# Work Motivation and Performance Appraisal: The Chinese College Instructors Perceived Procedural Fairness of Moderating Effect

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This article aimed to clarify the mechanism of performance appraisal on college instructors' teaching and research performance by constructing a moderated mediation model. By surveying 407 Chinese public college instructors on the performance appraisal model, work motivation, job (teaching and research) performance, and procedural fairness using a questionnaire, the research performed descriptive and regression analyses. It is the first time to explore the impact of different performance appraisal on college instructors' teaching and research performance through empirical methods, which enriches the theoretical literature of performance appraisal, and has guiding role for college to reasonably determine instructors' performance appraisal model, indicators and methods. The results showed that: (1) Performance appraisal and work motivation positively affect college instructors' teaching and research performance. (2) Intrinsic motivation plays a mediating role in the relationship between developmental assessment and job performance appraisal on instructors' job performance and the mediating effect of work motivation on the relationship between them are moderated by the perceived fairness of the performance appraisal procedure. These findings help understand the relationship and mechanism between faculty performance appraisal and job performance, enlightening the rational use of performance appraisal in higher education.

*Keywords:* **c**ollege instructors' performance appraisal, work motivation, job performance, perceived procedural fairness, mediating and moderating effect

# **INTRODUCTION**

With the continuous advancement of management reform, most public colleges have implemented performance appraisals. However, due to insufficient understanding of performance appraisal and deviation

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in practice, performance appraisal's role is not entirely played (Chen & Shan, 2010). For example, many colleges emphasize evaluative assessment and do not use developmental performance enough (Zheng, Chen, & Yang, 2021). Strict performance appraisal leads to college instructors' crazy publication of papers and textbooks regardless of the quality.

Performance appraisal is a "double-edged sword" that can motivate instructors to work and make efforts to achieve their goals. However, if improperly used, excessively linking performance appraisal with employees' material interests may also lead to short-term behaviors (Zhao, Liao, & Wen 2013). Excessive pressure may also lead to instructors' workplace anxiety (Ye, Zhang, & Yang, 2021), cheating (Li & Wang, 2020), counterproductive behavior (Zhao & Yu, 2009), and even violation of academic ethics, laws, and regulations. Regarding the mechanism of environmental variables on job performance, many studies have proven intrinsic motivation to be a key mediator variable (Cerasoli, Nicklin, & Ford, 2014), and reward can also significantly affect job performance (Liu, 2018). However, as an external situation factor, performance appraisal affecting college instructors' work motivation, literature is not rich enough. Performance appraisal's specific influence and mechanism on their teaching and research job performance are unclear.

Expectation theory holds that the force driving people to pursue and achieve goals and meet their needs is the product of the yearning for goals and the expectation of achieving them. If one of these forces is zero, the motive force is zero (Yuan & Xi, 2000). For college instructors, if their efforts are likely to lead to high performance, high performance is expected to lead to positive and attractive rewards, which becomes the best motivation for a person and the condition for realizing organizational goals (Liu, 2018). In performance appraisal, if the appraisal results are not used correctly, for example, there is no material, or spiritual reward after the assessment or the compensation is unattractive to employees, the role of motivation will fail. At the same time, if the target is set too high and unreasonable, the fewer hope employees can achieve the target, the lower their expectations will be, and the guiding role of the target will not be prominent.

In summary, performance appraisal will impact employees' psychology and directly affect their income and career development, which will impact employees' work motivation and thus affect their job performance. The perceived procedural fairness of performance appraisal reflects the attitude and ability of the organization in the performance appraisal work. It reflects the employees' cognition of the appraisal, which may lead to the behavioral reaction of the employees. To clarify the impact of performance appraisal on college instructors' teaching and research performance and its mechanism, and to explore the moderating effect of perceived appraisal fairness on this relationship, this research integrates the perception of procedural fairness of performance appraisal and builds the relationship framework among several variables of the performance appraisal model, work motivation, and job performance, hoping to answer the following research questions.

- 1. What is the impact of performance appraisal on instructors' job performance and motivation?
- 2. In college performance appraisal, what type of performance appraisal can best improve instructors' teaching and research performance, promote work motivation, and support the college's strategic objectives?
- 3. What is the relationship mechanism between performance appraisal and college instructors' job performance?

# LITERATURE REVIEW AND RESEARCH HYPOTHESIS

#### The Relationship Between Performance Appraisal and Job Performance

Performance appraisal evaluates the work and performance objectives of the organization or its members and summarizes the work in the previous period. Since Meyer, Kay, & French (1965) proposed the "dual nature" of performance appraisal, the literature in the field has classified it as developmental and evaluative performance appraisals. The purpose of developmental assessment is to discover employees' deficiencies in knowledge and skills and take the assessment results and information as the basis for improving their future performance. The evaluative review aims to check the task completion of employees, which is rigid and mandatory, and take the assessment results as the basis for employees' reward and punishment or promotion and elimination (Liao, Wen, & Wang, 2010). Many studies have shown that

performance appraisal can motivate employees' work enthusiasm and negatively affect employees' behaviors under certain conditions. Employees' perception of reasonable performance appraisal can promote employees' organizational citizenship behavior and improve job performance.

Existing studies have found that employees' perception of developmental performance appraisal can promote employees' fairness sense (Ostroff, 1993). Higher developmental performance appraisal is more conducive to improving task performance and fairness perception and significantly impacts organizational citizenship behavior (Wen & Liao, 2010). Evaluative performance appraisal stimulates employees' enthusiasm (Lu, Yue, Han, & Chen, 2018) and leads employees to pursue short-term interests (Zhang, 2012). In contrast, it may arouse employees' negative emotions, increasing their pressure and counterproductive behaviors (Sun, 2017). In addition, it can also lead to mutual attacks and vicious competition among employees, which is not conducive to team cooperation (Wu & Chen, 2009). It may even lead to workplace bias (Zhao, 2012) and anti-ethical behavior (Woodhams, Lupton, Perkins, & Cowling, 2015), damaging its long-term interests.

Goal setting and feedback are essential steps in performance appraisal (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to goal-setting theory, goal setting has a guiding effect on job performance. Although the relationship between goal setting and job performance needs to be adjusted by various factors (Locke & Latham, 2002), its effect is generally favorable. Evaluative performance appraisal is often related to employees' income, rewards, and promotion. Developmental performance appraisal usually involves helping employees improve their knowledge and skills, making them feel respected, valued, and invested in their development in the organization. According to social exchange theory, employees will thus have a "reward" behavior (Eisenberger, Fasolo, & Davislamastro, 1990) and make more efforts to achieve the goal, thus improving their job performance. Therefore, performance appraisal affects employee behavior and job performance. However, suppose the performance appraisal result is excessively linked with employees' economic interests and promotion. It may also lead to employees' tendency to engage in jobs that can result in short-term benefits and do not require too much innovation (Zhao et al., 2013). Therefore, evaluative performance appraisal can improve instructors' extrinsic motivation and has a more negligible effect on research work than teaching because research requires more innovation. Based on the above understanding and research results, this research makes the following assumptions:

H1: Developmental performance appraisal positively impacts teaching performance.

H2: Development performance appraisal positively impacts research performance.

H3: Evaluative performance appraisal positively impacts teaching performance.

H4: Evaluative performance appraisal positively impacts research performance.

# The Relationship Between Performance Appraisal and Work Motivation

Motivation is a desire to do something to satisfy a specific need. The need is a physical or psychological absence that makes an outcome attractive (Robbins, 2004). Work motivation is an individual's desire to achieve organizational goals through individual efforts under certain conditions. It is the condition or energy to promote self-guidance or guide employees to achieve organizational goals. The structure of work motivation mainly includes a two-dimensional and multidimensional model. The two-dimensional structure model has a more significant influence (Amabile, Hill, Hennessey, & Tighe, 1994). Ambrose & Kulik (1999) divided work motivation into intrinsic and extrinsic. Intrinsic motivation refers to the desire of individuals to work because of the work itself, such as the work being challenging, engaging, and attractive. Extrinsic motivation is the desire to work because of something other than the work itself, such as the pay, the evaluation, and other factors related to the outcome. According to cognitive evaluation theory, intrinsic motivation is generated when individuals have internal psychological needs. Extrinsic motivation is caused by satisfying external needs (Zhao, Zhang, Liu, & Ding, 2016). Developmental performance appraisal focuses on staff training and development and can meet the intrinsic needs of instructors to improve

themselves. Evaluative performance appraisal focuses on the reward and promotion of employees and can meet the material needs of instructors. Therefore, developmental performance appraisal can improve employees' intrinsic motivation (Kuvaas, 2007), while an evaluative appraisal is related to employees' extrinsic motivation (Zhang et al., 2021). Based on the above understanding and research results, this research proposed the following:

H5: Developmental performance appraisal positively affects intrinsic motivation.

