THE TALENTED EMPLOYEES' RETENTION STRATEGY OF THE E-COMMERCE ENTERPRISES: A STUDY OF THE MOA THEORETICAL FRAMEWORK

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Abstract

In the context of modern business, e-commerce is becoming an inevitable trend and gradually reaching new heights in Vietnam. There are many businesses that know how to take advantage of young human resources to build brands, create competitive advantages, increase profits, and expand business operations. However, this advantage is somewhat affected by the wave of employee resignations that is currently increasing. This study aims to fill these gaps by applying the motivation-opportunity-ability (MOA) theoretical framework proposed by MacInnis and Jaworski (1989) to retain talented employees. The dataset was collected by the authors through an online survey method, obtaining 732 survey responses from employees working in e-commerce businesses between September 2024 and December 2024. By employing quantitative research, the partial least squares structural equation modeling (PLS-SEM) approach was conducted using the SPSS and AMOS 20 software. The results provide clear evidence that the factors influencing long-term talent retention include two key elements: 1) opportunities for learning and career development, and 2) flexible working hours. This study refuted previous findings on the role of compensation in employee retention and provided evidence of optimal solutions for e-commerce businesses with limited salary budgets in retaining and developing human resources.

Keywords: Employee Satisfaction, Employee Engagement, MOA Theoretical Framework, E-Commerce, Modern Business

Authors' individual contribution: Conceptualization — L.K.D. and T.B.T.; Methodology — L.K.D. and T.B.T.; Validation — L.K.D. and T.B.T.; Formal Analysis — L.K.D. and T.B.T.; Resources — L.K.D. and T.B.T.; Writing — Review & Editing — L.K.D. and T.B.T.; Supervision — L.K.D. and T.B.T.; Project Administration — L.K.D. and T.B.T.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

1. INTRODUCTION

E-commerce includes buying and selling activities via the internet, transferring payment and data to complete those transactions. All online stores fall under this classification. This can include a variety of goods and services from consumer goods to luxury, as well as business-to-business (B2B) services.

Originating in the West in 1994, e-commerce began with the sale of compact discs (CDs) through

a website. In recent years, e-commerce has grown exponentially due to the COVID-19 pandemic, during which many businesses have adapted their models to better satisfy customers. The rapid evolution of information technology (IT) has transformed business practices, and the e-commerce trend continues to expand. During the pandemic, traditional businesses faced difficulties, while e-commerce companies continued to thrive. Businesses that effectively integrated technology into their operations, such as e-shopping, e-business, e-sales, e-payments, e-banking, e-delivery, and e-customer management, were able to reach diverse customer segments, reduce costs, increase sales efficiency, optimize operational processes, improve business performance, and boost revenue and profits. Online stores typically have lower setup and operational costs compared to traditional stores (including rent, furniture, signage, etc.). An online store is not limited to selling only 24/7; instead, customers can purchase products and services at any time of the day from any location worldwide. As a result, businesses can significantly increase their sales. Additionally, in the online marketplace, digital marketing offers diverse experiences for customers. Social media tools and search engine optimization enable businesses to connect with potential customers quickly. Companies can analyze consumer behavior and habits by monitoring shopping carts and improving transaction and payment processes.

In Vietnam, the e-commerce sector continues to grow strongly, with a growth rate exceeding 25% and a market size of over \$25 billion. Among this, the online retail market size has reached \$17.3 billion. This growth rate surpasses that of the overall economy. According to the General Statistics Office, Vietnam's gross domestic product in 2023 is estimated to have increased by 5.1% compared to the previous year. The services sector grew by 6.8%, with the transportation and warehousing industry increasing by 9.2%, financial, banking, and insurance activities rising by 6.2%, and accommodation and food services expanding by 12.2%. For the entire year of 2023, the total retail sales of goods and consumer service revenue at current prices were estimated at VND 6,232 trillion, an increase of 9.6%. Among this, retail sales of goods reached approximately VND 4,859 trillion, accounting for 78% of total retail sales and increasing by 8.6% compared to the previous year (Vietnam E-commerce Association [VECOM], 2024).

In the past decade, there have been several studies related to employee turnover behavior based on the motivation-opportunity-ability (MOA) framework, including research by Agyapong et al. (2019), Aman-Ullah et al. (2023), Saeed et al. (2023), and Berber and Gašić (2024). These studies suggest that factors such as remuneration and income have a positive impact on the intention to leave the job among e-commerce employees. The authors like Coomber and Barriball (2007), Kettinger et al. (2015), Ali (2020), Hundal and Zinakova (2021), Dousin et al. (2021), Padmavathi (2023), and Tee (2024) studied how environmental factors and professional working hours positively impact the intention to leave the job among e-commerce employees. Additionally, authors like Cho and Huang (2012), Qatawneh and Bader (2021), Jie (2023), Bajaber (2024), Al-Mahameed (2024), Gallo and Comite (2024), Aboelazm and Dganni (2025) studied how factors such as competence and

opportunities for learning and career development positively affect the intention to leave the job among e-commerce employees.

