

Research Article

THE RELATIONSHIP BETWEEN ATTRACTING AND RETAINING HIGH-QUALITY WORKERS WORKING IN THE PUBLIC SECTOR: EMPIRICAL EVIDENCE IN HO CHI MINH CITY, VIETNAM

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ABSTRACT

Recently, many civil servants and public employees have quit their jobs, affecting the apparatus and quality of operations, especially the force with post-graduate degrees and high quality - the core staff, playing a key role. core in every organization. This is also a challenging issue for researchers and policymakers. This study focuses on identifying and measuring factors that affect the ability of public organizations to attract and retain workers with university degrees or higher, building a quantitative model for the relationship above relationship and providing some implications for Ho Chi Minh City leaders in attracting and maintaining this important relationship. This study uses primary data from a survey of 413 observations in Ho Chi Minh City, Vietnam, and adopts the Partial Least Squares-Structural Equation Modeling with Bootstrap analysis for a reliable test of PLS-SEM. Its result shows five factors that affect "Attracting labor", and "Employee Retention" including Working environment, Welfare, Salary and bonus, Training and promotion opportunities, and Family traditions. Moreover, Attracting labor impacts positive Employee Retention.

Keywords: Partial Least Squares-Structural Equation Modeling (PLS-SEM); Bootstrap; Attracting labor; Employee Retention; Ho Chi Minh City, Vietnam.

INTRODUCTION

With the mission of being the economic, cultural, scientific, and technical leader of Vietnam, Ho Chi Minh City is having a great influence not only in the southern key economic region but also throughout the territory of Vietnam. Based on this strategic role, as well as the desire to promote economic growth and sustainable city development, high-quality labor becomes a requirement for HCMC. Recently, many civil servants and public employees have quit their jobs, affecting the apparatus and quality of operations, especially the force with post-graduate degrees and high quality - the core staff, playing a key role. core in every organization. This is also a challenging issue for researchers and policymakers. This study focuses on identifying and measuring factors that affect the ability of public organizations to attract and retain workers with university degrees or higher, building a quantitative model for the relationship above relationship and providing some implications for Ho Chi Minh City leaders in attracting and maintaining this important relationship.

LITERATURE REVIEWS

Background concepts and theories

Michaels *et al.*, (2001) believe that *high-quality labor* is someone who has outstanding talent and ability in terms of knowledge, experience, as well as appropriate judgment and attitude to contribute to performing well the assigned tasks. While Subotnik (2011), high-quality workers are individuals who demonstrate high self-mastery in the ability to self-develop the necessary knowledge and skills system in a specific field. According to Navigos Group (2023), high-quality human resources are a collection of workers with specialized

knowledge, good professional skills, good creative thinking ability, and mastery of all work operations. *Attracting employees* is considered something that managers must do to make potential candidates see the organization as a positive place to work (Rynes *et al.*, 1991), including several components such as Employees have positive attitudes and feelings toward an organization; sees the organization as a desirable place to work and will make efforts to work for that organization. Organizations often advertise job vacancies to attract candidates who meet the necessary criteria (Onah and Anikwe, 2016). *Employee retention* is seen as the organization implementing policies to prevent valuable employees from leaving their jobs (Hong *et al.*, 2012); Retaining high-quality employees is an organization's main resource (Nasir and Mahmood, 2016).

Theory of public service motivation: Public service motivation is an individual's tendency to respond to motives originating primarily or solely in public agencies and organizations. People with high levels of public service motivation feel attracted to public sector jobs because public sector employment allows them to do meaningful work for the good of society (Perry and Wise 1990). Public service motivation is oriented toward serving society and others and influenced by this motivation, individuals are more likely to exhibit prosocial behavior and be willing to support organizational change (Ahmad *et al.*, 2020).

Theory of human capital: Becker (1962) argued that individual workers have a set of skills or abilities that they can improve or accumulate through training and education. Education and training are investments that can increase productivity. As the arena accumulates increasingly more bodily capital, the possibility price of education declines. Education has become an increasingly important component of the workforce. Human resources are always owned by the employee, never by the employer. Unlike structured capital equipment, an employee can leave an organization. Most organizations take steps to support their most useful employees to prevent them from leaving the organization.

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Theory of Motivation for Human Resources: McClelland (1961) argued that a country's level of economic development is positively related to its overall achievement motivation. Need for achievement proposes that motivation and performance vary according to the strength of people's need for achievement and is defined as the desire to accomplish something difficult. There are people in society who wish to do something better or more effectively than what was done before (Robbins, 1993). The theory explains the need for achievement as mastery, manipulation, or organization of objects, people, or ideas. The above theories are relevant to this study in explaining the nature of high-quality human resources regarding public service motivation and motivational needs.