*H6:* Evaluative performance appraisal positively affects extrinsic motivation.

# The Relationship Between Work Motivation and Job Performance

Work motivation is an important variable affecting work behavior (Zhang et al., 2021). Existing studies have found that work motivation relates to employees' job performance and work pressure (Fernet, Gagne, & Austin, 2010; Fernet, Guay, Senecal, & Austin, 2012). Extrinsic motivation can also affect job performance, especially for simple tasks. Cerasoli, Nicklin, & Ford (2014) proved that intrinsic motivation significantly affects performance quality, while reward significantly affects performance quantity. Knowledge workers' work is complex, and their intrinsic motivation and interest will influence their work enthusiasm in work. They work hard and enhance their emotional commitment to the organization due to the expectation of performance quality because external control will lead to an individual cognitive shift. Also, it will strengthen the extrinsic motivation and weaken the inherent motivation, resulting in a high "hidden incentive cost" to compensate for the loss of intrinsic motivation (Weibel, 2010). Based on the above understanding and research results, this research proposed the following:

H7: College instructors' intrinsic motivation positively impacts teaching performance.

H8: College instructors' intrinsic motivation positively impacts research performance.

H9: College instructors' extrinsic motivation positively impacts teaching performance.

# The Mediating Role of Work Motivation in Performance Appraisal and Job Performance

Work motivation is a crucial variable between the external environment and work behavior. According to the job demand-resource model, rich work resources can make employees feel more satisfied (Schaufeli & Bakker, 2004), more engaged in work, and thus obtain better performance. College instructors are knowledgeable employees who pursue autonomy and independence. They have a strong desire for achievement and a sense of self-worth and attach importance to intrinsic motivation (Cheng & Guo, 2015). College instructors are also society members. Developmental performance appraisal can meet these needs. Merit pay is an integral part of their income. It is closely related to the appraisal assessment, so instructors will inevitably work hard to achieve better performance and thus obtain higher performance pay. Zhang et al.'s (2021) study show that intrinsic motivation plays a mediating role between developmental performance appraisal and instructors' innovative behavior, while extrinsic motivation plays a mediating role between developmental performance appraisal and instructors innovative behavior, while extrinsic motivation plays a mediating role between developmental performance appraisal and instructors innovative behavior, while extrinsic motivation plays a mediating role between developmental performance appraisal and instructors innovative behavior, while extrinsic motivation plays a mediating role between evaluative performance appraisal and instructors' progressive innovation behavior. Based on the above understanding and research results, this research proposed the following:

H10: Intrinsic motivation mediates the relationship between developmental appraisal and teaching performance.

H11: Intrinsic motivation mediates the relationship between developmental appraisal and research performance.

*H12:* Extrinsic motivation mediates the relationship between evaluative appraisal and teaching performance.

### The Moderating Effect of Perceived Fairness in the Process of Performance Appraisal

Perceived fairness of performance appraisal refers to the degree of fairness individuals perceive in performance appraisal. It is the application and embodiment of perceived organizational justice in specific situations of performance appraisal (Greenberg, 1986), including procedural justice, interactive justice, and distributive justice (Thurston & McNall, 2010; Lin & Liu, 2018). Procedural justice is the essential dimension in them.

Appraisal justice is related to employees' job responsibilities and emotions, including appraisal satisfaction, job engagement, job performance, and counterproductive behavior (Shrivastava & Purang, 2013). According to responsibility theory, responsibility sense is an explicit or implicit belief that a person expects to distinguish himself from others (Scott & Lyman, 1968). When a person is endowed with a sense of responsibility, they will have corresponding behavioral motivation. Performance goal setting is to support work responsibility, while assessment will distinguish employees from others, which will make employees have a greater sense of responsibility. If performance appraisal is fair, individuals will have a stronger sense of responsibility and higher job performance (Erdogan, 2002). Existing studies show that employees' emotion correlates with employees' job involvement (Gan & Cheng, 2021; Guo, Qiu, & Gan, 2022) and risk-taking behaviour (Gan, Zhang & Quan, 2021). Many scholars have found that employees' perception of fairness in performance appraisal positively impacts the performance appraisal effect (Yan & Wang, 2020). Gupta & Kumar (2013) found that fairness perception is directly proportional to job involvement and inversely proportional to job burnout. Goksoy & Alayoglu (2013) found that distributive justice and information justice positively correlate with employees' job engagement. Lin (2017) proves that appraisal justice impacts employees' organizational engagement and task performance. Lin & Liu (2018) found that fairness in performance evaluation significantly positively impacts employee innovation performance. Lee (2019) confirmed that fairness perception in performance appraisal positively impacts the intrinsic motivation of employees' efforts. Since the perception of appraisal justice relates to performance appraisal, work motivation, and performance, while procedural justice is what employees feel most, this research believes it will moderate the relationship among these several variables. Based on the above understanding and research results, this research proposed the following:

**H13:** Perceived procedural fairness moderates the relationship between developmental performance appraisal and intrinsic motivation.

*H14:* Perceived procedural fairness moderates the relationship between developmental performance appraisal and teaching performance.

*H15:* Perceived procedural fairness moderates the relationship between developmental performance appraisal and research performance.

*H16:* Perceived procedural fairness moderates the relationship between evaluative performance appraisal and extrinsic motivation.

*H17:* Perceived procedural fairness moderates the relationship between evaluative performance appraisal and teaching performance.

*H18:* Perceived procedural fairness moderates the relationship between evaluative performance appraisal and research performance.

Figure 1 presents the research model. In this model, DA is a developmental performance appraisal. EA is an evaluative performance appraisal, and IM is intrinsic motivation. EM stands for extrinsic motivation,

and PFP is the perceived procedural fairness of performance appraisal. JP is job performance including teaching performance (TP) and research performance (RP).





# **METHODOLOGY**

#### Sample

In this research, the population is full-time teachers in public undergraduate colleges in Sichuan Province, China. By referring to the official websites of relevant college and the published data at the beginning of 2018 (Education Department, 2018). There are 47,086 full-time teachers in public undergraduate colleges in Sichuan Province. According to the sample size calculation by Krejcie & Morgan (1970), the required sample size is 384. Stratified sampling is adopted. Chen & Shen (2018) indicated that online surveys are not significantly different from paper-based tests in terms of respondents' psychometric characteristics and social approval. They are more convenient and conducive to accessing samples with diverse backgrounds at a lower cost and dramatically reduce error in data input (Chen & Shen, 2018). This research distributed questionnaires through an online platform (Wenjuanxing) by stratified sampling. We sent the website links to the colleges administrators, and requested them sent it to instructors. A total of 410/600 questionnaires were recalled. There were 407 samples after excluding invalid questionnaires. Among these samples, 216 were male, accounting for 53.07%. 191 were females, accounting for 46.93%. See Table 1 for details.

Variable	Items	Frequency	Percentage
Condon	Male	216	53.07
Gender	Female	191	46.93
	Less than 34 years old	111	27.27
<b>A</b> = -	35 and 44 years old	173	42.51
Age	45 to 54 years old	90	22.11
	Over 55 years old	33	8.11
	Bachelor and below	61	14.99
Education	Master	208	51.11
Dackground	Doctor and above	138	33.91
	Less than 5 years	102	25.06
	6-10 years	74	18.18
Job Tenure	11 to 15 years	65	15.97
	16-20 years	66	16.22
	21 years or above	100	24.57
	Teaching Assistants and below	66	16.22
D	Lecturer	169	41.52
Professional Little	Associate professor	124	30.47
	Professor	48	11.79

# TABLE 1SAMPLE FREQUENCY

# Measures

This research is to measure variables on Likert 7 options scales. Maturity scales were used to measure variables to ensure the validity of the measurement. We adopt the scale modified by Wen & Liao (2010) for performance appraisal based on the scale developed by Cleveland, Murphy, & Williams (1989). The intrinsic motivation scale was created by Grant & Berry (2011). The extrinsic motivation scale was developed by Grant (2008). The procedural justice of the performance appraisal scale developed by Zhang (2014) was further improved from the scale developed by Luo (2007). Job performance is measured by the scale developed by Hu & Mo (2005), specifically for college instructors' job performance. All scales are included in Appendix A. According to research needs, some scales only adopt part of the dimensions. For example, two dimensions of teaching performance and research performance were adopted from instructor's job performance scale. Perceived procedural fairness dimension was adopted from perceived fairness of performance appraisal scale.