Thus, research documents on human resources in commercial enterprises are still limited; there has been no research on the application of the MOA theoretical framework to retain employees in the e-commerce industry, especially in countries with gradually developing technology industries like Vietnam. The goal of this study is to use the MOA theoretical framework to find out the factors that retain employees currently working in e-commerce enterprises in Vietnam. The MOA model was proposed by MacInnis and Jaworski (1989). The theory of this model suggests that the extent to which individuals process information to make decisions is based on three factors: motivation, opportunity, and ability. Specifically, the three MOA factors defined by the authors of the model are as follows:

• *Motivation*: Motivation is a combination of readiness, willingness, interest, and desire to process information in the context of persuasive communication.

• *Opportunity*: Opportunity refers to the availability of time and favorable conditions that allow for action.

• *Competence*: Competence is understood as the ability and knowledge capacity of the employee.

The main contributions of the research study are that salary is not a factor in retaining employees, and working hours and training opportunities are the goals of e-commerce employees.

The structure of this paper is as follows. Section 2 presents the previous studies related documents, as well as previous research methods, including fundamental theories as well as empirical studies on the application of the MOA theoretical framework in employee retention in e-commerce enterprises, thereby proposing the research hypotheses of the paper. Section 3, based on the documents, describes the method and proposes the research model. Sections 4 and 5, through the results from the model, analyze the results and discuss the research findings. Section 6 concludes the research content, solutions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The MOA theoretical framework was proposed by MacInnis and Jaworski (1989) in their article on processing relevant information from advertising. The integrated attitude formation model includes the antecedent levels of ability, motivation, and opportunity, brand information processing, cognitive and emotional responses, brand attitude formation process, and brand attitude. According to the theory, employee attitudes or behaviors are shaped by motivation (employees' desires or needs), opportunity (employees' attention to their work), and ability (employees' capabilities). This means that employee behavioral intentions are more likely to be activated by personal motivation (whether they want to do it or not), opportunity (whether they support it or not), and ability (whether they have the conditions to do it or not). The MOA theoretical framework has been widely applied in various research fields, such as marketing (Van Waeyenberg & Decramer, 2018) and human resources (Kellner et al., 2019; Sibian & Ispas, 2021).

Employee engagement and loyalty are described by Elegido (2013) and Al-Hmesat et al. (2025) as an individual's emotional attachment to an organization. This is reflected in a strong belief in the company's goals and values, a willingness to serve the organization, and a desire to remain with the company long-term.

2.1. The relationship between compensation, income, and intention to leave the job of e-commerce employees

Financial compensation refers to rewards provided through financial instruments such as salaries, bonuses, allowances, subsidies, benefits, and company shares. Employee compensation is a crucial factor in human resource management, significantly impacting work motivation, labor productivity, and the achievement of business objectives. Employee compensation serves as a tool for e-commerce business managers to effectively manage their workforce, create favorable working conditions, enhance task completion, and act as a motivator to fully develop employees' capabilities and intelligence. Within the MOA theoretical framework, financial compensation, including salaries and income, is considered a key motivator for fostering job commitment. However, research findings on its impact vary. Some studies suggest that financial compensation has no correlation with employees' intention to leave, while others indicate the opposite. Specifically, as follows:

According to Agyapong et al. (2019), a study was conducted to analyze the relationship between income, salary, and the intention to leave a job at a university in Ghana. Data was collected using structural analysis, and the results indicated that there was no evidence linking job-leaving intentions to income levels, benefits, or additional allowances. On the contrary, a negative relationship was found between these factors (Agyapong et al., 2019). This suggests that managers should not focus excessively on salaries or financial compensation packages but should explore alternative solutions to retain employees.

According to Aman-Ullah et al. (2023), the study examined the impact of income on employees' intention to leave their jobs, with job satisfaction acting as a mediating factor. A questionnaire was designed and administered to 600 nurses working in a hospital in Pakistan. Data analysis was conducted using SPSS and SmartPLS software (Aman-Ullah et al., 2023). The results provided evidence of a relationship between salary benefits and employees' intention to leave their jobs. The researchers encouraged businesses to develop fair compensation policies to retain employees. Additionally, the study highlighted that the relationship between salary and job-leaving intention is mediated by job satisfaction, which is considered a novel finding compared to previous research.