Factors of attraction and influence

Research on labor recruitment in Poland by Moczyłowska and Leszczewska (2015) shows that an employer to be considered attractive needs to create conditions for employees to have freedom of action and the ability to complete tasks and activities. Ambitious, interesting, and good atmosphere in the group. A study of the health sector in India by Madhavkumar's (2016) shows that hospital image and benefits systems yield positive results in terms of organizational attractiveness to potential job applicants. Research on the Chinese healthcare industry by Yan and Kung (2017) shows that hospital image and the welfare system have a positive influence on organizational attractiveness. A study of family and political relationships in the Philippines by Querubin (2016) shows that incumbents in high government positions provide electoral advantages to relatives. Research on labor attraction in Vietnam (Nguyen Ho Hai and Nguyen Viet Bang, 2020; Dang Van Em and Dao Van Han, 2020; Nguyen Thi Giang Huong *et al.*, 2022) shows that the main factors influencing attraction including building and promoting policies; recruitment and organization of personnel; Reward and discipline; human resource training, salaries, benefits; Working environment and conditions; Family traditions. Based on empirical studies, this study proposes the following hypotheses:

- H1:** Working environment positively impacts labor attraction.
- H2:** Salaries and bonuses have a positive impact on labor attraction.
- H3:** Welfare positively impacts labor attraction.
- H4:** Training and promotion opportunities have a positive impact on attracting labor.
- H5:** Family traditions have a positive impact on labor attraction.

Retention and influencing factors.

Research on employee retention by Irshad and Afridi (2007) hypothesizes that employee retention depends on personal values that meet the job, compensation costs, rewards, training and career development, favorable career opportunities, support from superiors, working environment, family support, and fair from the organization. Research on maintaining a high-quality workforce in universities in Kenya by Ng'ethe *et al.*, (2012) shows that employee retention depends on leadership, fairness in punishments and rewards, working environment, salary, promotion opportunities, training and development opportunities, and freedom at work, recognition of employee achievements. Research on employee retention in universities in Malaysia by Hong *et al.*, (2012) stated that employee retention depends on employee training opportunities, employee empowerment, and compensation costs. Research on employee retention in Afghanistan by Wood *et al.*, (2013) found that employee retention depends on the work environment, training and development opportunities, rewards, and recognition of employee contributions. In the study on employee retention in the retail industry

in the Maldives, Imna and Hassan (2015) show that employee retention depends on career development practices, combining career development practices with training opportunities, creation and development, rewards, and recognition, combining performance appraisal with rewards and recognition, health, and safety. The study on employee retention in Pakistan shows that employee retention depends on supervisor support, career development, rewards and recognition, work environment, job satisfaction, and balance between work and life (Naqvi *et al.*, 2015; Nasir and Mahmood, 2016; Aman-Ullah *et al.*, 2020). A study on employee retention in Rwanda by Uwimpuhwe *et al.*, (2017) shows that compensation systems impact employee retention. The study on nonprofit organizations by Slatten *et al.*, (2021) points out that employee retention depends on incentives or benefits offered. Research on employee retention in Vietnam shows that employee retention depends on training, career development, salary and benefits, and work environment, rewards, and recognition; salaries and benefits; opportunities for advancement and promotion; relationships with superiors and relationships with colleagues; employee loyalty; Opportunity to change jobs, family traditions (Huynh Thi Thu Suong, 2016; Nguyen Ho Hai và Nguyen Viet Bang, 2020). Based on empirical studies, this study proposes the following hypotheses:

- H6:** Work environment positively impacts employee retention.
- H7:** Compensation has a positive impact on employee retention.
- H8:** Benefits have a positive impact on employee retention.
- H9:** Training and promotion opportunities have a positive impact on employee retention.
- H10:** Family traditions have a positive impact on employee retention.

