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The impact of personality traits on the ethical leadership, job performance and job satisfaction of public servants – A case study of the Northern public sector of Vietnam

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ABSTRACT

The study aims to explore the impact of personality traits on ethical leadership, job performance and job satisfaction of public servants working in the Northern public sector of Vietnam. A quantitative approach was employed to evaluate the impact of personality traits on ethical leadership, job performance, and job satisfaction. A structured questionnaire was administered to obtain information from public servants. The SPSS 26 was used to conduct the demographic information of public servants and the SmartPLS 3.0 version was used to process the SEM. The research results showed Big Five personality traits have a positive impact on ethical leadership, job performance, and job satisfaction. Additionally, ethical leadership and job performance have a positive correlation with the job satisfaction of public servants. The research results were used to recommend leaders of State Administrative agencies in the Red River Delta to understand the personality traits of public servants to increase job satisfaction and achieve greater job performance.

1. INTRODUCTION

The advancement of science and technology has a positive impact on the economy. In this context, human resources play an important role in determining the success of organizations. However, how to motivate workers and achieve employee satisfaction is a question of interest to organizations.

The former studies of Barrick and Mount (1991), and Judge et al. (2002) depicted that people's thoughts and actions are positively influenced by their personalities. Personality traits are closely linked to people's work and social relationships. Each individual possesses a unique set of personality traits and is considered a characteristic to distinguish between individuals.

Saville and Holdsworth (1999) emphasized that personality traits are one perspective to measure job performance. Personality traits have a substantial relationship with job performance and job satisfaction (e.g. Barrick and Mount, 1991; Yesil and Sozbilir, 2013; Tran, 2019). Ethical leadership is an important factor for the organization to achieve the development and direction of moral, human and social values. In other words, the success of an organization will be based on the ethics of the leader (Özbağ, 2016). Nguyen and Tran (2019) stated that ethical leadership and job performance are influenced by different personalities.

The Northern region plays an important role in developing the economy of Vietnam. Hence, the public sector holds the core position in developing

and growing the economy by performing official duties. However, the Northern public sector is facing a shortage of human resources because of shifts in job trends, with many public servants intending to leave State agencies (Ministry of Home Affairs, 2021).

The study by Hoang and Nguyen (2021) analyzed the impact of Corporate Social Responsibility on work motivation and job performance of medical representatives at multinational pharmaceutical companies. In addition, Luu and Luu (2014) investigated the effect of human resource practices on job satisfaction and performance of employees working in 23 hotels with three to five-star rankings in Ho Chi Minh City. Although the above studies analyzed job satisfaction and performance, no study has investigated the public sector and on the link to personality traits. In particular, there are few empirical investigation studies from the Northern region public sector of Vietnam.

Coming from the above knowledge and research gap, this study aims to analyze the impact of personality traits on ethical leadership, job performance and job satisfaction of public servants working in the public sector IN the Northern region of Vietnam. Based on the research results, this study proposes some managerial implications to improve job satisfaction and enhance the job performance of public servants in the future.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Literature Review

2.1.1. Personality traits

The study by Bradberry (2007) showed personal character is a personality that exists in people and confirmed:

- (i) Personality is the psychological difference that makes individuals unique.
- (ii) Personality has a great influence on an individual's thoughts and actions.
- (iii) Personality directly affects the job and social relationships of individuals.

Carpenter and Moore (2009) explained personality is a chain of human emotions, thoughts, and behaviors. Thus, personality traits are predicted through the individuals' thoughts, words, and actions.

The Big Five personality traits have received a lot of attention from scholars (John, 1990). Smith and Canger (2004) concluded that the Big Five personality traits represent most of the common characteristics of personality based on five relatively independent factors to meaningfully explain individual differences and their responses. Among the names given to the Big Five model, the name of McCrae and Costa (1985) is the most widely used in personality studies, and is also known as the OCEAN model with NEO PI-R questionnaire (Jabari et al., 2013). Pham (2007) inherited and translated to Vietnamese from the NEO PI-R questionnaire to be consistent with the condition and personality traits of Vietnamese people. The content of the OCEAN model is explained:

Openness to experience comprises creativity, rich imagination, and passion to experience new things. People who are open to experimenting are liberal, like a colourful life, prefer variety rather than confinement in a framework, and love art and dream, so they rarely focus and are hard to predict (Pham, 2007).