According to Saeed et al. (2023), a company's success depends on the level of commitment and willingness of employees to contribute. The study aimed to examine the relationship between income and employees' intention to leave their jobs, considering job satisfaction and work performance as mediating factors (Saeed et al., 2023). The study was based on 343 observations from employees working in a banking organization. Using SPSS 6 for data analysis, the findings provided evidence

that salary significantly influences employees' job satisfaction, ultimately leading to their intention to leave.

According to Berber and Gašić (2024), the study aimed to determine the role of employee commitment in the relationship between salary and employees' intention to leave their jobs in the Republic of Serbia. The research data were collected from 764 employees through an online questionnaire. Using partial least squares structural equation modeling (PLS-SEM) with SPSS and SmartPLS, the findings provided evidence of a positive relationship between compensation, income, and employee commitment, as well as a significant negative relationship between compensation and the intention to leave the job. The results indicate an inconsistency between employee attitudes and rewards, and particularly, Serbian companies tend to use salary as a tool to reduce employee turnover rates.

Based on theory, the article proposes the following hypothesis:

H1: Compensation and income factors have a positive impact on the intention to leave the job of e-commerce employees.

2.2. The relationship between a professional work environment and the intention to leave the job of e-commerce employees

The work environment is simply understood as the surrounding conditions, encompassing all activities of an employee. More specifically, the environment includes physical conditions such as workspace, office design, and supporting equipment for work, as well as the corporate work culture. Over the past decade, numerous studies have shown that skilled employees pay attention to the work environment, and the work environment influences their behavior and desires specifically, as follows.

According to Coomber and Barriball (2007), job satisfaction contributes to employees' intention to leave their jobs. The authors sought evidence on job satisfaction, turnover intention, and turnover rates at a hospital in England. A secondary database was used for analysis. The factors considered included leadership, education level, salary, and work-related stress (Coomber & Barriball, 2007). The results indicated that work-related stress impacted employees' turnover rates. Education level and salary influenced job dissatisfaction, but the findings were inconsistent. The study concluded that factors related to the work environment had a greater impact on employees' intention to leave than other demographic factors.

According to Kettinger et al. (2015), the MOA theoretical framework was used to examine knowledge sharing among employees within an organization. The factors considered included psychological environment, information management capability, and IT support (Kettinger et al., 2015). An experiment conducted showed that the psychological environment had a significant impact on promoting employees' knowledge-sharing behavior. Organizational awareness of using IT to support knowledge work strongly influenced information management capability but did not directly affect knowledge sharing, indicating that IT investment yields indirect benefits. The study recommended that managers should consider

improving the work environment, enhancing information management capabilities, and fostering an open, friendly, and collaborative workplace culture.

According to Dousin et al. (2021), the study examined the impact of employee benefits on turnover intention through work-life balance and achievement. The authors collected data from 401 nurses in Malaysia over two phases from 2015 to 2017. The results indicated that job satisfaction played a mediating role between work-life balance and employees' turnover intentions (Dousin et al., 2021). The study suggested that implementing flexible working hours, adopting collaborative work methods, and improving salary and income policies could help reduce employee turnover rates.

According to Padmavathi (2023), the study aimed to clarify the impact of the work environment on employee engagement, job satisfaction, and retention. The authors collected 181 survey responses from employees of an e-commerce company in India. Using multiple regression analysis and mediation analysis, the results showed that job satisfaction and work engagement were entirely influenced by the work environment (Padmavathi, 2023). The study suggested that factors such as perceived work environment, managerial relationships, team interactions, and organizational support significantly affect employee satisfaction and engagement. When employees are provided with a supportive work environment, supervisory support, strong peer interactions, and organizational backing, they are more likely to stay committed to the organization for an extended period.

According to Tee (2024), workplace ostracism is a factor related to the work environment, while psychological capital can enhance employees' mental well-being and mitigate the harmful effects of workplace ostracism on job turnover intentions. Based on data collected from 160 respondents, including 52.5% female and 47.5% male executives working at e-commerce companies in Malaysia, with an average age of 27.89 years old, the study employed an unrestricted self-selection survey method with specific criteria (Tee, 2024). The results provide significant evidence of a positive relationship between workplace ostracism and turnover intentions, while a significant negative relationship exists between psychological capital and turnover intentions. However, psychological capital does not mitigate the relationship between workplace ostracism and turnover intentions. The study recommends raising awareness among employers in Malaysian e-commerce companies about taking proactive measures to address workplace ostracism. Additionally, organizing workshops on psychological capital is necessary to reduce turnover intentions among executives in Malaysian e-commerce companies.

Based on the theoretical framework, the article proposes the following hypotheses:

H2: The factor of a professional working environment has a positive impact on the turnover intentions of e-commerce employees.

