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The effects of compensation and benefits, working environment, and training and career development on professional commitment among employees in private dental clinics

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Abstract: This study investigates the determinants of professional commitment among employees in private dental clinics. Drawing on Herzberg's two-factor theory and social exchange theory, the study examines the effects of compensation and benefits, working environment, and training and career development. Data collected from 305 employees were analyzed using reliability testing, EFA, and regression analysis. The results indicate that compensation and benefits have the strongest positive impact on professional commitment, followed by training and career development, while the working environment shows no significant effect. These findings highlight the importance of financial incentives and human capital investment in enhancing employee commitment in healthcare settings. The study contributes to the literature by providing empirical evidence from an emerging economy context. Managerial implications emphasize the need for competitive compensation, continuous training, and digital transformation in human resource management. Limitations and future research directions are also discussed.

Keywords: *Business administration, Human resource management, Labor economics, Professional commitment, Training and career development.*

1. Introduction

Professional commitment has emerged as a critical determinant of workforce stability and service quality, particularly in labor-intensive sectors such as private healthcare. In the context of private dental clinics, employees' commitment to their profession plays a vital role in ensuring service continuity, patient satisfaction, and organizational sustainability. However, increasing labor mobility, rising expectations, and competitive pressures have made it more challenging to maintain long-term professional commitment among healthcare workers.

From a theoretical perspective, professional commitment can be explained through several foundational frameworks. The two-factor theory [1] suggests that both hygiene factors (e.g., compensation, working conditions) and motivators (e.g., career development) influence employees' attitudes. Meanwhile, social exchange theory posits that employees reciprocate favorable organizational treatment with stronger commitment [2]. Additionally, human capital theory emphasizes the role of training and development in enhancing employees' long-term engagement with their profession.

From a practical standpoint, the healthcare sector, particularly private dental clinics in emerging economies such as Vietnam, has undergone a significant transformation. Rapid urbanization, increasing healthcare demand, and technological advancements, including AI-supported diagnostics and digital patient management systems, have reshaped work environments. These changes require not only technical competence but also a strong sense of professional commitment among employees.

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Despite increasing attention to human resource management in healthcare, empirical evidence on the determinants of professional commitment in private dental clinics remains limited, especially in developing countries. This study aims to address this gap by examining the effects of compensation and benefits, working environment, and training and career development on professional commitment among employees in private dental clinics.

2. Theoretical Background and Hypothesis

2.1. Theoretical background

2.1.1. Herzberg's Two-Factor Theory

Herzberg's [1] two-factor theory distinguishes between hygiene factors and motivators in shaping employee attitudes. Hygiene factors, such as salary and working conditions, prevent dissatisfaction, whereas motivators such as growth opportunities enhance job satisfaction and commitment.

In this study, compensation and benefits, as well as the working environment, represent hygiene factors, while training and career development serve as motivators. These factors are expected to influence employees' professional commitment differently but complementarily.

2.1.2. Social Exchange Theory

Social exchange theory [2] suggests that relationships between employees and organizations are based on reciprocal exchanges. When employees perceive fair compensation, supportive environments, and development opportunities, they are more likely to reciprocate with higher commitment.

Applied to this research, employees in dental clinics who perceive organizational support are expected to develop stronger professional commitment.

2.2. Literature Review

Recent studies have increasingly emphasized the importance of human resource practices in enhancing professional commitment, particularly in healthcare and service sectors.

Nguyen et al. [3] found that compensation and job satisfaction significantly influence employee commitment in Vietnam's healthcare sector. The study highlights that financial incentives remain a dominant factor in emerging economies, where income stability is a primary concern.

Tran and Nguyen [4] demonstrated that training and career development positively affect employee retention and long-term commitment. Their findings support human capital theory, emphasizing that investment in employee development enhances both productivity and loyalty.

Al-Hawari et al. [5] showed that work environment quality significantly affects employee engagement and commitment in healthcare organizations. However, the effect varies depending on contextual factors such as organizational culture and economic conditions.

