



## Employees' job satisfaction, job performance and their relationship during the COVID–19 pandemic in Vietnam

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**Abstract.** *Purpose.* Purpose is to describe the current situation and different impacts of demographic variables such as gender, age and marital status on employees' job satisfaction, job performance and their relationship during the COVID-19 pandemic in Vietnam. Clarify the levels of influence among different job satisfaction groups on job performance and vice versa, the levels of influence among different job performance groups on job satisfaction. *Study design.* Data were collected using a survey for a convenient sample of 485 employees working at clothing and footwear factories in industrial zones of Hanoi and Hochiminh city Vietnam. *Findings.* Employees have lower job satisfaction and average job performance. The findings have no statistical difference from those before COVID-19. The cluster analysis results show that there are two employee groups, divided by the level of job satisfaction as well as job performance. There is no statistical significance difference by gender in employees' job satisfaction and job performance. Married people are more satisfied and have better performance than unmarried people whereas the young have lower job satisfaction and job performance than the older ( $p < 0.01$ ). The job satisfaction group also indicate higher work performance than the one with lower job satisfaction. Correspondingly, the good performed group have greater job satisfaction than the one with average job performance ( $p < 0.01$ ). The results reveal surprises about the role of relationships and salary. Relationships (colleagues, supervisors) have a strong impact on job performance of the job satisfaction group and on the job satisfaction of the good job performance. Meanwhile, salary has a strong impact on the performance of the less satisfaction group and on the job satisfaction of the average performance group. *Implications for practice.* Offer some recommendations for increasing employees' job satisfaction and job performance, facilitate sustainable development to the organization. *Value of the results.* The study compares the difference in the influence level of job satisfaction on job performance when clustering employees into groups of high and low job satisfaction. Likewise, the study also analyzes the impact of performance groups on employees' job satisfaction.

**Keywords:** COVID–19 pandemic, job satisfaction, job performance.

### Introduction

The study of the relationship between job satisfaction and job performance is one of the most venerable research traditions in industrial-organizational psychology (Judge et al., 2001). Especially, in the context that employees and businesses in general and in Vietnam are under great pressure

from the COVID-19 pandemic, this relationship has become more critical than ever. In the world, as estimated by the International Labor Organization (ILO), partial or total lockdowns have affected 2.7 billion employees (or 81% of the global workforce) as working hours will decrease by 6.7%, (or 195 million full-time employees) in the second quarter of this year. About 1.25 billion employees, equivalent to 38% of the global workforce working in many fields, are witnessing a serious decline in output, accompanied by high risks of layoffs, reduction in salary and working hours (ILO, 2021). The state of Vietnamese employees is no exception to this general trend. According to the survey from the Vietnam Chamber of Commerce and Industry (VCCI) carried out in 46 provinces and cities, 76% of surveyed enterprises have reduced working hours in various ways, such as adjusting flexible working hours and even layoffs (ILO, 2020). In addition, the COVID-19 pandemic causes psychological problems such as fear, worry, and stress (Shigemura et al., 2019). Employees' performance could also suffer as a result (Sasaki et al., 2020).

Vietnamese employee productivity is much lower than many countries in the world as well as other countries in the region. In terms of absolute value, according to World Bank data, Vietnamese employee productivity at purchasing power parity (in terms of PPP 2011) in 2019 was only 7.64% of Singapore; 19.53% of Malaysia; 37.92% of Thailand; 45.56% of Indonesia; 56.88% of the Philippines; 88.05% of Laos. Labor productivity of Vietnam in Southeast Asia is only higher than that of Cambodia (1.6 times) (Tuong Vy, 2021). Employee productivity is measured by the total of many factors, including macro factors such as the size of the economy, institutions, mechanisms, and policies, etc., or micro factors such as size, internal resources of enterprises, ability to adapt scientific and technological achievements to production and business; quality of human resources, skills of employees, ability to use human resources of enterprises and employers (Tuong Vy, 2021). Low employee productivity along with problems arising from the pandemic such as reduction of working hours, unstable labor, psychological insecurities caused by COVID-19 can affect employees' attitudes and performance. In the situation that employees must protect their own health against the emergence of new virus strains with an increasingly faster and stronger spreading speed while having to work to ensure their lives. The study tries to find out answers to the following questions during the COVID-19 pandemic in Vietnam:

1. What are the situation and differences among demographic groups (gender, age, marital status) in terms of employees' job satisfaction, job performance?
2. Is there reciprocal relationship between job satisfaction and job performance?
3. How employee groups with different levels of job satisfaction affect job performance and how different employee groups of performance affect job satisfaction?

## **Employees' job satisfaction**

Job satisfaction is an important concept that has attracted attention from industrial organizational psychologists for decades (Loan, 2020). Job satisfaction is the most researched subject in the history of industrial organizational psychology (Judge, Church, 2000), a commonly dependent measure in organizational studies (Spector, 1997). This subject is popular because it helps predict job behaviors such as citizenship behavior, absence, tendency to leave (Mount, 2006) and entails practical applications for the enhancement of individual lives as well as organizational effectiveness (Judge, Zhang, Glerum, 2020). Job satisfaction can lead to behaviors affecting organizational functioning. People deserve to be treated fairly and with respect. Therefore, in a way, job satisfaction reflects good treatment (Spector, 1997). In other words, it also can be considered an indicator of emotional well-being or psychological health.

In today's psychology, there are many different perspectives and approaches to job satisfaction. According to the individual approach, job satisfaction is known as the subjective feelings of employees about their work. Viewing from the organizational approach, it is regarded as the result of the organization performance, the working environment, and the relationships in it. Some researchers argue that job satisfaction comes from the fulfillment of employees' physical and psychological needs brought about by work (Porter, 1962; Wolf, 1970). In the emotional approach, job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1997). Job satisfaction means "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976). In support of these views, Fisher describes job satisfaction as an attitude with both affective (mood, emotional) and cognitive (belief, judgment, comparison) components (Fisher, 2000). Researchers who follow cognitive approach suppose job satisfaction is a subjective nature, the result of a conclusion based on a comparison of what is received by employees and their work compared to what is expected, wanted, and examined as things that are appropriate or entitled to them (Hu et al., 2019).

Many different studies show a variety of components of job satisfaction. Job satisfaction is composed of 20 clauses / sub-scales such as Ability Utilization, Achievement, Activity, Advancement, Authority, Company Policies, Compensation, Co-workers, Creativity, Independence, Moral Values, Recognition, Responsibility, Security, Social Status, Social Service, Supervision — Human Relations, Supervision — Technical, Variety, Working Conditions (Weiss, Dawis, England, 1967). Job satisfaction consists of five facets: pay, promotions, colleagues, supervision, and the work itself (Smith, Kendall, Hulin, 1969). E. A. Locke adds a few other facets: recognition, working conditions, and company and management (Locke, 1976). Some studies divide job satisfaction into intrinsic and extrinsic elements whereby pay and promotions are considered extrinsic factors and colleagues, supervision, and the work itself are considered intrinsic factors (Judge, Zhang, Glerum, 2020). C. L. Hulin and T. A. Judge suggested that job satisfaction has cognitive (evaluative), affective (or emotional), and behavioral components (Hulin, Judge, 2003). Common factors covered are supervisors, current wages, promotion opportunities, and relationships with colleagues (Rustiarini et al., 2019).

In general, job satisfaction is an individual's positive psychological state related to satisfaction (dissatisfaction) with respect to the elements of work, work environment, salary and other relationships. In this study, we consider the employees' job satisfaction as their positive psychological state related to their job nature, work conditions, salary, promotion opportunities, relationship with colleagues and with supervisors.