H3: The factor of flexible working hours has a positive impact on the turnover intentions of e-commerce employees.

2.3. The relationship between employee capabilities and the turnover intentions of e-commerce employees

Employee capabilities are specified in the attitude-knowledge-skill (ASK) framework. ASK is one of the standard models commonly used by businesses today (Bloom, 1956). The purpose is to evaluate or establish employee competency standards based on three main factors: attitude, knowledge, and skill.

According to Cho and Huang (2012), the study aimed to find evidence on how organizational commitment and career commitment affect employees' intention to leave their jobs for career advancement. Based on a list of members from a large computer association in Hong Kong, 500 members were randomly selected, and information was collected by sending emails. After two follow-up emails, 265 responses were received, with a response rate of 53%. The results showed that organizational commitment affects employees' intention to leave their jobs. This finding is explained by the cognitive dissonance process regarding professional commitment and organizational commitment. There is a significant relationship between organizational commitment and professional competence.

According to Jie (2023), the study aimed to examine the impact of career adaptability and job satisfaction on job performance and employee engagement. The database was collected from 340 employees at a training institution in China through survey questionnaires. Using the structural equation modeling (SEM) approach, the results indicated that career adaptability and employee satisfaction significantly influence job performance and employee engagement. Additionally, the study found that organizational commitment and self-efficacy serve as mediators in the relationship between career adaptability, job satisfaction, e-commerce job performance, and employee satisfaction. The study recommends that vocational college management should gain a deeper understanding of the importance of career adaptability, job satisfaction, organizational commitment, and employee engagement.

Bajaber (2024), based on the MOA theoretical framework, developed a model to identify factors influencing employees' learning ability. The dataset consists of 430 valid observations obtained through a questionnaire survey, using a linear SEM. The results indicated that the most significant influences on the intention to learn are ability, followed by motivation, and, finally, opportunities for employees. Among motivational factors, personal interest played a crucial role; among opportunity factors, course quality, perceived cost, and social influence were significant; and among ability factors, self-efficacy and transcendent recognition had a notable impact on employees' willingness to undergo training, their knowledge needs, and their achievements (Bajaber, 2024).

Based on the theoretical framework, the article proposes the following hypotheses:

H4: Employee competency factors have a positive impact on the intention to leave the job of e-commerce employees.

H5: Learning and career development opportunities have a positive impact on the intention to leave the job of e-commerce employees.

3. RESEARCH METHODOLOGY

The MOA model suggests that an individual's behavior is determined by their motivation, opportunity, and ability to perform the behavior. This study utilizes SPSS 20 and AMOS 20 (Arbuckle, 2011) to test the PLS-SEM framework, aiming to find evidence of the relationships between MOA factors

in retaining employees currently working at e-commerce enterprises in Vietnam. PLS-SEM estimates the parameters of the model based on the variance-based matrix. PLS-SEM is used when the researcher proposes a model with more than four independent variables and deals with the relationships closely.

To achieve the best results, the authors follow a validation process based on Anderson and Gerbing (1988). The SEM analysis process includes:

1) Scale test: The overall alpha coefficient is > 0.6, and the corrected item-total correlation is > 0.3.

2) Exploratory factor analysis (EFA): The suitability of the measurement scale requires Kaiser-Meyer-Olkin (KMO) of $0.5 \leq KMO \leq 1$, Bartlett's test of sphericity significance (Sig.) ≤ 0.05, extracted variance > 50% and eigenvalues > 1, factor loadings must be > 0.3 given the sample size of 732, which is above 255 (Hair et al., 2006).

3) Confirmatory factor analysis (CFA). The adjusted Chi-square/degree of freedom ratio (CMIN/Df) ≤ 5 (Bentler, 1980), Tucker-Lewis index (TLI) > 0.9 (Hu & Bentler, 1998), comparative fit index (CFI) > 0.9 (Hu & Bentler, 1998), normal fit index (NFI) > 0.9 (Hu & Bentler, 1998; Bentler, 1980), root mean square error approximation (RMSEA) < 0.05 (Browne & Cudeck, 1992).

4) Structural equation modeling (SEM). The research equation is formulated as:

$$ILJ = f(FRI, WEF, WTF, ECF, OLD) \qquad (1)$$

where,
- *FRI*: factors, remuneration, and income;
- *WEF*: work environment factors;
- *WTF*: working time factor;
- *ECF*: employee competency factor;
- *OLD*: opportunity to learn and develop;
- *ILJ*: intention to leave their job.

The research model is illustrated in Figure 1.