Conscientiousness involves hard work, thoughtfulness, meticulous, responsible, and a careful style of work towards achieving personal or organizational goals. Conscientious people focus on specific goals and execute them in the best way by working carefully, thoughtfully, reliably, and with great discipline (Pham, 2007).

Extroversion is associated with being strong, enthusiastic, like to make friends, dynamic, and positive emotions. Extroverts enjoy group or social activities, have many social connections, have a unique working style (Act First, Talk Later), and they assert themselves through assertiveness, boldly giving opinions (Pham, 2007).

Agreeableness is the ability to fit in with others through trust, cooperation, approval, consensus, and flexible thinking. People with agreeable personalities are interested in accord and do not enter into disputes over all matters. They have an optimistic view of people. Otherwise, they believe that human nature is honest, comfortable, and trustworthy (Pham, 2007).

Neuroticism represents the tendency to have negative emotions, not calm, worry, and easy to move by surrounding factors. Neuroticism people often appear insecure, uncomfortable, prevent, difficult to overcome events in work and life. And

they worry about relationships with people in life (Pham, 2007).

2.1.2. Ethical leadership

In the studies about organizational behavior, ethical leadership has played an important role in affecting the achievement of employees (De Hoogh and Den Hartog, 2008; Walumbwa and Schaubroeck, 2009). Brown et al. (2005) were the first to develop the theory of ethical leadership. They showed that “ethical leadership depicts common behaviors and is expressed through individual actions, interpersonal relationships and drive employee behavior by two-way communication, reinforcement, and decision making”. The concept of ethical leadership is formed based on sociological perspectives. Leadership is designed according to standards, and normative values and is expressed through behavior in communication, behavior when making ethical or unethical decisions, actions, rewards and punishments, and how it is done in the organizational environment. Brown and Treviño (2006) emphasized that ethical leadership is a distinctive, distinctive leadership style, and it is a cyclical combination of honesty, ethical standards and fair treatment of employees. De Hoogh and Den Hartog’s study (2008) approach from the sociological perspective and they found that ethical leadership is the socially responsible interaction with all activities of a group to achieve the set results. Thus, the concept of ethical leadership is considered to be the link between a leader’s inherent ethical values and problems occurring in the organization.

2.1.3. Job performance

Job performance is closely related to current job and organizational psychology, researchers have spent a lot of effort and time to classify and expand research on the concept of job performance (Campbell, 1990). The concept of job performance is considered mainly in terms of two aspects of behavior and results. Most studies are behavioral. Because if the organization emphasizes the results aspect, it will cause employees to find the simplest ways to achieve the results they want. It will cause negative consequences for the organization because other important behaviors are not focused. Campbell et al. (1993)’s study showed that job performance depicts behavior which is goal-oriented, i.e., behavior in which the organization hires the employees to do well as performance. Nguyen and Nguyen (2011) explained that job performance is assessed by the trust of effective

employees, employee satisfaction with the quality of work performed, and evaluation of superiors and colleagues. Performance is considered a tool to evaluate employees.

2.1.4. Job satisfaction

Job satisfaction is a factor that receives a lot of attention and is mentioned in studies on organizational behavior (Dinc et al., 2018). Hoppock (1935) was the first to study job satisfaction, and he confirmed that satisfaction is an employee’s overall attitude or emotional state towards the current job. In the influence theory of Locke (1976) showed that job satisfaction is “pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences”. According to Spector (1997), job satisfaction is divided in two directions: overall job satisfaction and satisfaction with different aspects of the job. Gurney et al. (1997) said that two directions of job satisfaction are absolutely suited to evaluate employee satisfaction with the organization. In this study, overall job satisfaction is used to evaluate employee satisfaction in a current job.

