Comparing job satisfaction among lecturers in public and non-public universities: Insights from Vietnam

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Abstract: ***This research examines job satisfaction among lecturers at public universities in Vietnam and compares it with that of lecturers at non-public universities. The findings reveal that salary, job nature, development opportunities, recognition, relationships, environment, and working conditions significantly influence job satisfaction. However, the impact of these factors varies between public and non-public university lecturers. The study underscores that lecturers' job satisfaction is crucial for university success, influencing the quality of tertiary education and fostering innovation.***

Keywords: *Public universities; non-public universities; lecturers; comparison; job satisfaction; Vietnam.*

1. Introduction

Teaching staff are crucial in shaping education quality, which impacts national development by producing skilled human resources. However, lecturers face growing challenges, such as the need for continuous knowledge updates and new roles in research and community engagement. These pressures make job satisfaction increasingly vital, especially given the governance differences between public and non-public institutions, which affect teacher satisfaction. While global research has identified critical factors like job security and leadership, studies in Vietnam are limited. This study investigates the differences in job satisfaction between lecturers at public and non-public universities in Vietnam, offering insights into the factors influencing academic satisfaction in the country.

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2. Theoretical framework

2.1. Job satisfaction

Research on job satisfaction is extensive, though it primarily focuses on private organizations, with fewer studies in public institutions like universities (Castellacci & Viñas-Bardolet, 2021). Initially, job satisfaction was viewed as a matter of need fulfillment, but later, it evolved into an understanding of it as an emotional response to work (Weiss, 2002).

Several influential models have been developed to measure job satisfaction. For instance, Cross (1973) identified six factors, including salary and the job itself, while Hackman and

Oldham (1975) emphasized job security and growth opportunities. Herzberg's two-factor theory, which distinguishes between motivators and hygiene factors, has been particularly influential. This theory suggests that certain factors lead to job satisfaction, while others prevent dissatisfaction (Herzberg & Snyderman, 1993).

Rue & Byars (2003) expanded on these ideas, identifying eight factors affecting job satisfaction, such as leadership and working conditions, and noting that satisfaction positively impacts organizational commitment, while dissatisfaction can lead to adverse outcomes like absenteeism and turnover. There is broad consensus that pay, relationships, and job security are critical components of job satisfaction (Cross, 1973; Hackman & Oldham, 1975; Spector, 2022).

2.2. Teacher job satisfaction

Academic staff job satisfaction is crucial for university development. Researchers like Lacy et al. (2004) and Gessesse and Premanandam (2023) have explored this, often using Herzberg's two-factor theory. While Lacy et al. (2004) supported Herzberg's model, Ssesanga and Garrett (2005) found it less applicable to academic staff, suggesting that any factor can influence satisfaction.

Hagedorn (2000) adapted Herzberg's theory for academia, proposing triggers (e.g., career changes) and mediators (e.g., demographics) as factors influencing satisfaction. Bentley et al. (2013) extended the reach of Hagedorn's framework internationally, demonstrating its relevance in diverse countries such as the US, UK, and beyond. Further studies, such as those by Rebello (2013) in Argentina, highlighted factors like material conditions and research opportunities as critical to job satisfaction, often finding them lacking. Similarly, Gessesse and Premanandam (2023) identified salary, supervision, and job security as key factors in Addis Ababa, with differences noted between public and private institutions.

Other research points to harmful factors like work overload, role conflict, and lack of autonomy as detrimental to job satisfaction (Monnapula-Mapesela, 2002; Miller, 2003). Academic job satisfaction varies by individual and contextual factors (Lacy & Sheehan, 1997).

3. Research methodology

3.1. Designing research methods

We employed quantitative research methods to examine the differences in job satisfaction between university lecturers at public and non-public universities in Vietnam. We meticulously identified the factors affecting job satisfaction by analyzing these influences. The main techniques used include testing scale reliability with Cronbach's Alpha, conducting Exploratory Factor Analysis (EFA), and applying multiple linear regression analysis with the Pearson correlation coefficient.

Multiple regression analysis was performed separately for lecturers from public and non-public universities. This approach allowed us to compare the impact of independent variables on job satisfaction across these two groups. Subsequently, we used one-way ANOVA to compare job satisfaction levels between the two types of institutions. All technical operations were carried out using SPSS 25 software.