During the pandemic, there are a number of emerging issues that can negatively impact employees' job satisfaction. First, businesses may have to cut working hours, reduce wages and and benefits. Second, social distancing (one of the 5K measures<sup>1</sup>) at the enterprise leads to inadequate direct contact with workmates and leaders. Finally, there arises psychological insecurity due to the high risk of Covid infection when working in an environment with several hundreds or thousands of workers. Based on this situation, the study puts forward the following hypotheses:

*H1: The employees' job satisfaction during the pandemic is lower than before the pandemic.*

Previous studies have investigated the differences in employees' job satisfaction according to demographic variables such as: gender (Clark, 1996; Hulin, Smith, 1964); age (Decker, Borgen, 1993; Sarker et al., 2003) and marital status (Austrom et al., 1988; Hoboubi, 2017). Therefore, the study makes some hypotheses related to the differences in employees' job satisfaction according to demographic variables (*H2*) as follows:

<sup>1</sup> 5K — (in Vietnamese) *Khau trang* (facemask) — (*Khu khuon*) disinfection — (*Khoang cach*) distance — (*Khong tu tap*) no gathering — (*Khai bao y te*) health declaration. This is a message from Ministry of Health to inform Vietnamese people of protective measure to combat COVID-19.

*H2a: There is a statistically significant difference in employees' job satisfaction by gender.*

*H2b: There is a statistically significant difference in employees' job satisfaction by age.*

*H2c: There is a statistically significant difference in employees' job satisfaction by marital status.*

## **Employees' job performance**

Job performance is an important indicator in assessing the level of economic development of the business. The outcome of job performance has a direct impact on organizational performance and success (Mughal, Iraqi, 2020). Performance needs an assessment to provide the right opportunity for employees to develop their career plans to identify their strengths and weaknesses so that companies can determine salary, provide promotions, and can assess employee behavior (Kehoe, Wright, 2013). Work results relate to the level of quantity and quality, how it has been produced, and the extent to which supervision is carried out (Wayne, Ferris, 1990). Performance is often defined in the context of the quantity, quality, and contribution that employees make to the achievement of organizational goals (Đorđević et al., 2020). Job performance refers to doing the job to achieve the goal with the most reasonable resources, requiring individuals to do it correctly and as planned (Phan et al., 2021).

Job performance is affected by many different personal and environmental factors. An effective employee is a combination of a good skill set and a productive work environment (Nurun Nabi, Dip, 2017). It means that employees are affected by internal and external forces when performing their job duties. Employee performance is determined by the accomplishment and achievements made at work (Mughal, Iraqi, 2020). Moreover, performance is the result of planning and is evaluated through performance management. Therefore, performance evaluation is the heart of performance management and the performance of an organization or an individual depends heavily on all organizational policies, practices and design features (Mughal, Iraqi, 2020). To accomplish a person's task or job should have a certain degree of willingness and level of ability (Nugroho et al., 2020). Work results involves (1) job knowledge: the level of knowledge related to work tasks that will directly affect the quantity and quality of work results; (2) initiative: the initiative's level during work tasks, especially in terms of handling problems that arise; (3) mental proficiency: the level of ability and speed in receiving work instructions and adapting to existing work methods and work situations; (4) attitude: the level of morale and positive attitude in carrying out tasks; (5) job performance: the discipline of time and attendance such as punctuality and attendance levels (Wayne, Ferris, 1990).

Thus, job performance is related to quantity, quality and contribution that employees make to the achievement of organizational goals by efforts, abilities, and perceptions of the tasks delegated to them. Job performance is a complex issue. To evaluate labor productivity fairly and objectively, it is necessary to notice: (1) the degree of work completion of employees in both quantity and quality, (2) job performance is closely related to the achievement of organizational goals, which means that employee performance is joined with organizational performance.