2.2. Hypothesis Development

2.2.1. The relationship between personality traits and ethical leadership

Walumbwa and Schaubroeck (2009) found that conscientiousness, agreeableness, neuroticism were a predictor for ethical leadership. In which conscientiousness and agreeableness have an active correlation with ethical leadership. In contrast, neuroticism has a negative correlation with ethical leadership. The study of Kalshoven et al. (2011) showed that ethical leadership is impacted by Big Five personality traits and conscientiousness has the highest impact on ethical leadership, follow by neuroticism, and the last is agreeableness. Openness to experience and extroversion have a negative impact on ethical leadership. The investigate studies conducted by Özbağ (2016), Nguyen and Tran (2020) suggested agreeableness, conscientiousness, and openness to experience have a positive impact on ethical leadership. Extroversion was not occurring any impact on ethical leadership, and neuroticism has a heavy negative impact on ethical leadership. So, the first assumption gather recommended in this research is:

H1.1: Openness to experience will be positively associated with ethical leadership.

H1.2: Conscientiousness will be positively associated with ethical leadership.

H1.3: Extroversion will be positively associated with ethical leadership.

H1.4: Agreeableness will be positively associated with ethical leadership.

H1.5: Neuroticism will be negatively associated with ethical leadership.

2.2.2. *The relationship between personality traits on job satisfaction*

Judge et al. (2002)'s study confirmed that personality traits are one of the effective tools used to assess job satisfaction. In which, neuroticism has a strong negative correlation with job satisfaction, followed by extroversion and conscientiousness have a strong positive correlation with job satisfaction. Openness to experience and agreeableness has a weak correlation with job satisfaction. According to Bruk-Lee et al. (2009) concluded that conscientiousness, extroversion, and agreeableness have a direct impact on job satisfaction. Additionally, job satisfaction is negatively affected by neuroticism and were not occur any association between job satisfaction and openness to experience. A study on job satisfaction in Asian countries by Templer (2012) absolutely agreed with the above results about the relationship among openness to experience and job satisfaction. At the same time, he emphasized positive relationship among extroversion, conscientiousness, neuroticism, agreeableness and job satisfaction. A empirical study of Nguyen and Tran (2020) indicated that openness to experience, conscientiousness, extroversion have a positive correlation with job satisfaction, and neuroticism has a negative correlation with job satisfaction, agreeableness was not occurring any association with job satisfaction. So, the second assumption gather recommended in this research is:

H2.1: Openness to experience will be positively associated with job satisfaction.

H2.2: Conscientiousness will be positively associated with job satisfaction.

H2.3: Extroversion will be positively associated with job satisfaction.

H2.4: Agreeableness will be positively associated with job satisfaction.

H2.5: Neuroticism will be negatively associated with job satisfaction.

2.2.3. *The relationship between personality traits and job performance*

According to Barrick and Mount (1991) showed that conscientiousness has the highest impact on job performance, following by extroversion, and the lowest impact is the openness to experience. In which, neuroticism has an inverse impact on job performance but agreeableness was not. Until 1993s, Barrick and Mount confirmed again that agreeableness has a positive impact on job performance. Thoresen et al. (2004) showed neuroticism did not exist any association with job performance and the four characteristics (conscientiousness, extroversion, agreeableness, and openness to experience) were positively associated with job performance. The studies of Rashid et al. (2016), Tran (2019) confirmed that job performance is directly affected by five personality traits with different degrees. In which, extroversion and agreeableness has the highest impact on job performance, next conscientiousness and emotional stability, finally openness to experience. So, the third assumption gather recommended in this research is:

H3.1: Openness to experience will be positively associated with job performance.

H3.2: Conscientiousness will be positively associated with job performance.

H3.3: Extroversion will be positively associated with job performance.

H3.4: Agreeableness will be positively associated with job performance.

H3.5: Neuroticism will be negatively associated with job performance.

