which you believe should be done by someone else?	Semmer (2010)
, which you believe are going too far, which should not be expected from you?	
, which you believe put you into an awkward position?	
, which you believe are unfair that you have to deal with them?	
, which keep you wondering if they have to be done at all?	
, which keep you wondering if they make sense at all?	
, which keep you wondering if they would not exist(or could be done with less effort),if it were organized differently or some other people made less mistakes?	
Collectivism, which keep you wondering if they just exist because some people simply demand it this way?	Van Hooft (2009)
	To me, pleasure is spending time with others.	
	I make an effort to avoid disagreements with my group members.	
	How I behave depends on who I am with, where I am, or both.	
	I would help, within my means, if a relative were in financial difficulty.	
	I would rather do a task in a group than do one alone.	
	Before making a decision,I always consult with others.	
To understand who I am,you must see me with members of my group.		
Emotional exhaustion	I feel used up at the end of the workday.	Maslach (1981)
	I feel fatigued when I get up in the morning and have to face another day on the job.	
	Working with people all day puts too much stress on me.	
	I feel emotionally drained from my work.	
Extra-role Behaviors	I will help others who have heavy work loads.	Zhiming Wu (2007)
	I am willing to assist new colleagues to adjust to the work.	
	I am willing to help colleagues solve work-related problems.	
	I will proactively raise suggestions to improve the unit's working procedure.	
	I would proactively make constructive suggestions that can improve the operation of the company.	

Table 2. Three stages of data collection

Stage	Research Object	Collection Content	Recovery Quantity	Recovery rate
1	Employee	Demographic variables	401 (458)	87.55% (100%)
		Illegitimate tasks		
		Collectivism		
2	Employee	Illegitimate tasks	346 (401)	86.28% (100%)
		Emotional exhaustion		
3	Employee	Illegitimate tasks	298 (346)	86.13% (100%)
		Emotional exhaustion		
	Manager	Extra-role Behaviors of Employees	75 (90)	83.33% (100%)

Table 3. Descriptive statistical analysis of the samples

Demographic variables		Frequency	Percentage(%)	Cumulative percentage(%)
Gender	Male (employee)	112	39.02	39.02
	Female (employee)	175	60.98	100
	Male (maneger)	18	25	25
	Female (maneger)	54	75	100
Education level	High School and below	10	3.49	3.49
	Junior college	39	13.59	17.08
	Undergraduate college	211	73.52	90.6
	Master and above	27	9.4	100
Age	Under the age of 25	80	27.88	27.88
	25~35	159	55.4	83.28
	35~45	37	12.89	96.17
	Above 45	11	3.83	100

4. Data Analysis

4.1. Confirmatory Factor Analysis

Table 4. Model Fit Summary

Model	χ^2	df	χ^2/df	$\Delta\chi(\Delta df)$	CFI	TLI	RMSEA	SRMR
Four-factor model A,B,C,D	418.813	224	1.870		0.918	0.907	0.055	0.057
Three-factor model A+B,C,D	564.843	227	2.488	146.030(3)	0.857	0.841	0.072	0.076
Two-factor model A+B+C,D	886.246	229	3.870	467.433(5)	0.722	0.693	0.100	0.097
Single-factor model A+B+C+D	946.494	230	4.115	527.681(6)	0.697	0.666	0.104	0.097

Note: N=287, A represents Illegitimate tasks, B represents emotional exhaustion, C represents extra-role behaviors, D represents collectivism, and "+" represents two factors combined into one.

Table 4 shows the results of the confirmatory factor analysis of Mplus8.3 for this study. From the table, it can be obtained that the four-factor model has a good fit that meets the academic recommendation ($\Delta\chi^2_s > 146.000$, $\Delta df_s > 3$) and significantly outperforms the fit indices of the other three models. This indicates good discriminant validity for the four variables measured in this study: illegitimate tasks, emotional exhaustion, extra-role behaviors, and collectivism.