3.2. The scale

To adapt the research context to Vietnamese universities, we used several independent variables to measure general job satisfaction, including income according to Cross (1973), Hackman & Oldham (1975), Smith et al. (1969), Specto (2022); the job itself (Cross, 1973; Smith et al., 1969; Khaleque & Rahman, 1987; Scarpello & Campbell, 1983); development opportunities (Hagedorn, 2000; Herzberg et al., 1993); recognition (Khaleque & Rahman, 1987, Macdonald & Maclntyre, 1997, Yuzuk, 1961); interpersonal relationships (Cross, 1973; Khaleque & Rahman, 1987; Scarpello & Campbell, 1983); environment and working conditions (Yuzuk, 1961; Khaleque & Rahman, 1987; Scarpello & Campbell, 1983).

The independent variable in the study is the level of job satisfaction. The scale of independent variables was selectively inherited from previous studies with adjustments to suit the style and context in

Vietnam. As for the dependent variable scale, the author uses 6 questions inherited from the scales of Fields (2002), Taylor & Tashakkori (1995), Gessesse & Premanandam, (2023), Rebello (2013), Bentley et al. (2015).

3.3. Data

According to data published by the Ministry of Education and Training of Vietnam, there were 78,190 full-time university lecturers in the academic year 2021-2022. Of these, 58,011 were employed at public universities, and 20,179 were at non-public universities. Based on Yamane's (1967) sampling formula, with a 5% margin of error, the required sample size was 383. To ensure comparability, the authors surveyed 820 lecturers, evenly distributed between public and non-public universities (410 from each).

A convenient random sampling method was employed, selecting eight public and eight non-public universities for the survey. As detailed in Figure 1, the number of questionnaires administered at each university was proportional to its faculty size. Of the distributed questionnaires, 406 responses from public universities and 394 from non-public universities were deemed valid for analysis.

Surveys were conducted in person with assistance from colleagues at the selected institutions. The sample was carefully structured to reflect diverse groups of lecturers based on age, gender, professional level, teaching seniority, and academic major.

Figure 1: Proportion of Research Sample

Public Universities				Non-Public Universities			
University symbol	Overall (Ni)	Survey sample ni=Ni*410/ 4476	Use for analysis	University symbol	Overall (Ni)	Survey sample ni=Ni*410/ 3658	Use for analysis
T1	432	40	39	T9	402	45	44
T2	890	82	82	T10	368	41	40
T3	673	62	61	T11	290	34	32
T4	476	43	43	T12	510	57	55
T5	398	36	35	T13	897	100	95
T6	478	44	43	T14	420	47	46
T7	502	46	46	T15	394	44	42
T8	627	57	57	T16	377	42	40
Total	4.476	410	406	Total	3.658	410	394

(Source: Compiled by the authors, in 2023)

The sample is determined according to the formula: ni=Ni*(400/N), where ni is the number of teachers selected for the survey, Ni is the number of teachers in each university, and N is the total number of teachers by university group.

4. Findings

4.1.Testing the scale using Cronbach's Alpha

The results of the scale reliability test using Cronbach's Alpha indicate that all independent and dependent variables have coefficients greater than 0.7. Specifically, the income variable (INC) exhibits the highest Cronbach's Alpha of 0.912, while the environment and working conditions variable (EWC) has the lowest Cronbach's Alpha of 0.842 (Figure 2). Since all variables have Cronbach's Alpha values exceeding 0.7, the scales are reliable, unidimensional, and thus suitable for continued use in research (Hair et al., 2010).

Figure 2: Cronbach's Alpha Coefficient

No.	Symbol	Factors	Cronbach's Alpha
1	INC	Income	0.912
2	WPJ	The job itself	0.884
3	OFP	Development opportunities	0.877
4	REC	Recognition	0.903
5	RAW	Relationships at work	0.886
6	EWC	Environment and working conditions	0.842
7	JOS	Job satisfaction	0.906

(Source: Compiled by the authors, in 2024)

In addition, the Cronbach's Alpha analysis reveals that all observed variables have Corrected Item-Total Correlation coefficients exceeding 0.3. This suggests that the scales are robust and suitable for measuring factors affecting job satisfaction among teachers at both public and non-public universities in Vietnam. The high Corrected Item-Total Correlation coefficients indicate a strong positive correlation between the observed variables and the remaining variables within the scale, affirming their quality (Cristobal et al., 2007). Furthermore, no observed variable has a Corrected Item-Total Correlation coefficient more significant than the group's Cronbach's Alpha coefficient, confirming that all variables are appropriate for inclusion in the exploratory factor analysis.

4.2. Exploratory Factor Analysis (EFA)

Following the reliability testing using Cronbach's Alpha, Exploratory Factor Analysis (EFA) was conducted to analyze the underlying factors. EFA was performed using Principal Axis Factoring and Promax rotation. The analysis was carried out separately for independent and dependent variables to verify their appropriateness.