# RESULTS

# **Common Method Biases Test**

This research adopts the Harman homologous deviation test on anonymous filling to test common method biases. The variance contribution of the first principal component was 35.63%, which was lower than the standard of 40%, indicating no significant common method biases in the questionnaire data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

### **Reliability and Validity**

This research adopts factor analysis for confirmatory factor analysis. Table 2 shows the results. The Kaiser-Meyer-Olkin (KMO) value equals 0.912, indicating that the data were suitable for factor analysis. After questionnaire analysis, this research deleted the item of EM4, which was different from the default constructs. Seven factors were verified. Their names, observed variables, eigenvalues, and variance interpretations are shown in table 2. The cumulative explanatory variance of these seven factors was 73.613%. According to the standard of (Hair, Anderson, Tatham, & Black, 2010), the cumulative explanatory variance of all factors should be above 60%, and the results of this research meet the standard.

Factor											
Variable	RP	DA	ТР	IM	PFP	EA	EM				
RP4	0.861										
RP3	0.85										
RP6	0.826										
RP5	0.789										
RP2	0.723										
RP1	0.716										
DA3		0.809									
DA4		0.775									
DA1		0.768									
DA2		0.724									
DA5		0.706									
TP3			0.862								
TP2			0.842								
TP4			0.835								
TP5			0.713								
TP1			0.69								
IM2				0.848							
IM4				0.842							
IM3				0.817							
IM1				0.808							
PFP2					0.779						
PFP1					0.742						
PFP3					0.71						
PFP5					0.707						
PFP4					0.614						
EA1						0.827					
EA2						0.778					
EA3						0.622					
EA4						0.56					
EM2							0.87				
EM1							0.849				
EM3							0.813				
Eigenvalue (total)	4.53	3.926	3.813	3.38	3.235	2.357	2.315				
Factor explanatory variance	14.156	12.269	11.916	10.561	10.11	7.367	7.233				
Cumulative explanatory variance	14.156	26.425	38.341	48.902	59.013	66.38	73.613				

TABLE 2FACTOR ANALYSIS

KMO=0.912

This research tested the questionnaire reliability by Cronbach coefficient detection. For validation purposes, a reliability coefficient of 0.6 is considered acceptable, 0.7 is deemed to be good, and 0.8-0.9 is ideal. Table 3 shows the results. According to the analysis results, the reliability coefficients of all dimensions in this research are more significant than 0.8, which is within the ideal range. The correlation between each item is more significant than 0.3. The correlation between the revised item and the total is more significant than 0.5. They all reached the standard value, indicating that the measurement scales in this research have good reliability.

	Correlat	ion matri	x betwee	n items			The correlation coefficient between the revised item and the total	Cronbach's α
	DA1	DA2	DA3	DA4	DA5			
DA1	1						0.766	
DA2	0.59	1					0.656	
DA3	0.741	0.603	1				0.809	0.898
DA4	0.692	0.554	0.728	1			0.792	
DA5	0.582	0.543	0.652	0.703	1		0.721	
	EA1	EA2	EA3	EA4				
EA1	1						0.617	
EA2	0.613	1					0.669	0.811
EA3	0.518	0.571	1				0.678	
EA4	0.405	0.454	0.563	1			0.559	
	TP1	TP2	TP3	TP4	TP5			
TP1	1						0.635	
TP2	0.572	1					0.778	0.905
TP3	0.572	0.794	1				0.846	0.705
TP4	0.578	0.704	0.802	1			0.828	
TP5	0.531	0.598	0.688	0.724	1		0.731	
	RP1	RP2	RP3	RP4	RP5	RP6		
RP1	1						0.733	
RP2	0.705	1					0.723	
RP3	0.683	0.698	1				0.834	0.923
RP4	0.622	0.607	0.814	1			0.833	
RP5	0.559	0.557	0.656	0.717	1		0.758	
RP6	0.603	0.563	0.678	0.756	0.753	1	0.787	
	IM1	IM2	IM3	IM4				
IM1	1						0.799	
IM2	0.811	1					0.86	0.922
IM3	0.673	0.769	1				0.804	

# TABLE 3SCALE RELIABILITY ANALYSIS

IM4	0.72	0.751	0.767	1	0.818	
	EM1	EM2	EM3			
EM1	1				0.754	
EM2	0.826	1			0.787	0.832
EM3	0.509	0.546	1		0.552	
	PFP1	PFP2	PFP3	PFP4 PFP5		
PFP1	1				0.747	
PFP2	0.671	1			0.673	
PFP3	0.663	0.595	1		0.743	0.871
PFP4	0.556	0.443	0.636	1	0.668	
PFP5	0.542	0.522	0.534	0.586 1	0.653	

In this research, the average variance extraction (AVE) volume was compared with the correlation coefficient to test the discriminant validity. Convergence validity requires that: factor loading be no less than 0.7, square multiple correlations no less than 0.5, composite reliability (CR) is not less than 0.7, and average variance extraction (AVE) volume is more significant than 0.5 (Hair et al., 2010). In this research, the average variance extraction (AVE) volume was compared with the correlation coefficient to test the discriminant validity. If the square root of the average variance extraction (AVE) volume is greater than the correlation coefficient, the improved discriminant validity is good (Fornell & Larcker, 1981). Table 4 presents the results of the analysis.

Construct	<b>Description Statistics</b>		Composite Reliability	Converge nt Validity		Ľ	<b>Discriminant Validity</b>				
Construct	Mean	Standard Deviation	CR	AVE	DA	EA	IM	EM	ТР	RP	PFP
DA	4.309	1.183	0.89	0.63	0.79						
EA	4.487	1.101	0.79	0.50	.592**	0.71					
IM	4.733	1.078	0.90	0.69	.356**	.294**	0.83				
EM	4.898	1.105	0.88	0.71	0.10	.229**	.252**	0.84			
TP	5.073	0.922	0.87	0.57	.385**	.295**	.520**	.239**	0.76		
RP	4.149	1.148	0.91	0.63	.409**	.284**	.395**	0.08	.443**	0.80	
PFP	4.104	1.083	0.84	0.51	.631**	.506**	.380**	.120*	.282**	.496**	• <b>0.71</b>

TABLE 4SCALE VALIDITY ANALYSIS

Note: The words in bold on the diagonal of discriminant validity are the square root value of AVE, and the lower triangle area is the Pearson correlation coefficient of the construct. \*\* indicates a significant correlation at the 0.01 level (double-tailed); \* indicates a significant correlation at the 0.05 level (double-tailed).

# **Direct Effects Analysis**

This research conducted regression analyses to test the direct effects in the case of control demographic variables. Table 5, Table 6, Table 7, and Table 8 illustrates the results.

Dependent var	riable	Т	'P	R	Р	IM	
Model		Model	Model	Model	Model	Model	Model
		l	2	3	4	5	6
	Gender	0.019	0.050	-0.406**	-0.366**	-0.358**	-0.326**
	Age	0.111	0.153	0.130	0.183	-0.055	-0.012
Control Variable	Education	0.104	0.112	0.240**	0.251**	0.041	0.049
	Job Tenure	-0.052	-0.038	-0.027	-0.009	-0.009	0.006
	Position	0.025	0.024	-0.119	-0.121	0.040	0.038
Independent Variable	DA		0.312**		0.401**		0.322**
R Square		0.017	0.173	0.061	0.227	0.033	0.155
Adjusted R Squ	iare	0.004	0.161	0.049	0.216	0.021	0.143
R Square Cha	nge	0.017	0.156**	0.061	0.166**	0.033**	0.122**

TABLE 5THE DIRECT EFFECT OF DA ON TP, RP, AND IM

Table 5 shows the direct effect of developmental appraisal (DA) on teaching performance (TP), research performance (RP), and intrinsic motivation (IM). The regression analysis results showed that developmental performance appraisal significantly affects teaching performance, research performance, and intrinsic motivation when controlling for demographic variables. The coefficient of influence of developmental performance assessment on teaching performance was 0.312 (P<0.01), the coefficient of influence on research performance was 0.401 (P<0.01), and the coefficient of influence on intrinsic motivation was 0.322 (P<0.01). Hypotheses H1, H2, and H5 were supported.