2.2.4. *The relationship between ethical leadership and job satisfaction*

The studies showed ethical leadership has the highest impact on job satisfaction (Okan & Akyüz, 2015; Attar et al., 2017). Accordingly, Neubert et al. (2009) proved that ethical leadership has both direct and indirect impact on job satisfaction. Research by Kooskora and Mägi (2010) showed the positive relationship between job satisfaction and ethical leadership through behavioral aspects of ethical leadership contains trust in employees, loyalty to the job and the organization, pride in the organization, positive perception for employees in giving autonomy to work and decide about all activities in the organization. Kim and Brymer (2011) described that the employees will have more job satisfaction if

the leader has ethical values and exhibits a transformative power style. If employees are managed by leaders with an ethical style, they will have a higher level of job satisfaction than leaders with an immoral style (Yates, 2014). Therefore, the issues around ethical values can increase job satisfaction more quickly (Vitell and Davis, 1990). The fourth assumption gather recommended in this research is:

H4: Ethical leadership will be positively associated with job satisfaction.

2.2.5. *The relationship between job performance and job satisfaction*

The most studies showed that job satisfaction has positive impact on job performance (Tran, 2005; Yang and Hwang, 2014; Dinc et al., 2018). Jacobs and Soloman (1977) noticed that job satisfaction will appear if employees are rewarded by the organization (physical and mental rewards) for their hard work, efforts to complete the assigned tasks and recognized by the results achieved during the work. The study of Iaffaldano and Muchinsky (1985) tested the relationship between job performance and job satisfaction and they found that job performance has the highest impact on job satisfaction. Because employees are appreciated in the working process or have better work results, they will easily achieve higher satisfaction in their current job. Besides, Campell (1990) also explained that job performance is considered an employee’s own behavior created in the working process. If the work process is evaluated well, it will create joy, happiness, and excitement at work and be a catalyst to increase job satisfaction. Moreover, Lawler and Porter (1967) confirmed that job performance is positively related to job satisfaction. Thus, the fifth assumption gather recommended in this research is:

H5: Job performance will be positively associated with job satisfaction.

From the assumptions, the authors suggest the research model as follows (see Figure 1):

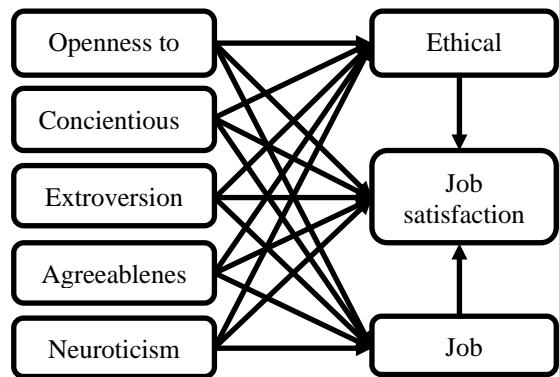


Figure 1. Research Model

3. METHODOLOGY

3.1. Scale development

The preliminary scale is designed based on the factors in the research model and came into domestic and foreign studies (see Table 1).

Table 1. The preliminary scale

No.	Scale	Source	Number of items
1	Big Five personality traits	Pham (2007)	44
2	Ethical leadership	Brown <i>et al.</i> (2005)	10
3	Job performance	Nguyen and Nguyen (2011)	4
4	Job satisfaction	Tran (2005)	5

Source: The author’s design

From the preliminary scale to develop into an official scale, the authors conducted a discussion with 30 managers who have rich experience at the State Administration agencies to record several evaluations related to the factors in the proposed research model, adjust the observed variables in the preliminary scale to consistent with the field of research and practice. In addition, the authors also conducted in-depth interviews with 05 human resource management experts to examine the relationship between the factors in the proposed research model, solve problems occurring in the discussion process and word correction to make the scale simple, convey the full content of the observed variables. All the above processes will occur in June 2022 and the collected data was classified and aggregated.

The quantitative research results showed that discussion managers and specialists agreed with factors in the suggested research model. The official scale includes 8 factors with 66 observed variables. In which, the preliminary scale is assessed as absolutely appropriate and kept the same, however, the scales have been adjusted in terms of words and developed several observed variables to better express the meaning of each scale. The official scale is presented in Table 2.