Figure 1. Research model
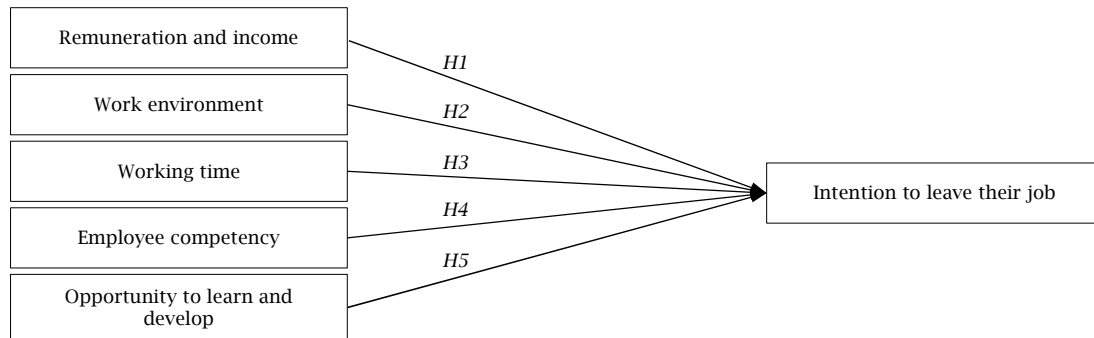
Source: Authors' elaboration.

The variables in the model are measured using a five-point Likert (1932) scale, which is a series of responses related to the attitude in the survey question, where the respondent will choose only one of the provided answers. According to this scale, the response "completely dissatisfied" is recorded as 1, "dissatisfied" as 2, "neutral" as 3, "satisfied" as 4, and "completely satisfied" as 5.

Firstly, based on the theory, the authors conducted interviews with 8 experts and finalized the survey questionnaire. Based on this, the authors launched the survey. The research collected 732 online survey responses from employees working at e-commerce businesses in Vietnam. Due to limited resources and time, the data collection period was from September 1, 2024, to November 30, 2024. According to Bollen (1989), when analyzing a SEM, the sample size is calculated using the formula $n = 5 * 2i$ (*i* is the observed variable in the model). According to Tabachnick and Fidell (2007), the sample size for multiple linear regression analysis is calculated using the formula $n = 50 + 8q$ (*q* is the number of independent variables in the model). Therefore, with 732 observations, the sample size meets the requirement.

The details are shown in Table 1 below.

Table 1. Statistics describing sociodemographic characteristics of survey participants

No.	Sociodemographic characteristics of the survey participants		Quantity	Rate (%)
1	Gender	Male	612	83.61
		Female	120	16.39
2	Age	18–30 years old	422	57.65
		31–40 years old	245	33.47
		41–50 years old	33	4.51
		50–55 years old	30	4.10
		Over 56 years old	2	0.27
3	Level	Intermediate	185	25.27
		College	112	15.30
		University	370	50.55
		Postgraduate	65	8.88
4	Job position	Board of directors	12	1.64
		Department heads	82	11.20
		Team leaders	122	16.67
		Staff	516	70.49
5	Experience	1–5 years	352	48.09
		5–7 years	133	18.17
		7–10 years	126	17.21
		Over 10 years	121	16.53

Source: Authors' elaboration.

The data in Table 1 show that descriptive statistical results reveal distinctive sociodemographic characteristics of the surveyed workforce. In terms of gender, male participants overwhelmingly dominate the sample (83.61%), indicating a notable gender imbalance within the surveyed e-commerce sector. Age distribution is concentrated among younger cohorts, with 57.65% aged 18–30 years old, and 33.47% aged 31–40 years old, suggesting that the labor force is predominantly young. Regarding educational attainment, a majority of respondents hold a university degree or higher (59.43%), reflecting a relatively high level of professional qualification. In terms of job position, the vast majority are staff-level employees (70.49%), whereas managerial and executive roles constitute a small proportion. Work experience data show that nearly half of the participants (48.09%) have between one and five years of experience, indicating high workforce mobility and potential challenges in long-term talent retention. These demographic characteristics provide a critical foundation for developing appropriate employee retention strategies, particularly when applying the MOA theoretical framework. Based on theory, the Author of the article built a scale as follows in Table 2.