Independent variables include the Kaiser-Meyer-Olkin (KMO) coefficient for the independent variables was 0.846 (Figure 3), well above the threshold of 0.5, indicating suitability for factor analysis; the Bartlett's Test of Sphericity was significant ($p < 0.05$), suggesting that the observed variables are correlated and suitable for factor analysis; and the Eigenvalues for the six factors affecting job satisfaction were all greater than 1, justifying the retention of these factors in the model. The total variance explained by these six factors was 72.198% (Figure 4), exceeding the acceptable threshold of 50%.

Figure 3. Exploratory factor analysis results for independent variables

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.846
Bartlett's Test of Sphericity	Approx. Chi-Square	241.325
	df	6
	Sig.	0

(Source: Author's data processing results on SPSS 25.0, 2024)

Figure 4: Total Variance explained with Independent Variable

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.262	22.363	22.363	6.262	22.363	22.363	3.842	13.723	13.723
2	3.821	13.646	36.009	3.821	13.646	36.009	3.666	13.091	26.814
3	3.27	11.677	47.686	3.27	11.677	47.686	3.504	12.516	39.33
4	2.577	9.202	56.888	2.577	9.202	56.888	3.434	12.263	51.593
5	2.269	8.104	64.992	2.269	8.104	64.992	2.985	10.661	62.254
6	2.018	7.206	72.198	2.018	7.206	72.198	2.784	9.944	72.198
7	0.984	3.515	75.713						
8	0.576	2.056	77.769						
9	0.553	1.976	79.745						
10	0.478	1.708	81.454						
11	0.472	1.687	83.141						
12	0.432	1.544	84.685						
13	0.412	1.473	86.158						
14	0.389	1.391	87.549						
15	0.367	1.312	88.86						
16	0.345	1.231	90.091						
17	0.314	1.123	91.214						
18	0.294	1.049	92.262						
19	0.283	1.01	93.272						
20	0.266	0.949	94.221						
21	0.251	0.895	95.116						
22	0.235	0.84	95.956						
23	0.212	0.758	96.714						
24	0.209	0.746	97.46						
25	0.2	0.715	98.175						
26	0.19	0.678	98.853						
27	0.162	0.578	99.431						
28	0.159	0.569	100						

Extraction Method: Principal Component Analysis.

(Source: Compiled by the authors, in 2024)

The rotated matrix image shows that the 28 observed variables load onto six factors: INC (income), WPJ (the job itself), OFP (development opportunities), REC (recognition), RAW (relationships at work), and EWC (environment and working conditions). All observed variables have factor loadings greater than 0.5 and do not cross-load on multiple factors. This confirms that the six factors extracted are representative and align with the proposed research model.

Figure 5: Rotation Matrix

	Component					
	1	2	3	4	5	6
INC5	0.882					
INC4	0.878					
INC1	0.862					
INC3	0.857					
INC2	0.734					
REC5		0.851				
REC1		0.84				
REC4		0.84				
REC2		0.827				
REC3		0.801				
RAW3			0.875			
RAW1			0.853			
RAW2			0.827			
RAW4			0.813			
RAW5			0.754			
WPJ4				0.871		
WPJ2				0.823		
WPJ5				0.794		
WPJ1				0.785		
WPJ3				0.766		
OFP2					0.867	
OFP1					0.835	
OFP4					0.832	
OFP3					0.81	
EWC2						0.837
EWC1						0.823
EWC3						0.808
EWC4						0.757

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

(Source: Compiled by the authors, in 2024)

Regarding dependent variables, the KMO coefficient was 0.858 (Figure 6), which falls within the acceptable range (0.5 < KMO < 1) for exploratory factor analysis (EFA). Bartlett's Test of Sphericity was significant ($p < 0.05$), indicating that the observed variables are appropriately correlated. The Eigenvalue of 4.139 confirmed the retention of all variables in the model. The total variance extracted was 68.977%, exceeding the 50% threshold, and the factor loadings for all dependent variable items were above 0.5, ensuring unidimensionality and coherence with the proposed research model.

Figure 6. Exploratory factor analysis results for dependent variable

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.858
Bartlett's Test of Sphericity	Approx. Chi-Square	3245.207
	df	465
	Sig.	0

(Source: Author's data processing results on SPSS 25.0, 2024)

Testing the correlation between variables results in a sig coefficient. The Pearson correlation coefficients between the independent variables (INC, WPJ, OFP, REC, RAW, EWC) and the dependent variable (JOC) were statistically significant ($p < 0.05$), indicating a meaningful linear relationship. Importantly, the correlations among independent variables were generally small (sig > 0.05), with some pairs having a significant correlation but none exceeding an absolute value of 0.7. This emphasizes that multicollinearity is not an issue (Dormann et al., 2013).