3.2. Sampling and data collection

The minimal sample scale for EFA is 50, optimum of 100 or more (Hair et al., 2010). The proportion of observations to an analytic variable is 5:1 or 10:1 will provide the minimal sample scale to make sure reliability. Hence, this study used the 10:1

proportion. This research with 66 observed variables, therefore the sample scale is $66 \times 10 = 660$.

In case the proportion of vote recovery is low, this study chose a sample scale of 860 public servants. The authors used a convenience sampling method for public servants working at the State Administration agencies focusing on the provinces in the Red River Delta of the Northern public sector. Because the Red River Delta is the sub-region with the strongest economic, political and social development. In addition, this sub-region has the largest number of public servants in the three sub-regions of the Northern (General Statistics Office of Vietnam, 2020). So, it may represent the northern public sector. The study sites are depicted in the map in Figure 2.



Figure 2. Map of Red River Delta – Vietnam

The authors distributed samples equally among the survey sites as $860 : 10 = 86$ votes per site to guarantee an aim and relative assessment among them. The investigation time is from August 1st to November 31st, 2021. The investigation sheets were sent to email of public servants working at the State Administrative agencies.

After processing the data, the authors received 820 valuable survey votes with a recovery proportion of 95.34%. The informants were male accounted for 65.7% of the total number of participants. 84.3% of informants were higher than 35 years old (middle-aged), 100% of informants with higher education, and 92.3% of informants got married.

4. FINDINGS AND DISCUSSION

4.1. The reliability test of constructs

The estimation results show the indicator loadings of the constructs in the model in a threshold higher than 0.6 (Chin *et al.*, 2008). Therefore, the observed variables are reliable (see Table 2).

Table 2 shows the scales achieve internal consistency because Cronbach's Alpha value exceeds 0.6 (Nunnally and Bernstein, 1994). In addition, the Composite Reliability (CR) values exceeded 0.7 and the Average Variance Extracted (AVE) values exceeded 0.5. Therefore, the scales meet reliability and convergent validity (Fornell and Larcker, 1981). Therefore, the scales are very good for further analysis .

Table 2. The results of reliability test

Scale	Sign	Statement	Outer loadings	AVE	Cronbach's Alpha	CR
Openness to experience	O1	I often come up with new ideas.	0.708	0.673	0.843	0.740
	O2	I'm usually curious about new things.	0.831			
	O3	I am often clever and think deeply.	0.782			
	O4	I have a creative mind.	0.785			
	O5	I have a rich imagination.	0.867			
	O6	I like to analyze new ideas.	0.721			
	O7	I am delicate in appreciating art, music, literature	0.678			
	O8	I cherish artistic values.	0.772			
	O9	I like freelance and changeable work.	0.665			
	O10	I have a hobby of art.	0.708			
Conscientiousness	C1	I am a careful person.	0.821	0.567	0.783	0.842
	C2	I am always dedicated to my work.	0.700			
	C3	I am a hard worker.	0.752			
	C4	I try to the end to get the job done.	0.772			
	C5	I do my job efficiently.	0.892			
	C6	I usually make a plan and follow it.	0.834			
	C7	I have a focus at work.	0.784			
	C8	I like to work with frameworks.	0.607			
	C9	I am dedicated to my work.	0.621			
Extroversion	E1	I am talkative in everything.	0.786	0.684	0.705	0.732
	E2	I am full of energy.	0.776			
	E3	I am enthusiastic about everything.	0.680			
	E4	I am decisive in everything.	0.838			
	E5	I am sociable and friendly.	0.823			
	E6	I am an open and confident person	0.630			
	E7	I am a vibrant person.	0.876			
	E8	I am an active and energetic person.	0.894			
Agreeableness	A1	I help and share with everyone.	0.673	0.507	0.813	0.704
	A2	I am tolerant of everyone.	0.774			
	A3	I am trustworthy with everyone.	0.832			
	A4	I am attentive and considerate of everyone.	0.722			
	A5	I like working with everyone.	0.789			
	A6	I respect everyone.	0.611			
	A7	I agree with everyone's opinion	0.743			
	A8	I am warm and easy to get along with everyone.	0.660			
	A9	I am polite to everyone.	0.783			
Neuroticism	N1	I am often sad and depressed.	0.674	0.623	0.826	0.749
	N2	I am usually stressed out about everything.	0.808			
	N3	I worry about everything.	0.833			
	N4	I often change my feelings suddenly.	0.842			
	N5	I am often nervous and lack confidence.	0.853			
	N6	I am hard to control my emotions.	0.668			