Dependent var	iable	Т	Έ	R	Р	EM		
Model		Model1	Model2	Model3	Model4	Model 5	Model 6	
	Gender	0.019	0.043	-0.406**	-0.379**	0.046	0.067	
	Age	0.111	0.171	0.130	0.197	-0.102	-0.049	
Control Voriable	Education	0.104	0.091	0.240**	0.226**	0.007	-0.004	
Control variable	Tenure	-0.052	-0.068	-0.027	-0.044	0.091	0.077	
	Position	0.025	0.042	-0.119	-0.099	-0.071	-0.056	
Independent Variable	EA		0.263**		0.297**		0.231**	
R Square		0.017	0.112	0.061	0.139	0.008	0.059	
Adjusted R Square		0.004	0.099	0.049 0.126		-0.005	0.045	
R Square Chai	nge	0.017	0.096**	0.061**	0.079**	0.008	0.051**	

TABLE 6THE DIRECT EFFECT OF EA ON TP, RP, AND EM

Table 6 shows the direct effect of evaluative appraisal (EA) on teaching performance (TP), research performance (RP), and extrinsic motivation (EM). The regression analysis results showed that evaluative performance appraisal directly and significantly affects teaching, research performance, and extrinsic motivation when controlling for demographic variables. The effect coefficients were 0.263(P<0.01), 0.297(P<0.01), and 0.231(P<0.01). Hypotheses H3, H4, and H6 were supported.

Dependen	t variable	Т	Έ	RP		
Model		Model1	Model2	Model3	Model4	
	Gender		0.182	-0.406**	-0.265**	
	Age	0.111	0.136	0.130	0.151	
Control Variable	Education	0.104	0.085	0.240**	0.224**	
	Job tenure	-0.052	-0.048	-0.027	-0.023	
	Professional position	0.025	0.007	-0.119	-0.134	
Independent Variable	IM		0.456**		0.394**	
R Sq	uare	0.017	0.291	0.061	0.193	
Adjusted R Square		0.004	0.281	0.049	0.181	
R Square	e Change	0.017	0.275**	0.061**	0.132**	

# TABLE 7THE DIRECT EFFECT OF IM ON TP AND RP

Table 7 shows the direct effect of intrinsic motivation (IM) on teaching performance (TP) and research performance (RP). The results of regression analysis showed that intrinsic motivation significantly affected teaching and research performance, and the effect coefficients were 0.456 (P<0.01) and 0.394 (P<0.01), respectively. Hypotheses H7 and H8 were supported.

Dependent va	riable	Т	<b>P</b>	RP		
Model		Model1	Model2	Model3	Model4	
	Gender	0.019	0.009	-0.406**	-0.411*	
	Age	0.111	0.132	0.130	0.139	
Control Voriable	Education	0.104	0.102	0.240**	0.240**	
Control Variable	Job tenure	-0.052	-0.071	-0.027	-0.035	
	Professional position	0.025	0.040	-0.119	-0.112	
Independent Variable	EM		0.209**		0.093	
R Square		0.017	0.079	0.061	0.069	
Adjusted R Square		0.004 0.065		0.049	0.055	
R Square Cha	ange	0.017	0.062**	0.061**	0.008	

# TABLE 8THE DIRECT EFFECT OF EM ON TP AND RP

Table 8 shows the direct effect of extrinsic motivation (EM) on teaching performance (TP) and research performance (RP). The regression analysis results showed that extrinsic motivation significantly affected teaching performance. The effect coefficient was 0.209 (P<0.01). Hypothesis H9 was supported.

Based on the analysis above, developmental performance appraisal, evaluative performance appraisal, and intrinsic motivation positively impact teaching and research performance. The effect of evaluative performance appraisal on research performance is more important than teaching performance. Extrinsic motivation has a significant positive effect on teaching performance but not on research performance. Developmental performance appraisal has a significant positive effect on extrinsic motivation, and evaluative performance appraisal has a significant positive effect on extrinsic motivation.

### **Mediating Effect Analysis**

This research adopted PROCESS v3.5 and bootstrapping to test the mediating effect of work motivation between performance appraisal and job performance. The results are shown in Table 9 and Tables 10, which indicate that when demographic variables are controlled, developmental performance appraisal positively affects teaching performance (B= 0.312, P < 0.01). Moreover, the direct effect is still significant when the intermediate variable (intrinsic motivation) is added (B=0.189, P < 0.01). Developmental performance appraisal significantly affects research performance (B = 0.401, P < 0.01), and the effect is still significant (B = 0.313, P < 0.01) through the mediation variable (intrinsic motivation). Evaluative performance appraisal significantly affects teaching performance (B= 0.382, P < 0.01), and the effect is still significant when the mediation variable (intrinsic motivation) is included (B= 0.226, P < 0.01). Hypotheses H10, H11, and H12 are verified.

In addition, the upper and lower limits of the bootstrap 95% confidence interval of the mediation effect of the above three mediation models do not contain 0 (see Table 7), indicating that developmental performance appraisal can not only directly impacts the teaching and research performance of university instructors but also predict teaching and research performance through the mediating effect of intrinsic motivation. Evaluative performance appraisal can predict the teaching performance, and it can predict teaching performance through extrinsic motivation, but it cannot predict research performance through extrinsic motivation. The direct effect (0.189) and mediating effect (0.123) of developmental performance appraisal on teaching performance accounted for 61% and 39% of the total effect (0.312), and the direct effect (0.313) and mediating effect (0.088) on research performance accounted for 78% and 22% of the total effect (0.401), respectively. The direct effect (0.226) and mediating effect (0.037) of evaluative performance appraisal on teaching performance accounted for 86% and 14% of the total effect (0.263), respectively.

Regression equation (N=407)		N=407)		Fitting inc	lex	Un-normalized coefficient	
DV	IV	MV	R	$\mathbb{R}^2$	F	В	t
TP	DA		0.416	0.173	13.946**	0.312	8.408**
IM	DA		0.394	0.155	12.260**	0.322	7.604**
тр	DA	IM	0.584	0.341	29.548**	0.189	5.509**
Ir	DA	LIVI				0.382	10.101**
RP	DA		0.477	0.227	19.594**	0.401	9.281**
IM	DA		0.394	0.155	12.260**	0.322	7.604**

# TABLE 9MEDIATION MODEL TEST

DD	RP DA IM 0.531 0.282		0.531 0.282 22.390**		22.390**	0.313	7.027**
NI				0.304	5.522**		
TP	EA		0.335	0.112	8.422**	0.263	8.308**
EM	EA		0.243	0.059	4.183**	0.231	4.674**
тр	E A	EM	0 202	0.146	0 722**	0.226	5.603**
IP	EA EM 0.382 0.146		9./33**	0.158	3.967**		

# TABLE 10 TOTAL EFFECT, DIRECT EFFECT, AND MEDIATING EFFECT TEST

Regression e	Regression equation (N=407)		Indov	Effect	se	Т	р	LLCI	ULCI	Effect properties	
DV	IV	MV	muex							Effect proportion	
			Total effect	0.312	0.036	8.697	0.000	0.241	0.382		
TP	DA	IM	direct effect	0.189	0.034	5.509	0.000	0.121	0.256	61%	
			Indirect effect	t 0.123	0.024			0.078	0.173	39%	
	5.4		Total effect	0.401	0.043	9.281	0.000	0.315	0.485		
RP	DA	IM	direct effect	0.313	0.045	7.027	0.000	0.226	0.401	78%	
			Indirect effect	0.088 t	0.025			0.043	0.138	22%	
			Total effect	0.263	0.040	6.561	0.000	0.184	0.342		
TP	EA	EM	direct effect	0.226	0.040	5.603	0.000	0.147	0.306	86%	
			Indirect effect	t 0.037	0.018			0.009	0.077	14%	
			Total effect	0.297	0.049	6.045	0.000	0.200	0.393		
RP	EA	EM	direct effect	0.290	0.051	5.752	0.000	0.181	0.389	98%	
			Indirect effect	0.007	0.016			-0.025	0.040	2%	

Note: LICI represents the lower 95% confidence interval limit, and ULCI represents the upper 95% confidence interval limit. If the 95% confidence interval does not contain 0, the correlation is significant; otherwise, it is insignificant.

# Analysis of the Moderating Effect

This research uses Hayes' Process 3.5 Model 8 and Model 1 to test the moderating effect of perceived procedural fairness on the relationship between performance appraisal and work motivation, teaching, and research performance. The results are shown in Tables 11 and Table 12. Tables 11 shows that the product of developmental performance appraisal and perceived procedural fairness positively impacts intrinsic motivation, teaching performance and research performance (intrinsic motivation: B=0.117, P<0.01; teaching performance: B=0.083, P < 0.01; research performance: B=0.133, P < 0.01). The product of

evaluative performance appraisal and perceived procedural fairness also positively affects extrinsic motivation, teaching performance, and research performance (extrinsic motivation: B=0.075, P< 0.05; teaching performance: B=0.127, P< 0.01; research performance: B=0.18, P < 0.01). These results indicate that the perceived procedural fairness moderates the effect of developmental appraisal and evaluative appraisal on teaching and research performance. It also moderates the impact of developmental performance appraisal on intrinsic motivation and evaluative performance appraisal on extrinsic motivation. Hypothesis H13, hypothesis H14, hypothesis H15, hypothesis H16, hypothesis H17, and H18 are verified.