Table 2. Measurement scale and variables in the research model

No.	Symbol	Survey questions for respondents	Reference
I. Factors remuneration and income (FRI)			
1	FRI1	The income paid is commensurate with your abilities.	Agyapong et al. (2019), Aman-Ullah et al. (2023), Saeed et al. (2023), Berber and Gašić (2024)
2	FRI2	Can you live entirely on the salary paid by the company?	
3	FRI3	Is your income in line with other e-commerce businesses in the area?	
4	FRI4	Does the company fulfill its obligations to contribute to mandatory social insurance as required?	
5	FRI5	Productivity bonuses are paid in proportion to your abilities.	
6	FRI6	The stock option bonus aligns with your expectations.	
7	FRI7	Are the benefits of travel programs appropriate for the contributions you have made?	
8	FRI8	The housing support is in line with your expectations	
II. Work environment factors scale (WEF)			
1	WEF1	Do you clearly understand the vision, mission, and core values of the company?	Coomber and Barriball (2007), Kettinger et al. (2015), Dousin et al. (2021), Padmavathi (2023), Tee (2024)
2	WEF2	Do leaders at all levels value the skills and talents of employees?	
3	WEF3	Are you provided with adequate technological equipment and machinery to perform your job?	
4	WEF4	Is your workplace comfortable and well-equipped with necessary amenities?	
5	WEF5	Does the company offer support and assistance in achieving common goals?	
III. Working time factor scale (WTF)			
1	WTF1	Are you satisfied with the working hours at the company?	Coomber and Barriball (2007), Kettinger et al. (2015), Dousin et al. (2021), Padmavathi (2023), Tee (2024)
2	WTF2	Are you satisfied with the current method of work supervision?	
3	WTF3	Are you satisfied with the fact that employee income is not dependent on working hours?	
4	WTF4	Are you provided with support for time off to pursue further education or participate in internal training programs?	
IV. Employee competency factor scale (ECF)			
1	ECF1	The company's online training system is well-structured and systematic.	Cho and Huang (2012), Jie (2023), Bajaber (2024)
2	ECF2	The company encourages employees to participate in training.	
3	ECF3	The company facilitates employees' participation in training.	
4	ECF4	The company's career path is clear for each job position.	
V. Scale for measuring the opportunity to learn and develop (OLD)			
1	OLD1	The company provides employees with training programs for the necessary skills required for the job.	Cho and Huang (2012), Jie (2023), Bajaber (2024)
2	OLD2	Job positions depend on the abilities and contributions of the employees.	
3	OLD3	My career path is always clear.	
4	OLD4	The company always encourages me to develop my professional strengths.	
VI. Scale to measure employees' intention to leave their job (ILJ)			
1	ILJ1	Are you satisfied with your decision to stay with the company for the long term?	Elegido (2013)
2	ILJ2	Would you stay with the company if another organization offered you a job with a better salary and conditions?	
3	ILJ3	Do you want to stay with the company for the long term?	
4	ILJ4	Is your family life closely tied to your long-term commitment to the company?	

Source: Authors' elaboration.

The initial model was considered with six scales and 29 observed variables.

4. RESULTS

The article analyzes the reliability of the scale through the Cronbach's alpha coefficient, which is an important measure used to evaluate the quality of the scale. The scale's reliability analysis results criteria for the variables that make up the scale have the overall alpha coefficient > 0.7 and the corrected item-total correlation > 0.3, eliminating observations including observations *FRI1, FRI2, FRI13, FRI14, WEF5, ECF4,* and *OLD4,* from the scales. The final scales meet the requirements, detailed in Table 3 below.

Table 3. Results of scale analysis for variables in the structural equation model

Variance	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
Factors remuneration and income (FRI)					
FRI5	11.87	4.562	0.648	0.460	0.791
FRI6	11.83	4.792	0.614	0.417	0.806
FRI7	11.96	4.024	0.718	0.552	0.757
FRI8	12.02	3.952	0.669	0.509	0.784
There are 4 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and at the same time, the Cronbach's alpha based on standardized items coefficient is 0.832, greater than 0.7. The scale meets the testing standards and is a good scale.					
Work environment factors scale (WEF)					
WEF1	10.58	4.181	0.718	0.572	0.852
WEF2	10.20	5.168	0.692	0.495	0.856
WEF3	10.37	4.511	0.829	0.692	0.801
WEF4	10.45	4.704	0.714	0.532	0.845
There are 4 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and simultaneously. At the same time, the Cronbach's alpha coefficient based on standardized items is 0.879, greater than 0.7. The scale meets the testing standards and is a good scale.					
Working time factor scale (WTF)					
WTF4	12.59	4.210	0.407	0.193	0.792
WTF1	12.30	4.876	0.579	0.465	0.667
WTF2	12.07	4.511	0.662	0.495	0.619
WTF3	12.41	4.598	0.575	0.358	0.662
There are 4 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and at the same time. At the same time, the Cronbach's alpha coefficient based on standardized items is 0.768, greater than 0.7.					
Employee competency factor scale (ECF)					
ECF1	5.7760	2.130	0.808	0.832	0.591
ECF2	5.9369	2.205	0.774	0.825	0.629
ECF3	5.3281	2.810	0.450	0.211	0.952
There are 3 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and at the same time. The Cronbach's alpha based on the standardized items' coefficient is 0.814, greater than 0.7. The scale meets the testing standards and is a good scale.					
Scale for measuring the opportunity to learn and develop (OLD)					
OLD1	7.67	3.122	0.628	0.504	0.738
OLD2	7.50	3.346	0.541	0.344	0.830
OLD3	7.49	2.934	0.770	0.606	0.589
There are 3 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and at the same time, the Cronbach's alpha based on standardized items coefficient is 0.798, greater than 0.7. The scale meets the testing standards and is a good scale.					
Scale to measure employees' intention to leave their job (ILJ)					
ILJ1	11.07	2.862	0.503	0.307	0.655
ILJ2	11.34	2.568	0.470	0.349	0.681
ILJ3	11.28	2.473	0.508	0.357	0.656
ILJ4	10.95	3.004	0.585	0.411	0.629
There are 4 observations that meet the requirements, the observed variables have a corrected item — total correlation value of 0.3 or higher, and at the same time, Cronbach's alpha based on standardized items is equal to 0.716, greater than 0.7. The scale meets the testing standards and is a good scale.					