4.2. Common Method Bias Test

A confirmatory factor analysis model (M1) was constructed using Amos 26.0 for the four variables in this study, and a comparison model (M2) with method factors was constructed by adding common method factors to M1. Comparing M1 and M2 gives: $\Delta\chi^2 / df = 0.494$, $\Delta RMSEA = 0.016$, $\Delta SRMR = 0.027$, $\Delta CFI = 0.060$, $\Delta TLI = 0.059$, $\Delta RFI = 0.053$, $\Delta IFI = 0.059$, $\Delta NFI = 0.062$, and $\Delta NFI = 0.062$. The analysis results show that the changes in RMSEA and SRMR do not exceed 0.05, and the changes in all other fit indices do not exceed 0.1, indicating that the original model is not significantly improved by adding the common method factor, and this There is no serious common method bias problem in this study.

4.3. Descriptive Statistical Analysis and Correlation Analysis

Table 5 shows that: illegitimate tasks were significantly positively related to emotional exhaustion, and significantly negatively related to extra-role behaviors. Emotional exhaustion was significantly negatively related to extra-role behaviors. Collectivism was significantly negatively related to emotional exhaustion. This set the stage for the tests of Hypothesis 1 to 5.

Table 5. Means, standard deviations and correlation coefficients

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
Gender	1.589	0.493	1						
Age	1.927	0.747	-0.092	1					
Education level	2.889	0.598	-0.132*	-0.128*	1				
Illegitimate tasks	2.954	0.797	-0.041	-0.036	0.069	1			
Collectivism	3.842	0.557	-0.088	0.024	0.002	-0.256**	1		
Emotional exhaustion	2.596	0.805	0.051	-0.116*	-0.005	0.560**	-0.502**	1	
Extra-role behaviors	3.817	0.672	-0.069	0.118*	0.026	-0.329**	0.710**	-0.544**	1

Note: N=287, * stands for $p < 0.05$, ** stands for $p < 0.01$.

4.4. Hypothesis Testing

In this study, gender, age, and education level were used as control variables, and Hypothesis testing was performed using hierarchical regression, and the test results are shown in Table 6.

Table 6. Hierarchical Regression

Variable	Emotional exhaustion				Extra-role behaviors		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Gender	0.039	0.059	0.022	0.005	-0.054	-0.066	-0.036
Age	-0.115	-0.096	-0.094	-0.103	0.118	0.107	0.058
Education level	-0.014	-0.048	-0.045	-0.055	0.034	0.054	0.029
Illegitimate tasks		0.562***	0.463***	0.514***		-0.332***	-0.046
Collectivism			-0.379***	-0.386***			
Emotional exhaustion							-0.509***
Illegitimate tasks×Collectivism				-0.112*			
ΔR^2	0.015	0.329***	0.462***	0.471***	0.019	0.128***	0.302***
<i>F</i>	1.472	34.565***	48.253***	41.588***	1.779	10.347***	24.31***

Note: N=287, * stands for $p < 0.05$, *** stands for $p < 0.001$.

From model 6, it is clear that the illegitimate tasks has a significant negative effect on extra-role behaviors ($\beta = -0.332$, $p < 0.001$), and hypothesis 1 is supported.

Model 2 showed a significant positive effect of the illegitimate tasks on emotional exhaustion ($\beta = 0.562$, $p < 0.001$), and hypothesis 2 was tested.

Model 7 showed that emotional exhaustion had a significant negative effect on extra-role behaviors ($\beta = -0.509$, $p < 0.001$), and the effect of illegitimate tasks on extra-role behaviors changed from significant ($\beta = -0.332$, $p < 0.001$) to insignificant ($\beta = -0.046$, $p = 0.449$), indicating that emotional exhaustion played a fully mediating role between illegitimate tasks and extra-role behaviors. Therefore, hypothesis 3 was proved.