Scale	Sign	Statement	Outer loadings	AVE	Cronbach's Alpha	CR
	N7	I am sensitive and easily demoralized.	0.721			
	N8	I do not usually stay calm in difficult situations.	0.778			
Ethical leadership	EL1	I find that leaders often listen to employees' opinions.	0.826			
	EL2	I find that leadership has levels of discipline for employees who violate ethics.	0.805			
	EL3	I find that leaders always encourage employees to live and work according to ethical and human values.	0.645			
	EL4	I find that leaders always care about the interests of employees.	0.784			
	EL5	I find that leaders always build a fair working environment.	0.800			
	EL6	I trust and follow the leader.	0.736	0.700	0.805	0.803
	EL7	I find that leaders always organize meetings and discussions to raise awareness and the importance of ethical values.	0.652			
	EL8	I find that leaders always reward employees with good moral qualities.	0.677			
	EL9	I realize that the successes achieved are not only the desired results but also the moral values brought	0.711			
	EL10	I always ask the question "What should be done" before making decisions.	0.733			
Job performance	JP1	I find myself as a productive person.	0.853			
	JP2	I am satisfied with the quality of my work.	0.789			
	JP3	I am trusted by the leadership to be an effective worker.	0.802	0.687	0.784	0.794
	JP4	I am considered an effective worker by my colleagues	0.783			
	JP5	I am appreciated every result of completing assigned tasks.	0.802			
Job satisfaction	JS1	I am glad I found the right job.	0.800			
	JS2	I would still choose this job if I had to choose again.	0.685			
	JS3	Overall, I feel very satisfied to work at the agency.	0.783			
	JS4	I find the agency to be the best place to work.	0.858	0.704	0.838	0.777
	JS5	I consider my agency as a second home.	0.601			
	JS6	I'm full of inspiration every time I start work.	0.769			
	JS7	I am respected at the workplace.	0.707			

Source: Authors' analysis

In addition, the study found that the HTMT ratio did not exceed the threshold of 0.85 (Kline, 2015). Thus, the scales reached discriminant validity

(Table 3). It proves that the results support the existence of discriminant validity for all tested constructs.

Table 3. HTMT ratio

Construct	1	2	3	4	5	6	7	8
Openness to experience								
Conscientiousness	0.808							
Extroversion	0.764	0.717						
Agreeableness	0.732	0.702	0.545					
Neuroticism	0.748	0.674	0.736	0.803				
Ethical leadership	0.673	0.573	0.642	0.798	0.767			
Job performance	0.684	0.708	0.700	0.633	0.600	0.741		
Job satisfaction	0.563	0.632	0.703	0.707	0.564	0.688	0.715	

Source: Authors analysis

4.2. The structural model

To measure the structural model, the study considered the coefficient of determination (R²), standardized coefficients (Beta), t-test value,

significance of t-test through 1000 times of bootstrap proposed by Hair et al. (2019), the out of sample predictive power rating coefficient (Q²) and the effect size (f²) together with the baseline measures.