Regression equation (N=407)			Fitness in	ndex	Coefficient Significance	
Independent Variable	Dependent Variable	R	$\mathbb{R}^2$	F	В	р
	Gender				-0.248	0.011
	Age				0.003	0.971
	Job tenure				-0.02	0.738
IM	Education background	0.481	0 232	14 008**	0.028	0.716
	Title	0.401	0.232	14.990	0.08	0.248
	DA				0.199	0.000
	PFP				0.248	0.000
	DA*PFP				0.117	0.000
	Gender				0.184	0.000
	Age	0.608			0.151	0.016
	Job tenure				-0.043	0.350
	Education background				0.09	0.131
TP	Title		0.37	25.861**	0.03	0.573
	DA				0.223	0.000
	PFP				-0.017	0.700
	IM				-0.017 0. 0.351 0. <b>0.083</b> 0.	0.000
	DA* PFP					0.000
	Gender				-0.182	0.046
	Age				0.21	0.012
	Job tenure				0.23	0.001
	Education background				-0.029	0.594
	Title				-0.078	0.225
RP	DA	0.63	0.397	28.007**	0.182	0.000
	PFP				0.169	0.000
	IM				0.335	0.000
	DA*PFP				0.133	0.000
	Gender				0.084	0.443
EM	Age	0.27	0.073	3.903**	-0.056	0.581
	Job tenure				0.003	0.976

# TABLE 11 MODERATING EFFECT OF PROCEDURAL FAIRNESS

	Education background				0.081	0.224
	Title				-0.05	0.519
	EA				0.247	0.000
	PFP				-0.007	0.907
	EA*PFP				0.075	0.016
	Gender				0.085	0.337
	Age				0.195	0.017
	Job tenure				0.128	0.066
	Education background				-0.075	0.162
TP	Title	0.46	0.212	11.833**	0.052	0.409
	EA				0.203	0.000
	PFP				0.14	0.001
	EM				0.108	0.021
	EA*PFP				0.127	0.000
	Gender				-0.247	0.009
	Age				-0.048	0.397
	Job tenure				0.203	0.020
DD	Education background	0 606	0 267	70 05**	0.235	0.002
Kſ	Title	0.000	0.307	20.03	-0.078	0.245
	EA				0.108	0.030
	PFP				0.451	0.000
	EA*PFP				0.180	0.000

# TABLE 12 DIRECT AND MEDIATING EFFECTS IN DIFFERENT LEVELS OF PROCEDURAL FAIRNESS

Independent variable	Dependent variable		PFP	Effect value	Boot S.E.	Boot CI lower limit	Boot CI lower limit
		Direct effect	-1.08(M-1SD)	0.072	0.057	-0.041	0.185
DA	IM		0 (M)	0.199	0.052	0.097	0.302
			1.08(M+1SD)	0.327	0.06	0.208	0.445
	ТР	Direct effect	-1.08(M-1SD)	0.133	0.045	0.045	0.221
DA			0 (M)	0.223	0.041	0.142	0.304
			1.08(M+1SD)	0.313	0.049	0.218	0.409
		Mediating effects of IM	-1.08(M-1SD)	0.025	0.029	-0.301	0.082
			0 (M)	0.07	0.024	0.024	0.121
			1.08(M+1SD)	0.115	0.029	0.06	0.173
DA	RP	Direct effect	-1.08(M-1SD)	0.038	0.053	-0.067	0.143
			0 (M)	0.182	0.049	0.085	0.278
			1.08(M+1SD)	0.325	0.058	0.211	0.439
			-1.08(M-1SD)	0.012	0.015	-0.013	0.046

				0.024	0.017	0.005	0.071
		Mediating	0 (M)	0.034	0.017	0.005	0.071
		effects of IM	1.08(M+1SD)	0.055	0.024	0.011	0.106
			-1.08(M-1SD)	0.167	0.062	0.045	0.288
EA	EM	Direct effect	0 (M)	0.247	0.057	0.135	0.36
			1.08(M+1SD)	0.328	0.07	0.19	0.467
			-1.08(M-1SD)	0.066	0.05	-0.033	0.165
		Direct effect	0 (M)	0.203	0.047	0.111	0.296
E۸	тр		1.08(M+1SD)	0.341	0.058	0.226	0.455
LA	11	Mediating	-1.08(M-1SD)	0.023	0.02	-0.003	0.075
		effects of	0 (M)	0.035	0.021	0.004	0.085
		EM	1.08(M+1SD)	0.046	0.024	0.006	0.101
			-1.08(M-1SD)	-0.087	0.053	-0.192	0.018
EA	RP	Direct effect	0 (M)	0.108	0.049	0.011	0.204
			1.08(M+1SD)	0.302	0.060	0.183	0.421

Tables 12 shows that, with the improvement of procedural fairness, the direct impact of developmental performance appraisal on faculty's intrinsic motivation, teaching performance and research performance is constantly increasing, and the direct impact of evaluative appraisal on faculty's external motivation, teaching and research performance is also constantly increasing. Moreover, the indirect impact of developmental appraisal on teaching and research performance and the indirect impact of evaluative appraisal on teaching performance are also increasing. These results further prove the existence of the moderating effect of perceived procedural fairness.

To further understand the moderating effect of perceived procedural fairness, this research generated five simple slope graphs, as shown in Figures 2, 3, 4, 5, 6 and 7. Simple slope analysis shows that developmental performance appraisal positively affects intrinsic motivation for subjects with a high sense of procedural fairness in performance appraisal (Figure 2). Simple slope = 0.327, P < 0.01. Evaluative performance appraisal also has a positive effect on extrinsic motivation. Simple slope = 0.328, P < 0.01. However, for the subjects with low fairness in the performance appraisal procedure, the positive effect of developmental performance appraisal on intrinsic motivation is not significant. Simple slope = 0.072, P = 0.209. The positive effect of evaluative performance appraisal on extrinsic motivation is lower than that of participants with a high sense of procedural fairness in performance appraisal (Figure 3) . Simple slope = 0.1667, P < 0.05. These results show that with the improvement of procedural justice, the positive effect of performance appraisal on work motivation tends to increase (see Table 9).

FIGURE 2 SLOPE DIAGRAM OF THE MODERATING EFFECT OF PROCEDURAL FAIRNESS ON DEVELOPMENTAL APPRAISAL AND INTRINSIC MOTIVATION



FIGURE 3 SLOPE DIAGRAM OF THE MODERATING EFFECT OF PROCEDURAL FAIRNESS ON THE RELATIONSHIP BETWEEN EVALUATIVE APPRAISAL AND EXTRINSIC MOTIVATION



Figures 4 and 5 show a critical value in the moderating effect of perceived procedural fairness on the relationship between appraisal and teaching performance. When perceived procedural fairness in

performance appraisal is lower than this critical value, the effect of developmental performance appraisal on teaching performance is low (simple slope = 0.1330, P < 0.01). Also, the evaluative performance appraisal has no significant effect on teaching performance (simple slope = 0.0492, P = 0.3014). For those who perceive procedural fairness of performance appraisal as higher than that value, the positive effect of developmental and evaluative performance appraisals on teaching performance is significantly improved (see Table 9).





FIGURE 5 SLOPE DIAGRAM OF THE MODERATING EFFECT OF PROCEDURAL FAIRNESS ON EVALUATIVE APPRAISAL AND TEACHING PERFORMANCE



As seen from Figure 6 and Figure 7, for the participants with a high sense of procedural fairness in performance appraisal, performance appraisal has a significant positive prediction effect on research

performance (simple slope = 0.307, and 0.108). However, for those with low perceived fairness of performance appraisal procedure, developmental performance appraisal has no significant positive effect on research performance. These results show that with the improvement of procedural justice, the positive predictive effect of performance appraisal on research performance tends to increase again.