Note: With a sample size of 732, which is greater than 350, the study selects an absolute value below 0.5. The KMO test shows that the KMO measure of sampling adequacy is 0.689, which is within the range of $0.5 < KMO < 1$. Bartlett's test of sphericity is 0.000; the factor loading coefficients for the observed variables are greater than 0.3; and the cumulative variance extraction test shows a cumulative percent of 68.204%, which is greater than 50%. Thus, the EFA results meet the requirements.
Source: Authors' elaboration using the statistics from SPSS 20 software.

Table 4. Summary of exploratory factor analysis of the model (Part 1)

Panel A: KMO and Bartlett's test			
Kaiser-Meyer-Olkin Measure of sampling adequacy			0.689
Bartlett's test of sphericity	Approx. Chi-square		3405.828
	df		231
	Sig.		0.000

Panel B: Pattern matrix						
Variable	Component					
	1	2	3	4	5	6
WEF3	0.911					
WEF1	0.870					
WEF4	0.825					
WEF2	0.814					
FRI8		0.862				
FRI7		0.856				
FRI5		0.754				
FRI6		0.749				
WTF2			0.857			
WTF1			0.825			
WTF4			0.657			
WTF3			0.650			

Table 4. Summary of exploratory factor analysis of the model (Part 2)

Variable	Component					
	1	*2*	*3*	*4*	*5*	*6*
ECF2				0.926		
ECF1				0.912		
ECF3				0.707		
ILJ4					0.807	
ILJ1					0.746	
ILJ3					0.744	
ILJ2					0.681	
OLD3						0.916
OLD1						0.818
OLD2						0.741

Note: Extraction method: Principal component analysis. Rotation method: Promax with Kaiser normalization. Rotation converged in six iterations.
Source: Authors' elaboration using the statistics from SPSS 20 software.

According to the theoretical basis, the model must meet the measurement scale tests. A model that fits the real data must comply with the five measurement indices: 1) CMIN/df; 2) TLI; 3) CFI; 4) NFI; and 5) RMSEA.

According to Table 5, the integrated model fits the actual data as it meets the validation criteria.

Table 6 shows that hypotheses *H3* and *H5* are accepted with the significance level of the estimated coefficients: p-value ≤ 0.05; confidence level ≥ 95%. The factors included in the model are statistically significant, and the hypotheses are accepted. Hypotheses *H1*, *H2*, and *H4* are rejected due to p-value > 0.05.

Figure 2. Estimated regression results of the model

Note: Chi-square = 0.990, TLI = 0.915, CFI = 0.933, NFI = 0.902, RMSEA = 0.30.
Source: Authors' statistics elaboration using the statistics from AMOS 20 software.

Table 5. Model fit evaluation

No.	Measures and tests	Reference values	Model values
1	CMIN/df (x^2/df)	CMIN/df ≤ 5 (x^2/df ≤ 5)	0.990
2	TLI	TLI > 0.90	0.915
3	CFI	CFI > 0.90 (the closer to 1, the better)	0.933
4	NFI	The closer to 1, the better	0.902
5	RMSEA	RMSEA < 0.05 (is suitable)	0.030
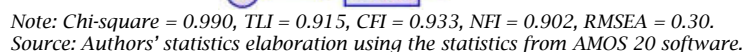
Source: Authors' statistics elaboration using the statistics from AMOS 20 software.

Table 6. Hypothesis testing results

Hypothesis	Impact	Estimate	Std. error	Critical ratio	P	Label
H1	ILJ ← FRI	-0.028	0.019	-1.509	0.131	Rejected
H2	ILJ ← WEF	0.013	0.022	0.617	0.537	Rejected
H3	ILJ ← WTF	0.059	0.033	1.798	0.042	Accepted
H4	ILJ ← ECF	0.043	0.025	1.737	0.082	Rejected
H5	ILJ ← OLD	0.069	0.034	2.043	0.026	Accepted

Source: Authors' statistics elaboration using the statistics from AMOS 20 software.