Employees' working efficiency during COVID-19 pandemic may be affected by some changes in the performance of labor activities. It takes time for employees to implement epidemic prevention measures such as daily medical declaration, frequent hand washing and disinfection (before, during and after work). In addition, the mandatory wearing of masks, limiting frequent contact, keeping a distance at work also causes tension, suffocation and obstacles for coordination and interaction, even dyspnea for workers. All of these factors can reduce job performance. Therefore, the study raises the following hypotheses:

*H3: Employees' job performance during the pandemic is lower than before the pandemic.*

Job performance is affected by variables such as: gender (Hyde, 2005; Kinget al., 2010; Rothet al., 2012), age (van Ours, Stoeldraijer, 2011) and status marital status (Jordan, Zitek, 2012; Padmanabhan, Magesh, 2016). The study poses the following hypotheses (H4):

*H4a: There is a statistically significant difference in employees' job performance by gender.*

*H4b: There is a statistically significant difference in employees' job performance by age.*

*H4c: There is a statistically significant difference in employees' job performance by marital status.*

## **Relationship between job satisfaction and job performance**

Long time ago, the relationship of job satisfaction and job performance attracted the interest of scientists, starting with Hawthorne studies and the ensuing human relations movement. Most studies show a direct or indirect relationship between these two variables. Job satisfaction is a process of achieving employee motivation levels (Sapta, Muafi, Setini, 2021), being more productive at work, and a form of employee employment driven by the fulfillment of their needs. The needs of workers who can be adequately fulfilled are stimuli that can motivate them to work comfortably and optimally (Sapta, Muafi, Setini, 2021). Employees who are less satisfied with their jobs tend to be less productive than their peers (Bockerman, Ilmakunnas, 2012). The positive correlation between job satisfaction and productivity indices was statistically significant (Hoboubi et al., 2017). Employees' stress is negatively correlated with job performance (Khuong, Yen, 2016). There are seven models of the relationship between job satisfaction and job performance. These are the models: job satisfaction causes job performance; job performance causes job satisfaction; job satisfaction and job performance are reciprocally related; the relationship between job satisfaction and job performance is spurious; the relationship between job satisfaction and job performance is moderated by other variables; there is no relationship between job satisfaction and job performance; alternative conceptualizations of job satisfaction and/or job performance (Judge et al., 2001).

From the above overview on relationship between job satisfaction and job performance, several hypotheses are put forward as follows:

*H5: There is a statistically significant positive correlation between employees' job satisfaction and employees' job performance*

*H6: There is a statistically significant difference in job performance between different groups job satisfaction*

*H7: There is a statistically significant difference in job satisfaction between different groups job performance*

## **Methods**

### **Samples and research design**

The data were collected using questionnaire form among a convenience sample of 485 employees working at clothing and footwear factories in industrial zones in Hanoi city (six factories), Ho Chi Minh city (six factories), Vietnam from May to October 2020. With the recommendation letter from the University of Social Sciences and Humanities, the researchers were allowed to conduct their survey on lunch break with funding as approved. These are Vietnamese enterprises specializing in making clothing and footwear products to serve domestic market and export. Their jobs are quite simple but require meticulousness and ingenuity, so most workers are females.

In this study, the percent of female participants (71.1 percent) is higher than the percent of male participants (28.9 percent). As for marital status, 67.1% of workers are married and 32.9%

unmarried (including those single/divorced). The age groups of employees consist of four groups: from 18 to 24 accounted for 25.6%, from 25 to 34 accounted for 47.1%, from 35 to 44 accounted for 16.2%, and from 45 and above accounted for 7.6%.

### **Measures**

This study used two main measures: (1) job satisfaction and (2) job performance.

#### ***Measure of job satisfaction***

In-depth interviews were conducted among 12 employees on dimensions of job satisfaction such as: work itself, working conditions, current wages, promotion opportunities, and relationships with supervisors, colleagues. During the interview, the researchers also raised several questions about changes of work compared to before the pandemic, mental health problems during the pandemic, their attitudes towards the factories' anti-Covid measures, reasons for their satisfaction (dissatisfaction) and job performance.