The relationship between attraction and retention

Research on employee attraction and retention in Romania by Turnea (2018) shows that employee engagement impacts satisfaction and engagement with the organization. When employees are motivated, they work towards improving conditions in the workplace. Research on employee attraction in Durban, South Africa indicated satisfaction in contributing to that organization's workforce motivation leads to improved employee productivity and retention for the organization (Hoque and Tshutsha, 2022). Research on employee retention in South African universities by Masango and Mpofu (2013) showed organizations that fail to retain quality employees often face high employee turnover. This is not only expensive; it is detrimental to the survival, growth, and prosperity of the organization. Research on the Public Sector in Ho Chi Minh City, Vietnam by Nguyen Ho Hai and Nguyen Viet Bang (2020) shows that attraction has an impact on employee retention. Based on empirical studies, this study proposes the following hypothesis:

- H11:** Attraction has a positive impact on employee retention.

RESEARCH MODELS

It is required to have a theoretical assessment and empirical study for further research to expand this theory and provide more empirical evidence and policy implications related to attracting labor and maintaining employment. Previous studies highlighted the factors that impact attracting labor and maintaining employment with qualitative analysis or measurement of relationships using quantitative models such as statistical testing, separate regression models, and Structural equation modeling, but did not provide a complete basis for a comprehensive analytical framework on attracting labor and maintaining employment. Therefore, the purpose of this study is to extend the findings from previous ones and integrate analysis of their

correlation into Partial Least Squares-Structural Equation Modeling. The research teams selected a case study in Ho Chi Minh City as shown in Figure 1.

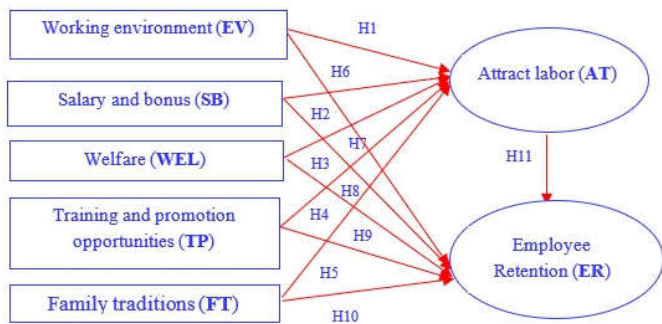


Figure 1: Theoretical research model

METHODOLOGY

Measurement: All scales are modified from previous studies to fit the research context in Vietnam. We designed a three-step process for the survey. First, we carried out a survey using the expertise method of discussing with 15 human resource management experts with at least five years of experience working at agencies related to the internal affairs industry, who are leaders of departments and agencies in Ho Chi Minh City to refer to measuring scales and observation variables that are suitable for the internal affairs industry. Second, a pilot survey with 20 high-quality employees in Ho Chi Minh City to verify if there were any errors in the questionnaire. The sample was selected based on the respondents' willingness to participate in this study. Third, conduct a full survey of high-quality employees working in Ho Chi Minh City. A total of 430 respondents filled out the questionnaire.

A five-point Likert scale starting from "strongly disagree" to "strongly agree" was used to measure all observation variables. To measure "Working environment" and "Training and promotion opportunities", 9 observation variables were included in the questionnaire. These measurements were mainly based on research on employee motivation and retention in Malaysia by Chew (2005). For "Welfare", 4 observation variables were included in the questionnaire. It was mainly based on research on employee retention in universities in Malaysia by Hong *et al.*, (2012). For "Salary and bonus", 4 observation variables are included in the questionnaire. It is mainly based on research on the compensation system on employee attraction and retention in Rwanda by Uwimpuhwe *et al.*, (2018). For "Family traditions", 5 observation variables were included in the questionnaire. It was mainly based on research on the Staffing of small nonprofit organizations by Slatten *et al.*, (2021). For "Attracting labor", 3 observation variables were included in the questionnaire. It was mainly based on research on Family and Politics by Querubin (2016) and it was adjusted to suit the Vietnamese situation and had new observation variables built by the authors from the expertise discussion results such as "The organization attracted me as a worthwhile place to work". For "Employee Retention", 4 observation variables were included. It was mainly based on research on the Attraction and retention of employees in Romania by Turnea (2018) and had new observation variables built by the authors from the expertise discussion results such as "If I get a more attractive job from another organization, I will still stay at this organization". Details of the scales are in the Appendix (Table A).

Data collection and processing: We surveyed in Ho Chi Minh City with 430 questionnaires. This survey lasted from February to May

2023. After data processing, 413 reliable observations were used to analyze the data. Because the theoretical model has a set of interwoven relationships, the Partial Least Square - Structural Equation Model(PLS-SEM) is used to test the above hypotheses (Anderson and Gerbing, 1988; Kline, 2011). Structural Equation Modeling was performed in 4 steps: (i) Reliability test of scale; (ii) Exploratory Factor Analysis (EFA); (iii) Confirmatory Factor Analysis (CFA) and (iv) Structural Equation Modeling (SEM). Data analysis was performed on SPSS and AMOS software version 21.0.