Singh and Sharma [6] highlighted the role of digital transformation in human resource management. The authors found that the integration of ERP systems and AI-based HR analytics improves employee satisfaction and organizational commitment by enhancing transparency and efficiency.

Kumar et al. [7] argued that AI-enabled HR systems significantly enhance workforce engagement by providing personalized training and career development pathways. This suggests that digital technologies are becoming an important driver of employee commitment in modern organizations.

Despite these contributions, few studies have examined the combined effects of compensation, working environment, and training within the context of private dental clinics in emerging economies, particularly under conditions of digital transformation and AI adoption. This study addresses this gap by integrating traditional HR factors with a contemporary technological context.

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2.3. Hypothesis Development

2.3.1. Compensation And Benefits (CB), and Professional Commitment (PC)

Compensation is a key determinant of employee satisfaction and retention. Previous studies, Nguyen et al. [3], confirm that fair and competitive compensation enhances commitment.

H_1: Compensation and benefits positively affect professional commitment.

2.3.2. Working Environment (ENV), and Professional Commitment (PC)

A supportive and safe working environment contributes to psychological well-being and reduces burnout [8]. However, empirical findings are mixed depending on context.

H_2: Working environment positively affects professional commitment.

2.3.3. Training and Career Development (TRA), and Professional Commitment (PC)

Training enhances employees' skills and perceived career prospects, strengthening long-term engagement [9].

H_3: Training and career development positively affect professional commitment.

3. Methodology

This study employs a quantitative research approach using survey data collected from 305 employees working in private dental clinics. A structured questionnaire based on validated scales was used.

Measurement items were adapted from prior studies, including Allen and Meyer [10], Herzberg [1], and Noe [9]. All variables were measured using a five-point Likert scale (see Table 1).

Data analysis was conducted using SPSS, following these steps: reliability testing (Cronbach's Alpha), exploratory factor analysis (EFA), correlation analysis, and multiple regression analysis.

This approach ensures the reliability and validity of the measurement model and enables hypothesis testing.

Table 1.
Scales for the independent and dependent variables.

Code	Description	Sources
Professional commitment (PC)		
PC1	I intend to remain in my current profession for a long time.	Allen and Meyer [10]
PC2	I feel emotionally attached to my profession.	
PC3	I would find it difficult to leave my current profession.	
Compensation and Benefits (CB)		
CB1	My salary is commensurate with my job responsibilities.	Herzberg [1]; Nguyen et al. [3]
CB2	The bonus and incentive system is fair and motivating.	
CB3	The organization provides adequate welfare and benefits.	
Working Environment (ENV)		
ENV1	The working environment is safe and meets professional standards.	Maslach and Leiter [8]
ENV2	I have good relationships with colleagues.	
ENV3	The working conditions are comfortable and supportive.	
Training and Career Development (TRA)		
TRA1	I have opportunities to participate in professional training programs.	Noe [9]; Tran and Nguyen [4]
TRA2	The organization supports my career development.	
TRA3	I have clear opportunities for promotion.	

4. Results

4.1. The Quality Scale Analysis Result

In Tables 2 and 3, all constructs exhibit strong reliability ($\alpha > 0.8$), indicating internal consistency [11].

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Table 2.
Analysis of factors' confidence in scales.

Determinants	N	Cronbach's Alpha	Corrected Item-Total Correlation
Compensation and benefits (CB)	3	0.930	0.836
Working environment (ENV)	3	0.872	0.728
Training and career development (TRA)	3	0.866	0.740
Professional commitment (PC)	3	0.841	0.662