FIGURE 6





.50

1.00

1.50

.00

DA



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3.75

-1.50

-1.00

- .50

# DISCUSSION

# Performance Appraisal Affects College Instructors' Job Performance, and Different Appraisal Modes Have Other Influences

This research found that performance appraisal significantly affects college instructors' job performance, supporting previous research results. It also found that the developmental performance appraisal positively affects employees' job performance (Liu, Zhao, Wang, 2016). It can significantly predict the breakthrough innovation of college instructors (Zhang, Zhang, Qing, & Chen, 2021). Evaluative performance appraisal can also positively predict employees' job performance. Taking performance appraisal as the basis of salary decision-making will guide employees' performance (Murray & Heneman, 1993).

This research further clarified the different influences of performance appraisal on teaching and research work. Developmental performance appraisal has a direct predictive effect on instructors' teaching and research work. At the same time, evaluative performance appraisal also has a positive impact on teaching and research job performance, but the predictive effect is lower than developmental performance appraisal. The reason lies in the complexity of research work. As a complex task, scientific research is affected by researchers' ability and motivation and environmental and institutional factors. The latter has a more significant impact (Long, Wang, & Zhu, 2012). Appraisal can improve employees' work involvement but cannot directly improve their workability. Therefore, it has a more negligible effect on research performance than teaching.

# Work Motivation Better Reveals the Relationship Between Performance Appraisal and Job Performance

This research finds the impact of the performance appraisal on college instructors' job performance by three intermediary paths. The most considerable intermediary role is developmental performance appraisal through the intrinsic motivation effect on teaching performance, followed by the prediction effect on research performance. Developmental performance appraisal improves teaching and research performance through intrinsic motivation. Evaluative performance appraisal will enhance teaching performance through extrinsic motivation. Its effect mechanism is that developmental performance appraisal aims to find employees' job performance weaknesses and strengthen staff training through review and inspection. This purpose fits instructors' intrinsic motivation to achieve good performance and desire for progress. It satisfies their psychological needs for autonomy, ability, and relationship, conducive to developing inherent reason (Zhang et al., 2021).

This research finds that extrinsic motivation mediates the relationship between evaluative appraisal and teaching performance. The mechanism is that evaluative appraisal relates to employees' performance pay, rewards, and title promotion. The material demand will motivate instructors to work harder, thus leading to changes in work behavior and performance improvements. Many studies have proven this (Yao, Chen, & Liu, 2017; Yu, Kong, Zhang, & Yuan, 2021). It is also an essential embodiment of performance appraisal as a tool.

# Perceived Procedural Fairness Moderates the Relationship Between Performance Appraisal, Work Motivation, and Job Performance

This research found that the procedural fairness of performance appraisal plays a moderating role in the relationship between performance appraisal, work motivation, and performance. Specifically, compared with the participants with a lower sense of procedural justice, the direct prediction effect of performance appraisal on job performance was more significant for the participants with a higher sense of fairness of performance appraisal. This result shows that performance appraisal affects employee motivation and performance in diverse organizational environments. The perception of appraisal fairness is a guaranteed factor for assessing the promotion of employee work motivation and performance, which is consistent with previous studies (Yan & Wang, 2020). Individuals with high perceived procedural fairness of performance appraisal will have a stronger sense of responsibility and good emotions, thus promoting their job

performance. According to social exchange theory, when individuals or organizations feel goodwill from another party, they reciprocate accordingly (Cropanzano & Mitchell, 2005). Therefore, when individuals perceive higher fairness in performance appraisal, they will favor the organization. In return, they will be more supportive of the inspection personnel in behavior and attitude, resulting in positive results (Gupta & Kumar, 2013). At the same time, the perceived fairness of performance appraisal has a positive impact on the intrinsic motivation of employees' efforts (Lee, 2019). The fairer the appraisal procedure is for performance appraisal, the better the performance appraisal will be for hard-working employees. Therefore, the more equitable the review is perceived by the employees, the more engaged they will be. In contrast, employees with a low perception of fairness in performance appraisal are prone to adverse reactions, affecting job performance improvement and counterproductive work behaviors (Zhang, 2014).

# CONCLUSION

This research constructs a moderated mediation model based on previous studies and theories. This is the first time to test the different effects of college instructors' performance appraisal on teaching and research performance. It demonstrates the intermediary role of work motivation and responds to performance appraisal under what conditions significantly affect job performance (the regulatory role of procedural fairness). The study results can help answer how the appraisal can affect teachers' work performance. It also answers under what conditions performance appraisal can directly impact teaching and research performance and significantly improve work motivation. In addition, it reveals college instructors' performance appraisal and the action mechanism between instructors' job performance (the intermediary role of work motivation). It also shows the difference in this mechanism under different conditions (the moderating role of perceived fairness). The results show that work motivation is a vital mechanism between college instructors' performance appraisal and job performance. This mechanism has different effects on performance appraisals and is moderated by instructors' perceived procedural fairness. It effectively integrates the goal setting and expectation theory, which plays a particular role in improving college instructors' performance appraisal research.

In addition, the moderated intermediary model has some enlightenment to guide colleges to reasonably use performance appraisal means. First, colleges should deeply understand the different impacts of performance appraisals on instructors' work motivation. In addition, they should give full play to the promotion role of developmental performance appraisal on instructors' intrinsic motivation and avoid the one-sided use of evaluative performance appraisal to promote extrinsic motivation. The reason for doing it is that evaluative performance appraisal cannot fundamentally solve the problem of employees' working ability (Zhao et al., 2013). Second, colleges should determine instructors' work objectives according to college characteristics and adopt different assessment methods. If they want to improve instructors' research job performance appraisal. Third, colleges should be concerned about the perceived procedural fairness of instructors' performance appraisal to improve the incentive effect.

There are also some deficiencies in this research, which need further improvement in the future. First, although it has clarified the different impacts of different appraisals on college instructors' job performance, performance appraisal is often used by combining the two modes in organizations (Wen & Liao, 2010). In the future, it is necessary to further study the combination of the two assessment modes in what way and proportion can achieve the best effect. Second, there are still many other variables in the mechanism between performance appraisal and job performance that are worth studying and discussing. Future relevant studies will consider incorporating more variables into the study, especially those related to employees' personal characteristics.

# REFERENCES

- Amabile, T.M., Hill, K.G., Hennessey, B.A., & Tighe, E.M. (1994). The Work Preference Inventory -Assessing Intrinsic and Extrinsic Motivational Orientations. *Journal of Personality and Social Psychology*, 66(5), 950–967. https://doi.org/10.1037/0022-3514.66.5.950
- Ambrose, M.L., & Kulik, C.T. (1999). Old Friends, New Faces: Motivation Research in the 1990s. *Journal of Management*, 25(3), 231–292. https://doi.org/10.1016/s0149-2063(99)00003-3
- Cerasoli, C.P., Nicklin, J.M., & Ford, M.T. (2014). Intrinsic Motivation and Extrinsic Incentives Jointly Predict Performance: A 40-year Meta-Analysis. *Psychological Bulletin*, *140*(4), 980–1008. https://doi.org/10.1037/a0035661
- Chen, R., & Shan, Z. (2010). Problems and Suggestions in Performance Appraisal of College Instructors. *Chinese Journal of National Institute of Education Administration*, (10), 68–70. http://dx.doi.org/10.3969/j.issn.1672-4038.2010.10.016
- Chen, X., & Shen, W. (2018). *Empirical Methods in Organization and Management Research*. Beijing: Peking College Press.
- Cheng, Y., & Guo Z. (2015). The Mediating Role of Job Engagement in Job Autonomy and Job Performance: Evidence from Empirical Sampling. *Chinese Human Resources Development*, 2015(19), 56–63. http://dx.doi.org/ 10.16471/j.cnki.11-2822/c.2015.19.011
- Cleveland, J.N., Murphy, K.R., & Williams, R.E. (1989). Multiple Uses of Performance Appraisal -Prevalence and Correlates. *Journal of Applied Psychology*, 74(1), 130–135. https://doi.org/10.1037/0021-9010.74.1.130
- Cropanzano, R., & Mitchell, M.S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal* of Management, 31(6), 874–900. https://doi.org/10.1177/0149206305279602
- Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The Job Demands-Resources Model of Burnout. *Journal of Applied Psychology*, 86(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499
- Education department, S.P. (2018). Statistical Summary of Education in Sichuan Province in 2017. In *The* education department of Sichuan Province. https://dx.doi.org/10.41443/y.cnki.yscjy.2019.000041
- Eisenberger, R., Fasolo, P., & Davislamastro, V. (1990). Perceived Organizational Support and Employee Diligence, Commitment, and Innovation. *Journal of Applied Psychology*, 75(1), 51–59. https://doi.org/10.1037//0021-9010.75.1.51
- Erdogan, B. (2002). Antecedents and Consequences of Justice Perceptions in Performance Appraisals. *Journal of Human Resource Management Review*, 12(4), 555–578. https://doi.org/10.1016/S1053-4822(02)00070-0
- Fernet, C., Gagne, M., & Austin, S. (2010). When does Quality of Relationships with Coworkers Predict Burnout over time? The Moderating Role of Work Motivation. *Journal of Organizational Behavior*, 31(8), 1163–1180. https://doi.org/10.1002/job.673
- Fernet, C., Guay, F., Senecal, C., & Austin, S. (2012). Predicting Intraindividual Changes in Teacher Burnout: The role of Perceived School Environment and Motivational Factors. *Teaching and Teacher Education*, 28(4), 514–525. https://doi.org/10.1016/j.tate.2011.11.013
- Fornell, C., & Larcker, D.F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. https://doi.org/10.2307/3151312
- Gan, Y., & Cheng, L. (2021). Psychological Capital and Career Commitment Among Chinese Urban Preschool Teachers: The Mediating and Moderating Effects of Subjective Well-being. *Frontiers* in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.509107
- Gan, Y., Zhang, J., & Quan, Z. (2021). Public Perception of Risk and Coping Response to COVID-19 in China: The Moderating role of Negative Emotion. *Journal of Psychology in Africa*, 31(2), 117– 123. https://doi.org/10.1080/14330237.2021.1903167