RESULTS

Information about survey objects

Table 1. Characteristics of survey objects (n = 413)

Demographic information		Frequency	%
Education level	Ph.D.	21	5
	Master	392	95
Ages (years)	< 35	78	19
	35-50	216	52
	>50	119	29
Gender	Male	269	65
	Female	144	35

Source: Extract research results from SPSS software, 2024.

Table 1 shows the details of the questionnaire. Among 413 survey observations, males account for 65%. The ages were distributed across three groups: under 35, 35-50, and over 50 with 19%, 52%, and 29%, respectively. Also, education levels in two groups: PhD, and Master, are 21%, and 95% respectively.

Scale reliability analysis.

The results in Table 2 showed that: The observed variables all satisfy the conditions in the reliability analysis of the scale through an alpha coefficient > 0.6, and a variable-total correlation > 0.3 (Nunnally and Burnstein, 1994).

Table 2. Scale reliability test and rejected observed variables.

No.	Scale	Observed variables are excluded	Alpha coefficients	Conclusion
1	SB	None	0.819	Good quality
2	EV	None	0.868	Good quality
3	BN	None	0.861	Good quality
4	TP	None	0.825	Good quality
5	FT	None	0.853	Good quality
6	ER	None	0.849	Good quality
7	AT	None	0.853	Good quality

Source: Extract research results from SPSS software, 2024.

Exploratory Factor analysis

Table 3 shows that the factors of AT and ER are extracted into five factors corresponding to the measured variables of the theoretical model. The total variance extracted is 66.715% at an Eigenvalue of 1.914; the EFA of AT is extracted into three observed variables with an extracted variance of 77.347% at an Eigenvalue of 2.320%. The EFA of ER is extracted into four observed variables with an extracted variance of 69.116% at an Eigenvalue of 2.765; and the Promax rotation method is used.

Table 3. Pattern matrix.

Component	Component						
	1	2	3	4	5	6	7
EV3	0.835						
EV2	0.829						
EV5	0.820						
EV1	0.795						
EV4	0.762						
FT4		0.826					
FT5		0.801					
FT3		0.794					
FT2		0.793					
FT1		0.751					
WEL4			0.859				
WEL3			0.842				
WEL2			0.841				
WEL1			0.801				
TP3				0.827			
TP1				0.825			
TP2				0.814			
TP4				0.745			
SB2					0.844		
SB4					0.819		
SB3					0.791		
SB1					0.747		
AT2						0.896	
AT1						0.876	
AT3						0.866	
ER1							0.874
ER2							0.868
ER3							0.793
ER4							0.786
Kaiser-Meyer-Olkin Measure					0.841	0.728	0.811
Bartlett test (Sig.)					0.000	0.000	0.000
Eigenvalues					1.914	2.320	2.765
% of Variance					66.715	77.347	69.116

Source: Extract research results from SPSS software, 2024.

Note: $0.5 < KMO < 1$; Bartlett's test has a significance level less than 0.05; Factor Loading of observed variables (Factor Loading) > 0.5 ; extracted variance $> 50\%$, and Eigenvalue > 1 (Hair *et al.*, 2006).

Confirmatory Factor Analysis

The measurement models that are consistent with the actual data must be consistent with five measures: (i) Cmin/df; (ii) TLI; (iii) CFI; (iv) NFI; and (v) RMSEA (Gefen *et al.*, 2011).

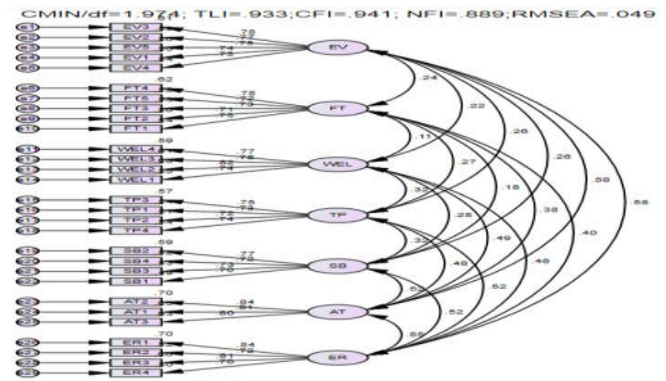


Figure 2: Confirmatory factor analysis results

Source: Extract research results from AMOS software, 2024.