From Model 4, the interaction term of illegitimate tasks and collectivism had a significant negative effect on emotional exhaustion ($\beta = -0.112$, $p < 0.05$), therefore hypothesis 4 was proved.

The results of the moderated mediation model were tested using PROCESS, controlling for gender, age, and educational level, and are shown in Tables 7. The results indicate that after putting collectivism into the model, the product term of illegitimate tasks and collectivism has a significant effect on both emotional exhaustion and extra-role behaviors (emotional exhaustion: $B=-0.177$, $t=-2.026$, $p<0.05$; extra-role behaviors: $B=-0.248$, $t=-3.361$, $p<0.001$), and the product term of emotional exhaustion and collectivism has a significant effect on extra-role behaviors ($B=0.215$, $t=3.015$, $p<0.01$). Consistent with Mode 59 of the model in the PROCESS tool invented by Hayes. So, hypothesis 5 was supported.

Table 7. Moderated Mediation Model Testing

Variable	Emotional exhaustion			Extra-role behaviors		
	B	se	t	B	se	t
constant	-0.020	0.037	-0.550	3.838	0.030	129.152***
Illegitimate tasks	0.513	0.051	10.013***	0.004	0.044	0.095
Collectivism	-0.562	0.066	-8.581***	0.688	0.055	12.574***
Emotional exhaustion				-0.207	0.044	-4.655***
Illegitimate tasks×Collectivism	-0.177	0.088	-2.026*	-0.248	0.074	-3.361***
Emotional exhaustion×Collectivism				0.215	0.071	3.015**
R	0.677			0.758		
R ²	0.459			0.574		
F	80.001			75.767		

Note: N=287, * stands for $p<0.05$, ** stands for $p<0.01$, *** stands for $p<0.001$.

5. Conclusion

Theoretically, the labor market is free and equal, and employees of high-tech enterprises can leave in the dust when they face the bad working experience brought by illegitimate tasks. However, in real work and social situations, many employees will choose to silently and passively resist to relieve their dissatisfaction, which is very detrimental to employees' work happiness, sense of belonging and the long-term development of high-tech enterprises. In the fierce market competition, there are many unpredictable potential threats. Improving employees' work motivation, happiness, sense of belonging and cohesion, and stimulating employees' extra-role behaviors can all effectively enhance the organization's anti-risk capability and protect the development of high-tech enterprises. Therefore, the management of high-tech enterprises must pay attention to the negative impact of illegitimate tasks on employees' work motivation, and take corresponding measures to identify and reduce illegitimate tasks as much as possible.

First of all, the prevalence of illegitimate tasks in the organization is closely related to the inadequate management system and the lack of openness and transparency. High-tech enterprises can start from improving and sounding the existing management system, and strive to establish an organizational structure with clear division of departments and clear division of job authority and responsibility. Thus optimize the staffing, effectively reduce the phenomenon of shirking and tug-of-war between departments and positions, and facilitate the reasonable assignment of work tasks. In addition, it is also necessary to respect the personalized demands of employees and establish a reasonable feedback mechanism for employee complaints. When employees face illegitimate tasks imposed by colleagues and line leaders, they can have a door for complaints and feedback.

Second, high-tech enterprises have a relatively large proportion of young and middle-aged employees, and the traditional management style is no longer very applicable. In this regard,

enterprises should improve the management level in a targeted manner according to the characteristics of contemporary young people, so that they can coordinate and assign work more rationally and guide their organizational leadership through a more scientific and rational, flexible and humane way. In addition, it is also necessary to strengthen managers' definition of work and non-work, to better distinguish between work and non-work issues, and to avoid the use of power for personal gain and false public service, so as to effectively reduce the generation of illegitimate tasks.

Finally, we suggest that managers should focus on employees with low collectivism, who are more sensitive to the perception of illegitimate tasks and more vulnerable to the negative impact of illegitimate tasks, and can listen to their opinions and ideas more actively to help managers understand the existence of illegitimate tasks in the company, thus reducing the generation of illegitimate tasks.

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