- Goksoy, A., & Alayoglu, N. (2013). The Impact of Perception of Performance Appraisal and Distributive Justice Fairness on Employees' Ethical Decision Making in Paternalist Organizational Culture. *Performance Improvement Quarterly*, 26(1), 57–79. http://dx.doi.org/10.1002/piq.21137
- Grant, A.M. (2008). Does Intrinsic Motivation Fuel the Prosocial Fire? Motivational Synergy in Predicting Persistence, Performance, and Productivity. *Journal of Applied Psychology*, 93(1), 48– 58. https://doi.org/10.1037/0021-9010.93.1.48
- Grant, A.M., & Berry, J.W. (2011). The Necessity of Others is the Mother of Invention: Intrinsic and Prosocial Motivations, Perspective Taking, and Creativity. *Academy of Management Journal*, 54(1), 73–96. https://doi.org/10.5465/amj.2011.59215085
- Greenberg, J. (1986). Determinants of Perceived Fairness of Performance Evaluations. *Journal of Applied Psychology*, *71*(2), 340–342. https://doi.org/10.1037/0021-9010.71.2.340
- Guo, J., Qiu, Y., & Gan, Y. (2022). Workplace Incivility and Work Engagement: The Mediating Role of Job Insecurity and the Moderating Role of Self-perceived Employability. *Managerial and Decision Economics*, 43(1), 192–205. https:// doi.org/10.1002/mde.3377
- Gupta, V., & Kumar, S. (2013). Impact of Performance Appraisal Justice on Employee Engagement: A Study of Indian Professionals. *Employee Relations*, 35(1), 61–78. https://doi.org/10.1108/01425451311279410
- Hair, J.F.J., Anderson, R.E., Tatham, R.L., & Black, W.C. (2010). *Multivariate Data Analysis*. New Jersey: Prentice-Hall International.
- Hu, J., & Mo, Y. (2005). A research on Organizational Commitment and Job Performance of University Teachers. *Journal of Zhejiang Sci-Tech University*, 2005(04), 420–425, 429. Retrieved from https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2005&filename=ZJSG 200504021&uniplatform=NZKPT&v=hKe4w0eoacGNCWtPcODbDyeCxJJhkrwSlrhTHdi6Xxb 39O5nAmQNxJLTjIiYLV4L
- Krejcie, R.V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607. https://doi.org/10.1177/001316447003000308
- Kuvaas, B. (2006). Job Performance, Affective Commitment, and Work Motivation: The Roles of Pay Administration and Pay Level. *Journal of Organizational Behavior*, 27(3), 365–385. https://doi.org/10.1002/job.377
- Kuvaas, B. (2007). Different Relationships Between Perceptions of Developmental Performance Appraisal and Job Performance. *Personnel Review*, *36*(3), 378–397. https://doi.org/10.1108/00483480710731338
- Lee, H.W. (2019). Performance-Based Human Resource Management and Federal Employee'S Motivation: Moderating Roles of Goal-Clarifying Intervention, Appraisal Fairness, and Feedback Satisfaction. *Review of Public Personnel Administration*, 39(3), 323–348. https://doi.org/10.1177/0734371x17721300
- Li, X., & Wang, W. (2020). The Influence Mechanism of Performance Pressure on Cheating Behavior in Workplace. *Chinese Journal of Business Economics and Management*, (10), 39–51. http://dx.doi.org/10.14134/j.cnki.cn33-1336/f.2020.10.004
- Liao, J., Wen, P., & Wang, J. (2010). From Accounting to Guidance: Strategic Transfer of Performance Management [J]. *China Human Resources Development*, 2010(2), 67–70. http://dx.doi.org/10.16471/j.cnki.11-2822/c.2010.02.011
- Lin, L. (2017). An Empirical Study on Performance Appraisal Orientation and Its Effect. *Chinese Journal* of Social Scientist, (03), 76–79. http://dx.doi.org/10.3969/j.issn.1002-3240.2017.03.013
- Lin, X., & Liu, Y. (2018). The Influence of Performance Appraisal Fairness on Employee Innovation Performance: The Mediating Effect of Psychological Security. *Chinese Journal of Modern Management Science*, (05), 94–96. http://dx.doi.org/10.3969/j.issn.1007-368X.2018.05.031
- Liu, J. (2018). Implications of Expectation Theory and Equity Theory for Tax Performance. Chinese Journal of China Taxation, 2018(12), 70–71. http://dx.doi.org/10.19376/j.cnki.cn11-1178/f.2018.12.031

- Liu, L., Zhao, S., & Wang, T. (2016). The Influence Mechanism of Developmental Performance Appraisal on Employee Performance. *Journal of Central South University (Social Science)*, 22(5), 123–131. http://dx.doi.org/10.3969/j.issn.1672-3104.2016.05.018
- Locke, E.A., & Latham, G.P. (2002). Building A Practically Useful Theory of Goal Setting and Task Motivation - A 35-Year Odyssey. *American Psychologist*, 57(9), 705–717. https://doi.org/10.1037//0003-066x.57.9.705
- Long, L., Wang, H., & Zhu, Y. (2012). The Relationship Between Scientific Research Assessment Model and Innovation in Research-Oriented Colleges. *Chinese Journal of Advanced Engineering Education Research*, 2012(1), 145–150. Retrieved May 2022, from https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2012&filename=GDG J201201026&uniplatform=NZKPT&v=4LRq4TeRiEokT6pa2SEBWaLbojkBy5RN2Jx\_onRvOd dROwf-ovZDxvx1geyyjPNW
- Lu, H., Yue, A., Han, Y., & Chen, H. (2018). Exploring the Effect of Different Performance Appraisal Purposes on Miners' Organizational Citizenship Behavior: The Mediating Role of Organizational Identification. Sustainability, 10(11). https://doi.org/10.3390/su10114254
- Luo, J. (2007). The Study on Justice Perception in Performance Appraisal and Its Impacts on Knowledge Workers' Work Attitude (PhD. Dissertation). Chinese Journal of Huazhong University of Science and Technology. http://dx.doi.org/10.7666/d.d093113
- Meyer, H.H., Kay, E., & French, J.R.P. (1981). Split Roles in Performance Appraisal. In M.M. Gruneberg, & D.J. Oborne (Eds.), *Psychology and Industrial Productivity*. Palgrave Macmillan, London. https://doi.org/10.1007/978-1-349-04809-0\_6
- Murray, B. (1993). Review of *Merit Pay: Linking Pay Increases to Performance Ratings.*, by R. Heneman. *Industrial and Labor Relations Review*, 47(1), 148–149. https://doi.org/10.2307/2524256
- Ostroff, C. (1993). Rater Perceptions, Satisfaction and Performance Ratings. *Journal of Occupational and Organizational Psychology*, 66, 345–356. https://doi:10.1111/j.2044-8325.1993.tb00544.x
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal* of Applied Psychology, 88(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Robbins, S. (2004). The Essence of Organizational Behavior. Beijing: China Renmin University Press.