4.3. Analyzing regression and correlation

Based on the scale reliability analysis and the research model, multiple regression analysis was conducted to evaluate each factor's impact on the teaching staff's job satisfaction. The linear regression model was applied separately for public and non-public university teachers using the single-pass inclusion method.

Figure 7. Model Summary Analysis Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson Public universities	Durbin-WatsonNon-Public universities
1	0.811[a]	0.657	0.641	0.73041	1.6015	1.592

a. Predictors: (Constant), TL, TH, SL, CC, KN, KT

b. Dependent Variable: HH

(Source: Author's data processing results on SPSS 25.0, 2024)

The adjusted R2 coefficient for public universities was 0.641 (Figure 7), indicating that the independent variables account for 64.1% of the variation in job satisfaction (JOS), with 35.9% of the variation attributed to factors not included in the model. The adjusted R2 coefficient for non-public universities was 0.645, showing a similar explanatory power, with 64.5% of the variation explained and 35.5% unexplained by the model.

The Durbin-Watson test yielded coefficients of 1.6015 (Figure 7), for public universities and 1.592 for non-public universities, within the acceptable range of 1.5

to 2.5, indicating no violation of the first-order serial autocorrelation assumption.

The F-test results were statistically significant ($p < 0.05$) for both groups, confirming the adequacy of the linear regression model for the collected data. Furthermore, all Variance Inflation Factor (VIF) values for the six independent variables (INC, WPJ, OFP, REC, RAW, and EWC) were below 2, and the significance values were less than 0.05, indicating no multicollinearity among the independent variables. All regression coefficients were positive, suggesting that INC, WPJ, OFP, REC, RAW, and EWC positively affect job satisfaction (JOS).

Figure 8: Regression coefficients

Institution		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Public	(Constant)	-0.559	0.246		-2.27	0.024		
	INC	0.084	0.035	0.107	2.403	0.017	0.929	1.076
	WPJ	0.248	0.054	0.24	4.636	0	0.685	1.46
	OFP	0.14	0.039	0.171	3.596	0	0.809	1.236
	REC	0.012	0.036	0.016	0.343	0.732	0.868	1.152
	RAW	0.515	0.046	0.492	11.148	0	0.938	1.066
	EWC	0.222	0.042	0.265	5.287	0	0.731	1.367
Private	(Constant)	-2.042	0.327		-6.237	0		
	INC	0.333	0.055	0.278	6.082	0	0.897	1.115
	WPJ	0.216	0.04	0.247	5.426	0	0.9	1.111
	OFP	0.248	0.048	0.25	5.205	0	0.809	1.236
	REC	0.346	0.056	0.294	6.12	0	0.811	1.233
	RAW	0.124	0.055	0.102	2.255	0.025	0.921	1.085
	EWC	0.271	0.049	0.248	5.554	0	0.939	1.066

a. Dependent Variable: JOB

(Source: Compiled by the authors, in 2024)

The research results indicate that, at non-public universities, all six independent variables (income, job itself, development opportunities, recognition, relationships at work, environment, and working conditions) significantly impact job satisfaction, with t-test significance coefficients below 0.05. At public universities, however, recognition (REC) does not significantly affect job satisfaction (t-test significance coefficient of 0.732), though the other variables (INC, WPJ, OFP, RAW, EWC) do.

In both university types, independent variables positively impact job satisfaction. However, public universities show a fascinatingly wide variation in standardized beta coefficients, with values ranging from 0.492 to 0.16, compared to 0.294 to 0.102 at non-public universities. Figure 6 summarizes these coefficients.

Figure 9: Standardized Regression Coefficients

Factors		Standardized regression coefficients	
Symbol	Variable	Public universities	Non-public universities
INC	Salary	0.107	0.278
WPJ	Job itself	0.24	0.247
OFP	Development opportunities	0.171	0.25
REC	Recognition	0.016	0.294
RAW	Relationships at work	0.492	0.102
EWC	Environment and working conditions	0.265	0.248

(Source: Compiled by the authors, in 2024)

At public universities, relationships at work have the highest impact on teacher satisfaction (regression coefficient of 0.492), while at non-public universities, the effect is much smaller (0.102). Conversely, recognition and development opportunities significantly affect job satisfaction at non-public universities, with coefficients of 0.294 and 0.25, respectively, but have lower impacts at public universities (0.16 and 0.171). The effects of the job, the environment, and working conditions are similar across both institutions.