The empirical results show that the factor of flexible working hours has a positive impact on the intention to quit the job of e-commerce employees with high significance, with a p-value less than 0.05. This finding is consistent with the studies of Coomber and Barriball (2007), Kettinger et al. (2015), Dousin et al. (2021), Padmavathi (2023), and Tee (2024). Similarly, the factor of opportunities for learning and career development also has a positive impact on the intention to quit the job of e-commerce employees with a significant p-value less than 0.05. This result aligns with the research of Cho and Huang (2012), Jie (2023), and Bajaber (2024). However, a new finding is that the factors of compensation, income, professional work environment, and employee competence do not have a significant relationship with the intention to quit the job of e-commerce employees, contrary to the studies of Agyapong et al. (2019), Aman-Ullah et al. (2023), Saeed et al. (2023), Berber and Gašić (2024). This can be explained by the specificity and characteristics of the human resources in the e-commerce industry, primarily consisting of Gen Z employees, leading to significant differences.

5. DISCUSSION

Based on the results of the regression model, the authors propose solutions to help e-commerce business managers retain employees as follows:

Firstly, opportunities for learning and job development. Companies need to enhance internal training activities. They should increase the budget allocated for training, which currently represents a very small portion of profits. Businesses should allocate at least 10–15% of their profits for training expenses. Regular job analysis should be conducted to identify the necessary competencies for each job position. A suitable training process should be developed, including steps such as planning training, creating training programs, organizing training sessions, and assessing the training process. Here, after identifying training needs and planning the training, developing the training program is crucial because it helps improve the effectiveness of training activities in e-commerce companies, achieving training goals at the lowest cost. Choosing appropriate training methods is necessary, especially the application of IT in training tasks. Building an internal network system for training services, encouraging lifelong learning among employees. E-commerce businesses should develop an internal network system for training with numerous e-learning courses and available resources so employees can self-study and revisit them whenever they wish.

In addition, developing a career ladder for each position is essential. This will help employees clearly see their career path and highlight their career development opportunities. Career development should align employee career growth with organizational development. The career development for employees should also be tailored to different employee groups, clearly describing job positions along the career path, salary levels, and job functions for each position. E-commerce businesses should build a career ladder for their employees, similar to how they design job position proposals or conduct job analysis.

Secondly, flexible working hours. Flexible working hours refer to a work schedule in which the length, distribution, and arrangement of working hours differ from the previously fixed framework. Typically, this work arrangement is mutually agreed upon between the company and its employees. Essentially, flexible working hours involve adjustments in the length and division of work time within a specific cycle. The main benefit of flexible working hours is that it provides employees with a sense of comfort and convenience. For example, in a traditional setup, employees are required to work from 8:00 AM to 6:00 PM. However, with a flexible schedule, employees may start work later as long as they ensure the quality and completion of their tasks. This model allows companies to grant employees the freedom to choose their work hours, location, and methods in a way that best suits their personal lives. It can be considered a rare yet highly effective adaptation by businesses, leading to improved productivity and employee satisfaction.

Additionally, businesses should focus on initiatives such as: Improving the workspace (office design, green spaces, and providing adequate amenities). Building trust with employees to foster a positive work environment. Enhancing communication by engaging with employees more frequently and effectively. Sharing the company's mission and helping employees understand their significance within the organization. Encouraging teamwork and collaboration to strengthen team spirit.

6. CONCLUSION

This study offers significant theoretical and practical implications by validating the applicability of the MOA theoretical framework in the context of talent retention within Vietnam's growing e-commerce sector. While previous research has emphasized compensation as a primary driver of employee retention, our findings challenge this notion. Instead, the study highlights two critical, non-financial factors, opportunities for learning and career development, and flexible working hours, as the most influential in fostering long-term employee commitment. These insights are particularly valuable for e-commerce enterprises facing budget constraints, as they suggest more sustainable and strategic approaches to talent management.

The research also recommends that businesses invest in structured internal training programs, conduct regular job analyses to align skills with role requirements, and implement flexible work policies

to enhance employee satisfaction and engagement. In doing so, enterprises can strengthen organizational cohesion and increase their capacity to retain high-potential employees in a highly competitive labor market.

Despite its contributions, the study has certain limitations. It does not account for the variation in enterprise size or geographical and socio-economic differences among e-commerce businesses, which may affect the generalizability of the results. Future research should address these dimensions to deepen understanding and refine retention strategies across diverse organizational contexts.

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