Table 4. Hypothesis testing

Hypothesis	β	t-statistic	p	Conclusion
H1.1: Openness to experience => Ethical leadership	0.431	3.263	0.001	Supported
H1.2: Conscientiousness => Ethical leadership	0.463	0.342	0.000	Supported
H1.3: Extroversion => Ethical leadership	0.204	2.167	0.000	Supported
H1.4: Agreeableness => Ethical leadership	0.412	3.349	0.000	Supported
H1.5: Neuroticism => Ethical leadership	-0.213	2.929	0.003	Supported
H2.1: Openness to experience => Job satisfaction	0.421	3.563	0.000	Supported
H2.2: Conscientiousness => Job satisfaction	0.436	2.432	0.000	Supported
H2.3: Extroversion => Job satisfaction	0.291	1.023	0.000	Supported
H2.4: Agreeableness => Job satisfaction	0.444	2.013	0.000	Supported
H2.5: Neuroticism => Job satisfaction	-0.137	0.462	0.000	Supported
H3.1: Openness to experience => Job performance	0.439	1.352	0.000	Supported
H3.2: Conscientiousness => Job performance	0.454	1.453	0.000	Supported
H3.3: Extroversion => Job performance	0.342	1.578	0.000	Supported
H3.4: Agreeableness => Job performance	0.426	1.192	0.000	Supported
H3.5: Neuroticism => Job performance	-0.221	1.023	0.000	Supported
H4: Ethical leadership => Job satisfaction	0.487	2.455	0.000	Supported
H5: Job performance => Job satisfaction	0.417	2.010	0.000	Supported

Source: Authors' analysis

The analysis results in Table 4 showed the Big Five personality traits have a significant impact on ethical leadership, job satisfaction, and job performance of public servants working at the State Administration agencies in the Red River Delta of the Northern. In which, conscientiousness has the highest positive impact on ethical leadership and job performance with β = 0.463 and β = 0.454. For job satisfaction, agreeableness is the most influential factor with β = 0.444. Moreover, neuroticism has an inverse impact on ethical leadership, job satisfaction, and job performance with standardized estimates of -0.213, -0.137, and -0.221. The results also showed ethical leadership and job performance have a positive significant impact on job satisfaction

with β = 0.487 and β = 0.417. Thus, the hypotheses group H1, H2, and H3 are accepted and the hypothesis H4, and H5 also are supported.

The analysis results in Table 5 showed conscientiousness has the most positive significant impact on ethical leadership, job satisfaction, and job performance with f² values of 0.406, 0.425, 0.400. And 4 personality traits (openness to experience, extroversion, agreeableness, and neuroticism) have a medium impact on ethical leadership, job satisfaction, and job performance. In addition, ethical leadership and job performance have a large impact on job satisfaction with f² values of 0.417 and 0.404.

Table 5. Effect size f^2

Hypothesis	f Square	Effect size
H1.1: Openness to experience => Ethical leadership	0.324	Medium
H1.2: Conscientiousness => Ethical leadership	0.406	Large
H1.3: Extroversion => Ethical leadership	0.156	Medium
H1.4: Agreeableness => Ethical leadership	0.287	Medium
H1.5: Neuroticism => Ethical leadership	0.153	Medium
H2.1: Openness to experience => Job satisfaction	0.242	Medium
H2.2: Conscientiousness => Job satisfaction	0.425	Large
H2.3: Extroversion => Job satisfaction	0.321	Medium
H2.4: Agreeableness => Job satisfaction	0.256	Medium
H2.5: Neuroticism => Job satisfaction	0.150	Medium
H3.1: Openness to experience => Job performance	0.342	Medium
H3.2: Conscientiousness => Job performance	0.400	Large
H3.3: Extroversion => Job performance	0.201	Medium
H3.4: Agreeableness => Job performance	0.397	Large
H3.5: Neuroticism => Job performance	0.167	Medium
H4: Ethical leadership => Job satisfaction	0.417	Large
H5: Job performance => Job satisfaction	0.404	Large

The analysis results in Table 6 showed the Adjusted R Square value of ethical leadership = 0.638. It means the Big Five personality traits explained 63.8% of the variance of ethical leadership factor while 36.2% of the error and other factors outside the model. Next, the Adjusted R Square value of job satisfaction = 0.530. It means the Big Five personality traits explained 53.0% of the variance of the job satisfaction factor, and 47.0% of the error

and other factors outside the model. Finally, the Adjusted R Square value of job performance = 0.402. It means the Big Five personality traits explained 40.2% of the variance of job performance factors, and 59.8% of the error and other factors outside the model. The research results indicate that all component models have $Q^2 > 0$, so the overall structural model of this study achieved overall quality (Hair et al., 2019).