Table 4. The fit indices of the CFA

No.	Measures	Indicator Standard values	Model value	Results
1	Cmin/df	$\chi^2/ d.f. < 3$ good fit; < 5 accepted; the smaller the better (Bentler and Bonett, 1980; Bagozii and Jy, 1988)	1.974	Good
2	TLI (Tucker-Lewis Index)	TLI: the closer it is to 1, the more appropriate; $TLI > 0.90$ is consistent; $TLI \geq 0.95$ is in good agreement (Hu and Bentler, 1995)	0.933	Good
3	CFI (Comparative Fit Index)	$CFI > 0.90$; $0 < CFI < 1$, the closer to 1, the more suitable (Hu and Bentler, 1995).	0.941	Good
4	NFI (Normal Fit Index)	NFI, the closer it is to 1, the more suitable. NFI close to 0.90 is accepted; $NFI > 0.95$ is, a good fit. (Chin and Todd, 1995; Hu and Bentler, 1995)	0.899	Accepted
5	RMSEA (Root Mean Square Error Approximation)	$RMSEA < 0.05$, the model fits well; $RMSEA < 0.08$, accepted; the smaller the better (Browne and Cudeck, 1993)	0.049	Good

Source: Extract research results from AMOS software, 2024.

Table 4 shows that the measurement model is consistent with the actual data.

Structural Equation Modeling

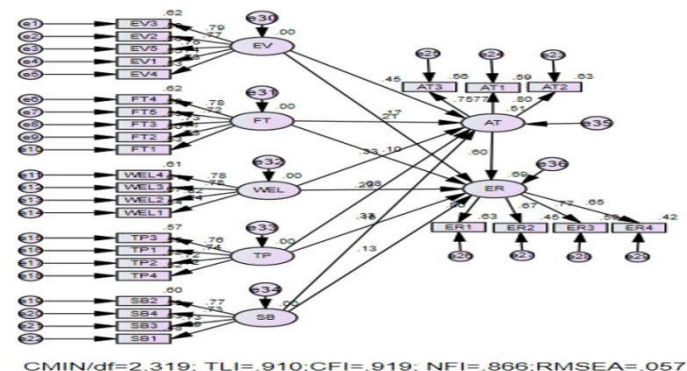


Figure 3: Results of structural equation modeling

Source: Extract research results from AMOS software, 2024.

The results presented in Figure 3 showed the model has a value of Cmin/df = 2.319; TLI = 0.910; CFI = 0.919; NFI = 0.866; and RMSEA = 0.057. Thus, the integrated model fits the actual data.

Table 5. The model fitting the actual data in this study.

Hypothesis	Path	Estimate	S.E.	C.R.	P	Decision
H1	A <-- EV	0.483	0.056	8.57	***	Accept
	T			5		
H5	A <-- FT	0.205	0.047	4.41	***	Accept
	T			3		
H3	A <-- WE	0.349	0.054	6.50	***	Accept
	T			9		
H4	A <-- TP	0.253	0.056	4.55	***	Accept
	T			5		
H2	A <-- SB	0.334	0.053	6.33	***	Accept
	T			3		
H6	M <-- EV	0.184	0.060	3.07	0.0	Accept
	E			1	02	
H10	E <-- FT	0.099	0.044	2.24	0.0	Accept
	R			3	25	
H8	E <-- WE	0.091	0.053	1.71	0.0	Accept
	R			5	86	
H9	E <-- TP	0.168	0.053	3.15	0.0	Accept
	R			9	02	
H7	E <-- SB	0.129	0.052	2.46	0.0	Accept
	R			8	14	
H11	E <-- AT	0.606	0.080	7.60	***	Accept
	R			5		

Note:*** (P_value = 0.000 / Sig. = 0.000).

Source: Extract research results from AMOS software, 2024.

In Table 5, all hypotheses are accepted with a 95% confidence level or higher (P_value ≤ 0.05).

Table 6. Magnitude of the impact

Impacts	Regression coefficient	%	Position
AT = f(EV, FT, WEL, TP, SB)			
AT <-- EV	0.483	29.7	1
AT <-- FT	0.205	12.6	5
AT <-- WEL	0.349	21.5	2
AT <-- TP	0.253	15.6	4
AT <-- SB	0.334	20.6	3
Total	1.624	100	
ME = f(EV, FT, WEL, TP, SB, AT)			
ER <-- EV	0.184	14.4	2
ER <-- FT	0.099	7.8	5
ER <-- WEL	0.091	7.1	6
ER <-- TP	0.168	13.2	3
ER <-- SB	0.129	10.1	4
ER <-- AT	0.606	47.5	1
Total	1.277	100	

Source: Extract research results from AMOS software, 2024.