Table 3.
Results of Cronbach's alpha testing of attributes and item-total statistics.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Compensation and benefits (CB): α = 0.930				
CB1	7.121	1.962	0.883	0.881
CB2	7.233	1.798	0.836	0.918
CB3	7.062	1.874	0.856	0.898
Working environment (ENV): α = 0.872				
ENV1	5.705	2.459	0.752	0.823
ENV2	5.757	2.309	0.728	0.849
ENV3	5.620	2.454	0.792	0.789
Training and career development (TRA): α = 0.866				
TRA1	7.272	2.330	0.740	0.823
TRA2	7.305	2.009	0.754	0.804
TRA3	7.357	1.967	0.753	0.807
Professional commitment (PC): α = 0.841				
PC1	6.075	1.708	0.771	0.714
PC2	6.030	2.095	0.662	0.823
PC3	6.059	1.825	0.694	0.792

The high Cronbach's Alpha values (ranging from 0.841 to 0.930) confirm strong internal consistency across all constructs. This indicates that the measurement scales are reliable and suitable for capturing the underlying dimensions of professional commitment and its determinants. In particular, the compensation construct shows the highest reliability, suggesting that financial-related items are perceived consistently by respondents.

From an economic perspective, this reflects the standardized perception of compensation structures among employees in private dental clinics, where income and benefits are clearly defined and comparable across organizations.

4.2. Exploratory Factor Analysis (EFA)

According to Table 4 and Table 5, KMO = 0.872 and Sig. = 0.000 confirm data suitability. The extracted variance (83.2%) exceeds the threshold, supporting construct validity [11].

Table 4.
KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.872
Bartlett's Test of Sphericity	Approx. Chi-Square	1981.217
	Df	36
	Sig.	0.000

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Table 5.
Total Variance Explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Total	% of Variance	Cumulative %
1	5.153	57.254	57.254	5.153	57.254	2.686	29.849	29.849
2	1.188	13.196	70.449	1.188	13.196	2.409	26.772	56.621
3	1.148	12.753	83.202	1.148	12.753	2.392	26.581	83.202
4	0.368	4.094	87.296					
5	0.306	3.399	90.695					
6	0.276	3.063	93.757					
7	0.220	2.446	96.203					
8	0.201	2.228	98.431					
9	0.141	1.569	100.000					

Importantly, the clear factor separation implies that compensation, environment, and training are perceived as distinct dimensions. This is particularly relevant in the context of digital transformation, where ERP systems and data integration allow organizations to manage these dimensions more independently and efficiently.

4.3. Correlation Analysis Results

Next, Table 6 presents the correlation between independent and dependent variables.

Table 6.
Correlation between independent and dependent variables.

Description		Professional Commitment (PC)	Compensation and Benefits (CB)	Working Environment (ENV)	Training and Career Development (TRA)
Professional Commitment (PC)	Pearson Correlation	1	0.484**	0.349**	0.374**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	305	305	305	305
Compensation and Benefits (CB)	Pearson Correlation	0.484**	1	0.549**	0.538**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	305	305	305	305
Working Environment (ENV)	Pearson Correlation	0.349**	0.549**	1	0.509**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	305	305	305	305
Training and Career Development (TRA)	Pearson Correlation	0.374**	0.538**	0.509**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	305	305	305	305

Note: The symbol ** indicates that this pair of variables has a linear correlation at a 99% confidence level (corresponding to a significance level of 1% = 0.01).

All independent variables are positively correlated with professional commitment ($p < 0.01$), with compensation showing the strongest correlation ($r = 0.484^{**}$). This suggests that financial incentives remain the most immediate and visible factor influencing employee attitudes [11].

However, the moderate correlations of training ($r = 0.374^{**}$) and environment ($r = 0.349^{**}$) indicate that non-financial factors also contribute meaningfully, particularly in knowledge-intensive sectors such as healthcare.

4.4. Result of Regression Model Analysis

Table 7.
Model Summary[b].

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.506[a]	0.256	0.249	0.57131	1.813

Note: a. Predictors: (Constant), TRA, ENV, CB
b. Dependent Variable: PC.

Table 8.
ANOVA[a].

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.859	3	11.286	34.578	0.000[b]
	Residual	98.247	301	0.326		
	Total	132.106	304			

Note: a. Dependent Variable: PC
b. Predictors: (Constant), TRA, ENV, CB.