The Independent Sample T-test reveals a significant difference in job satisfaction between teachers at public and non-public universities, with an F-test Sig coefficient of 0.004 and a T-test Sig of 0.001, both below 0.05. Teachers at public universities have an average job satisfaction score of 3.8465, compared to 3.533 for non-public universities. These results align with the earlier regression and correlation analyses, highlighting notable differences in job satisfaction between the two groups.

5. Discussions and conclusions

The regression analysis results, with an F-value of 0.000 < 0.001 in both public and non-public university groups, indicate the overall regression model is highly significant. This model, which explains over 60% of the job satisfaction levels for lecturers at these universities in Vietnam, provides a comprehensive understanding of the factors influencing job satisfaction. The independent variables - income, the job itself, development opportunities, relationships at work, and working environment - are significant across the model, with p-values all below 0.05. However, the recognition (REC) variable has a p-value of 0.732 in public universities, suggesting that recognition does not significantly impact job satisfaction for lecturers in this group, even though it is a significant factor for those in non-public universities.

This divergence from Maslow's (1954) hierarchy of needs, which posits that self-esteem and recognition are crucial for job satisfaction, is notable. Similarly, Herzberg and Snyderman (1993), Hagedorn (2000), and Bentley et al. (2015) identified recognition as a critical motivator for job satisfaction. However, our findings align with the reality in Vietnam, where recognition and reward activities are often formalized, untimely, and need more substance, leading to diminished value and impact (Nguyen, 2019).

The study also evaluates the reliability of the job satisfaction scale using Cronbach's Alpha, confirming that the scales used are robust and effectively measure the intended variables. In public universities, the most significant factors influencing job satisfaction are the working environment and conditions, with a regression coefficient of 0.492, followed by relationships at work (0.265), the job itself (0.24), development opportunities (0.171), and income (0.107). In contrast, for non-public universities, recognition has the strongest impact on job satisfaction. The different levels of impact between public and non-public

universities underscore the need for further research into the underlying causes, which could provide valuable insights for improving job satisfaction among university lecturers.

Job satisfaction is considered an emotional response to work, encompassing positive and negative feelings (Weiss, 2002). Previous research, such as that by Cross (1973), Hackman & Oldham (1975), and Spector (2022), highlights the positive impact of salary on job satisfaction. This study confirms that income positively influences job satisfaction, with a more significant effect observed in non-public universities (standardized beta coefficient 0.278) than in public universities (0.107). The salary structures in public universities, governed by the Law 2010 on Public Employees (amended in 2019), are lower than in the private sector, which may contribute to this difference.

Interestingly, relationships at work substantially impact job satisfaction in public universities, with a coefficient of 0.492—the highest among all factors-while this impact is minimal (0.102) in non-public universities (Figure 9). This suggests limitations in building effective workplace relationships in non-public institutions despite the importance of such relationships in fostering satisfaction and long-term commitment.

The study further substantiates that the nature of the job and the working environment positively influence job satisfaction in both public and non-public universities. The ownership form does not significantly alter the impact of these factors. Despite typically better facilities and conditions in non-public universities, more is needed to improve satisfaction levels compared to public universities. Enhancing job content and improving working conditions could lead to greater satisfaction, fostering commitment, performance, and long-term attachment to the institution.

Development opportunities are crucial for employee satisfaction. This study provides evidence that development opportunities are strongly linked to job satisfaction among university lecturers, underscoring the importance of training, promotion, and professional development opportunities. The F-test and T-test results also confirm significant differences in job satisfaction between lecturers at public and non-public universities, with public university lecturers reporting higher overall satisfaction (mean value 3.8465) than their non-public counterparts (mean value 3.533).

In conclusion, the empirical results from this study highlight apparent differences in job satisfaction between lecturers at public and non-public universities in Vietnam. Factors such as salary, job, development opportunities, recognition, relationships at work, and the working environment significantly influence job satisfaction at non-public universities. In contrast, recognition does not significantly impact public university lecturers, who report higher overall satisfaction levels. These findings suggest that the governance model of universities affects job satisfaction among lecturers. Further research is needed to explore how governance, management style, and policy mechanisms influence satisfaction. This study contributes to the understanding of job satisfaction in Vietnamese universities. It offers a foundation for future research that could expand cross-nationally or consider additional factors such as gender, age, qualifications, and seniority. Finally, the study offers significant policy implications. Job satisfaction is critical not only for universities but also for national human resource development. Enhancing job satisfaction through better pay, working conditions, and recognition can improve teaching quality, foster creativity, and contribute to societal advancement. Policymakers and university leaders should pay greater attention to these factors, especially in developing countries like Vietnam.

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