Table 6. Effect sizes of predictive relevance

Construct	R Square	Adjusted R Square	Q^2	Effect
Ethical leadership	0.632	0.638	0.537	Large
Job satisfaction	0.543	0.530	0.467	Medium
Job performance	0.431	0.402	0.505	Large

Source: Authors analysis

4.3. Discussion

The research results showed that openness to experience, Conscientiousness, extroversion, and agreeableness have a positive relationship with ethical leadership while neuroticism has a negative relationship with ethical leadership. The research outcomes are homologous with the study of Kalshoven et al. (2011). On the contrary, the study of Walumbwa and Schaubroeck (2009) emphasized that only two factors of conscientiousness and agreeableness have an active impact on ethical leadership and neuroticism has a negative correlation with ethical leadership. And Özbağ (2016) stated that extroversion did not occur any impact on ethical leadership.

The research results also showed that openness to experience, conscientiousness, extroversion, and agreeableness have a positive correlation with job satisfaction and neuroticism has a negative correlation with job satisfaction. The results are similar to the study of Templer (2012). While the study of Bruk-Lee et al. (2009) only has conscientiousness, extroversion, and agreeableness impact on job satisfaction and neuroticism has a negative impact on job satisfaction as well with were not occur any association between job satisfaction and openness to experience.

The above results showed the factors openness to experience, conscientiousness, extroversion, and agreeableness have a positive impact on job

performance and neuroticism has a negative correlation with job performance. The results are absolutely supported by Tran (2019). While the study of Thoresen et al. (2004) showed neuroticism did not exist any association with job performance. Thus, the research results proved different cultural environments will lead to different results.

Additionally, the factors of ethical leadership and job performance have a positive impact on job satisfaction. The results are similar to the studies of Attar (2017), Dinc et al. (2018).

5. IMPLICATIONS

Theoretically, this study makes a great contribution to knowledge building in the field of human resource management and determines the relationship between the Big Five personality trait's impact on ethical leadership, job satisfaction, and job performance at the State Administrative agencies in the Red River Delta. Besides, this study is considered as a reference source, theoretical basis and material for further studies.

For the practical, the research results suggest that the leaders of State Administrative agencies in the Red River Delta catch the personality traits of public servants to bring about job satisfaction to achieve the best job performance.

As a result, this study suggests several important implications for the leaders of State Administrative agencies in the Red River Delta as follows:

This study helps leaders to understand the impact of Big Five personality traits on ethical leadership, job satisfaction, and job performance of public servants. For this reason, leaders understand the value of ethics and know which personality traits are right for themselves and public servants, leading to job satisfaction of them. Especially in the public sector, ethics is an important factor so become an ethical leader to manage your organization more

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successfully. Even public servants themselves must know to determine if their personality traits are suitable for this job to know how to adjust to satisfy needs. And finding a good working environment where there is a leader who cares about the common interests of public servants and the community brings high job satisfaction and job performance.

Personality traits play an important role in determining job satisfaction and job performance. Therefore, human resource managers must focus on these attributes in the recruitment process and arrange work consistent with each person's personality to bring job satisfaction and job performance, helping State administration agencies' systems operate better. This study also helps public servants to have career orientations that match their personalities.

6. CONCLUSIONS

This study explored the impact of personality traits on ethical leadership, job performance and job satisfaction of public servants working in the Northern public sector of Vietnam through data obtained by direct survey method of them. PLS-SEM was conducted to determine the interactions between the structures in the research model. The analysis results showed Big Five personality traits have a significant impact on ethical leadership, job satisfaction, and job performance. Additionally, ethical leadership and job performance have a positive impact on the job satisfaction of public servants.

Although this study's purpose has been achieved, this study still has a limited sample size because it was only conducted in the Northern public sector. Therefore, to overcome the above limitation, future studies can increase the sample size and expand the research scope to the Central and Southern public sectors.

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