- Schaufeli, W.B., & Bakker, A.B. (2004). Job Demands, Job Resources, and Their Relationship with Burnout and Engagement: A Multisample Study. *Journal of Organizational Behavior*, 25(3), 293–315. https://doi.org/10.1002/job.248
- Scott, M.B., & Lyman, S.M. (1968). Accounts. American Sociological Review, 33(1), 46–62. https://doi.org/10.2307/2092239
- Shrivastava, A., & Purang, P. (2016). Performance Appraisal Fairness & Its Outcomes: A Study of Indian Banks. *Indian Journal of Industrial Relations*, *51*(4), 660–674.
- Sun, W. (2017). Study on the Relationship Between Enterprise Performance Appraisal Purpose and Employees' Counterproductive Workplace Behaviors. *Chinese Journal of China Coal*, 43(09), 22–25. http://dx.doi.org/10.19880/j.cnki.ccm.2017.09.004
- Thurston, P.W., & McNall, L. (2010). Justice Perceptions of Performance Appraisal Practices. *Journal of Managerial Psychology*, 25(3–4), 201–228. https://doi.org/10.1108/02683941011023712
- Weibel, A., Rost, K., & Osterloh, M. (2010). Pay for Performance in the Public Sector—Benefits and (Hidden) Costs. *Journal of Public Administration Research & Theory*, 20(2), 387–412. https://doi.org/10.1093/jopart/mup009
- Wen, P., & Liao, J. (2010). The Different Influence of Different Performance Appraisal on Employee Appraisal Response – A Study from the Perspective of Appraisal Objective. *Chinese Journal of Nankai Management Review*, 13(02), 142–150, 158. http://dx.doi.org/10.3969/j.issn.1008-3448.2010.02.016

- Woodhams, C., Lupton, B., Perkins, G., & Cowling, M. (2015). Multiple Disadvantages and Wage Growth: The Effect of Merit Pay on Pay Gaps. *Journal of Human Resource Management*, 54(2), 283–301. https://doi.org/10.1002/hrm.21692
- Wu, G., & Chen, T. (2009). An Empirical Study on the Influence of Performance Management Orientation on Team Performance. *Chinese Journal of Nankai Management Review*, 12(06), 51– 59, 76. http://dx.doi.org/10.3969/j.issn.1008-3448.2009.06.008
- Yan, K., & Wang, X. (2020). A Study on the Influence of the Perception of Fairness in Performance Appraisal on the Job Performance of Grassroots Employees. *Chinese Journal of China Market*, (02). http://dx.doi.org/117-118. 10.13939/j.cnki.zgsc.2020.02.117
- Yao, Y., Chen, Y., & Liu, J. (2017). The Relationship between Performance Appraisal Goal Orientation and Employee Performance: The Mediating Role of Psychological Empowerment. *Chinese Journal of Modernization of Management*, 37(1), 43–45. http://dx.doi.org/10.3969/j.issn.1003-1154.2017.01.013
- Ye, X., Zhang, Y., & Yang, L. (2021). Research on the Impact of Team Performance Pressure on Employee Withdrawal Behavior Under a Cross-Layer Model Test. *Chinese Journal of Management*, 18(3), 371–380. http://dx.doi.org/ 10.3969/j.issn.1672-884x.2021.03.007
- Yu, Y., Kong, C., Zhang, W., & Yuan, B. (2021). Research on the Chain Mediating Effect of Work Motivation on Job Satisfaction and Job Performance of Primary Medical Staff. *Chinese Journal* of Health Policy, 14(8), 21–28. http://dx.doi.org/ 10.3969/j.issn.1674-2982.2021.08.004
- Yuan, Z., & Xi, G. (2000). A Review of Expectation Theory. Journal of Nanjing University of Science and Technology (social sciences), (03), 45–49. http://dx.doi.org/ 10.3969/j.issn.1008-2646.2000.03.009
- Zhang, H., Zhang, J., Qing, G., & Chen, J. (2021). The Impact of Performance Appraisal on Instructors' Breakthrough Innovation in Research-Oriented Colleges. *Chinese Journal of Finance and Accounting*, (18), 123–130. http://dx.doi.org/ 10.19641/j.cnki.42-1290/f.2021.18.017
- Zhang, Y. (2012). Research on the Influence Mechanism of Perceived Fairness in Performance Appraisal on Counterproductive Work Behaviors. (Ph.D. dissertation), Huazhong University of Science and Technology. http://dx.doi.org/10.7666/d.D229332
- Zhang, Y. (2014). The Relationship between Fairness Perceptions in Performance Appraisal and Counterproductive Work Behavior: Exchange Ideology as a Moderator. *Chinese Journal of Management Review*, 26(08), 158–167, 180. http://dx.doi.org/10.14120/j.cnki.cn11-5057/f.2014.08.056
- Zhao, J. (2012). A Research of the Influence Mechanism of Performance Appraisal Purpose on Deviant Behavior in Workplace. (Ph.D. Dissertation), Huazhong University of Science and Technology. Retrieved May 2022, from https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CDFD&dbname= CDFDLAST2015&filename=1012361286.nh&uniplatform=NZKPT&v=6fKRVRRme0A90qnaKmhS3nuhl8qsgaLBVw arMIXE5wYVq-3fcUx-nBiJ-CKR9-
- Zhao, J., Liao, J., & Wen, P. (2013). The Dimension and Effect of Performance Appraisal Purpose. *Chinese Journal of Zhongnan University of Economics and Law*, (01), 144–151. http://dx.doi.org/10.3969/j.issn.1003-5230.2013.01.022
- Zhao, S., & Yu, D. (2009). Employee's Counterproductive Behavior Caused by Performance Appraisal and Its Control. *Human Resources Development of China*, (11), 36–38. http://dx.doi.org/10.16471/j.cnki.11-2822/c.2009.11.017
- Zhao, Y., Zhang, Z., Liu, N., & Ding, M. (2016). Review of the New Development of Self-Determination Theory. *Chinese Journal of Management*, 13(7), 1095–1104. http://dx.doi.org/10.3969/j.issn.1672-884x.2016.07.019
- Zheng, Q., Chen, X., & Yang, W. (2021). A Survey on the Ccurrent Situation of Job Stress and Job Burnout of University Young Instructors in Guangdong Province. *Journal of Guangxi Normal* University for Nationalities, 38(03), 40–45. http:// dx.doi:10.19488/j.cnki.45-1378/g4.2021.03.009

# APPENDIX: DATA COLLECTION TOOLS AND MEASUREMENT ITEMS

Variables	Subscales	Items	Source or basis		
	DA	My performance appraisal results will help me identify my training needs. The organization can provide feedback on the results of performance appraisal. A performance review identifies my strengths and weaknesses.	Wen &		
		Performance reviews provide me with clear goals for my personal development.			
PA		The feedback I received helped me understand the company.	Liao		
	EA       The result of the performance appraisal determines my salary level.         There is a strong link between performance appraisal results and my promotion.         A performance review is an assessment of my past performance.         Performance appraisal results are the basis for judging who is good and evil.				
	IM	I'm very interested in my job. My job is exciting.	Grant & Berry		
		My job is fascinating. I enjoy my job very much.	(2011)		
VV IVI		I need this job to support my family.	Grant (2008)		
	EM	I need to earn money from this job.			
		I have to do this job.			
JP	ТР	I can earn more by getting better results. I always actively use teaching methods that can develop students' thinking ability and teach students the skills to distinguish the critical points of the textbook. I always well prepare for class, give the students sufficient homework and correct them carefully. I always stake the initiative to enrich the content of the course with a large amount of information, valuable connections and			
		<ul> <li>appropriate examples using advanced textbooks.</li> <li>I can fully mobilize the students' enthusiasm for the course learning, and the students have a solid ability to solve practical problems.</li> <li>I am good at identifying the direction in the new information of the subject and actively carrying out the construction of new courses</li> </ul>	Hu & Mo (2005)		
	RP	I take the initiative to carry out scientific research exchange activities and often participate in academic conferences at home and abroad.			

	I strive to make the scientific research results have good application prospects and can create social wealth and economic benefits.	
	I always actively carry out research work and have a considerable number of high-level papers or treatises.	
	I always put a lot of energy into scientific research and won a high-level reward for my scientific research achievements.	
	I always take the initiative to participate in social work, have high-level social part-time jobs, and have social visibility.	
	I always take the initiative to participate in scientific research projects, and the number and level of scientific research projects were much higher than the average.	
	During the assessment process, I expressed my views and feelings.	
PFP	In the assessment process, I can impact the assessment results I get.	Thong
	The unit appraisal process is not biased against all employees.	(2014)
	The leader first collects complete performance information about me and then evaluates me.	
	I can ask to re-verify my assessment results	