Table 6 shows factors affecting AT in order of influence from high to low EV, WEL, SB, TP, and FT. Factors affecting ER in order of influence: AT, EV, TP, SB, FT, and WEL.

Using BOOTSTRAP to analyze the reliability of PLS-SEM results.

Methods of analysis of structural functions often require large samples (Anderson and Gerbing, 1988), whereas academic research is often limited in sample size. In such cases, Bootstrap is an

appropriate alternative (Schumacker and Lomax, 2010). Bootstrap is an alternative, repeatable sampling method in which the original sample acts as a population. The Bootstrap method generates random samples from the original sample, which has numerous observations, often choosing 1,000 observations. The estimated results from N samples are averaged, and this value tends to be close to the estimate of the population. The smaller the difference between the average value of Bootstrap regression coefficients and the model estimate with the original sample, the more reliably the model estimates can be concluded.

Table 7. Bootstrap implementation results

Regression Weights: (Group number 1 - Default model)								
Parameter		SE	SE-SE	Mean	Bias	SE-Bias	*CR	
AT <-- EV		0.054	0.001	0.480	-0.003	0.002	-1.5	
AT <-- FT		0.049	0.001	0.205	-0.001	0.002	-0.5	
AT <-- WEL		0.056	0.001	0.348	0.000	0.002	0.0	
AT <-- TP		0.062	0.001	0.255	0.002	0.002	1.0	
AT <-- SB		0.058	0.001	0.337	0.003	0.002	1.5	
ME <-- EV		0.064	0.001	0.185	0.001	0.002	0.5	
ME <-- FT		0.048	0.001	0.098	0.000	0.002	0.0	
ME <-- WEL		0.055	0.001	0.091	0.000	0.002	0.0	
ME <-- TP		0.055	0.001	0.167	-0.001	0.002	-0.5	
ME <-- SB		0.059	0.001	0.129	0.000	0.002	0.0	
ME <-- AT		0.088	0.002	0.610	0.004	0.003	1.3	

Source: Extract research results from AMOS software, 2024.

*CR (Critical Ratios) = (Bias) / (SE-Bias)

The absolute value of CR is less than or equal to 2, so it can be said that the bias is very small, the difference is not statistically significant at the 95% confidence level (Hair et al., 2006). The regression coefficient results before Bootstrap are reliable with a confidence level greater than or equal to 95%. Table 7 shows regression coefficient results before Bootstrap was reliable.

DISCUSSION AND POLICY IMPLICATIONS

Our study has identified 5 factors that affect "Attracting labor", and "Employee Retention" such as EV (Working environment), WEL (Welfare), SB (Salary and bonus), TP (Training and promotion opportunities), and FT (Family traditions). This result is consistent with previous research on the public sector in Afghanistan by Wood et al., (2013), Pakistan by Naqvi et al., (2015), the nonprofit organizations by Slatten et al., (2021).

We added new observation variables to the research on Attracting labor, and Employee Retention, specifically "The organization attracted me as a worthwhile place to work", and "If I get a more attractive job from another organization, I will still stay at this organization". To improve the Attracting labor, and Employee Retention of Ho Chi Minh City human resources, it is necessary to pay attention to 5 factors: Working environment, Welfare, Salary and bonus, Training and promotion opportunities, and Family traditions. These are also key factors for Attracting labor, and Employee Retention in Ho Chi Minh City and enhancing human capital.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Although the research contributes some implications for administrators in the public sector in Ho Chi Minh City, it cannot avoid some limitations. First, the research sample was conducted and only 413 responses were collected, as well as the sampling scope in Ho Chi Minh City's public sector did not cover all levels/industries or specific fields such as hospitals, and schools. Further research is proposed to expand the size and scale of the survey sample so that the research results will be more reliable. Second, the author has not yet fully synthesized and analyzed the factors that affect attracting and maintaining high-quality employees, leading to the possibility of missing some important factors that affect the quality of workers. Future research can improve the model by considering adding new antecedents, typically organizational culture, relationships with colleagues and superiors, or labor safety. Finally, the group of demographic variables has not been fully utilized to exploit the influence of age, education level and gender on the role of job choice and loyalty of workers to public organizations. Future research should incorporate these factors to further test the impact of demographics in the model.

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