Table 9.
Regression model.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.080	0.199		5.422	0.000		
	CB	0.361	0.062	0.369	5.783	0.000	0.608	1.645
	ENV	0.068	0.055	0.078	1.243	0.215	0.635	1.576
	TRA	0.127	0.058	0.136	2.192	0.029	0.645	1.549

Note: a. Dependent Variable: PC.

Tables 7, 8, and 9 show that:

The model explains 25.6% of the variance ($R^2 = 0.256$), indicating moderate explanatory power [11]. The relatively low explanatory power ($R^2 = 0.256$) suggests that other factors, such as organizational culture, digital HR systems, and AI-enabled management, may also influence outcomes, emphasizing the need for future research.

The regression equation is as follows: PC = 0.369 CB + 0.136 TRA;

Compensation and benefits (CB) ($\beta = 0.369$, $p < 0.001$) → strongest effect: Financial incentives remain the primary driver; training and career development (TRA) ($\beta = 0.136$, $p < 0.05$) → moderate effect: Human capital investment plays a growing role; working environment (ENV) (not significant): Working environment alone is insufficient.

From an economic standpoint, this suggests that employees prioritize tangible financial rewards over intangible workplace conditions. In emerging markets, where income security remains a key concern, this finding aligns with labor economics theory.

Next, Table 10 presents the results of testing the research hypotheses.

Table 10.
Results of testing the research hypotheses.

No	Hypotheses	Test results	Trends of influence
1	H1	Accept	+
2	H2	Rejected	#
3	H3	Accept	+

4.5. Discussion

The findings confirm that compensation and benefits are the most significant determinants of professional commitment, consistent with Herzberg's theory and prior studies [3]. In emerging economies, financial stability remains a key concern.

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Training and career development also show a positive impact, supporting human capital theory and prior research [4]. This highlights the importance of long-term career pathways in retaining healthcare workers. In the context of digital transformation, training becomes even more important as employees must adapt to new technologies, including AI-based systems and ERP platforms.

Interestingly, the working environment does not significantly influence commitment. This contrasts with previous studies [8] suggesting that financial and career factors may outweigh environmental conditions in this context. Additionally, this finding contrasts with earlier studies, such as Al-Hawari et al. [5], indicating that in developing economies, financial and career-related factors may be more influential than environmental conditions. It also reflects the possibility that digitalization reduces dependence on physical work conditions, as many processes become system-driven.

Overall, the results highlight a shift toward technology-enabled human resource management, where financial incentives and skill development, supported by digital tools, play a more critical role than traditional workplace factors.

5. Implications

Compensation strategy: Organizations should develop competitive and transparent compensation systems to enhance employee commitment. In addition to base salary, performance-based incentives and digital payroll systems integrated with ERP can improve fairness and transparency, thereby strengthening employee trust.

Training and AI-enabled development: Firms should invest in continuous training programs, particularly those supported by AI technologies. AI-based learning systems can personalize training content, improving employee engagement and long-term professional commitment.

Digital HR and ERP integration: The integration of ERP systems into human resource management can improve data consistency and decision-making. Digital HR platforms allow real-time monitoring of employee performance and satisfaction, contributing to more effective workforce management.

Organizational strategy in digital transformation: Organizations should align HR strategies with digital transformation goals. This includes adopting AI tools, automating routine tasks, and focusing on high-value activities such as strategic decision-making and innovation.

Investment in training programs is essential. Continuous professional development improves both skills and engagement.

Policy implications: Policymakers should support healthcare workforce development through regulatory frameworks and incentives. They should also promote digital transformation in healthcare by providing guidelines and incentives for adopting AI and ERP systems. This will enhance workforce stability and improve service quality in the healthcare sector.

6. Conclusion

This study examines the determinants of professional commitment among employees in private dental clinics. The results highlight the dominant role of compensation and the importance of training.

However, the study has limitations. The sample is limited to Hanoi, and the model explains only part of the variance. Future research should include additional variables such as job satisfaction and organizational culture, and apply advanced methods such as SEM.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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