Based on the nature of job satisfaction that was analyzed in combination with its qualitative manifestations obtained through depth interviews with employees, this study summarized and listed 39 items. With these items, we designed a survey questionnaire about job satisfaction of employees. The study examined factors to determine the validity of the scale on the principle of selecting items with main coefficient factor loading  $> 0.4$ , secondary coefficient factor loading  $< 0.35$  and  $KMO > 0.5$ . The study analyzed these factors three times to eliminate items that do not meet the conditions. As the result, coefficient  $KMO$  was 0.94 ( $> 0.5$ ), Barlet test had  $sig = 0.00 < 0.05$  and the job satisfaction scale was viewed from three factors: salary, colleagues, and supervisors with a total variance of 62.2%  $> 50\%$ . Salary component consisted of six items (e.g., "The job I am doing helps me have an income to support myself and my family"); colleagues component included seven items (e.g., "At work, I always receive attention and sharing from colleagues"); supervisors component was composed of five items (e.g., "I like the way the supervisors share with their employees in the enterprise..."). Thus, job satisfaction scale has 18 items. Internal validity of the component is ensured ( $> 0.5$ ): salary (Cronbach's  $\alpha = 0.82$ ), colleagues (Cronbach's  $\alpha = 0.92$ ), supervisors (Cronbach's  $\alpha = 0.90$ ) and job satisfaction (Cronbach's  $\alpha = 0.85$ ).

#### ***Measure of job performance***

Combined with the Employee performance scale of Chen, Tsui, Farh (2002) and Heilman et al. (1992) used and reported by Sy et al. (2006), the study designed a six-item scale. Internal consistency of the scale was sufficiently high (Cronbach's  $\alpha = 0.86$ ) with only one factor confirmed.

A five-point Likert-type scale is used in this study with anchors from «1» — «Strongly disagree» to «5» — «Strongly agree». The scale score is calculated as the average of the component items. Thus, the scale has a maximum score of 5.0, a minimum of 1.0. The closer the average score is to the degree of agreement; the more satisfaction and higher performance is indicated. Specifically, if the average score reaches 5.0, job satisfaction is rated as very satisfied and job performance is considered excellent. If the average score is close to 4.0, respondents are satisfied, and their job performance is said to be good. With the average score of 3.0, employees are lower satisfied and have average job performance. If the average score is close to 2.0, respondents express dissatisfaction with their job, which is accompanied with low work performance. The average score stands at 1.0 means being very dissatisfaction and poor job performance.

The collected data was processed by SPSS software version 22.0. To compare job satisfaction and job performance according to demographic variables, the study uses inferential statistics (Independent-Samples *T-test*) for gender and marital status, One-way Anova for age. To classify groups of employees with different levels of job satisfaction and job performance, the study uses

hierarchical cluster analysis with Ward's method because it has been shown to be more effective than other methods (Milligan, 1980). These clusters are used as a variable to analyze the influence of job satisfaction on job performance and vice versa using Person correlation and linear regression.

## Results

The results of Table 1 show that employees have less job satisfaction ( $M = 3.88$ ,  $SD = 0.64$ ), which coincides with the study prior epidemic ( $p > 0.05$ ), and average job performance ( $M = 3.89$ ,  $SD = 0.61$ ) — echoing the 2018 study ( $p > 0.05$ ) (Hang, Hong, 2015; Yu et al., 2018). Therefore,  $H1$  and  $H3$  are rejected. The cluster analysis on job satisfaction resulted in two clusters: 203 people (accounting for 44.5%) and 253 people (accounting for 55.5%) with the average score of job satisfaction as illustrated in Table 1. The average score of job satisfaction in the first group is between three and four, and over four points in the second group. We call the first group as the lower job satisfaction group and second one as the job satisfaction group. Thus, the rate of employees who are satisfied with their job is higher than the rate of less satisfied one. According to cluster analysis, the mean score performance of the two employee groups is  $M = 3.44$ ,  $SD = 0.46$  and  $M = 4.09$ ,  $SD = 0.55$  respectively, so we name them as the average job performance and the good job performance group. The average job performance group accounted for 31.5% and the good job performance group took up 68.5%.

Table 1. Compare the mean of job satisfaction and job performance according to the variables

Variables	Job satisfaction $M$ ( $SD$ )	$t / F$	Job performance $M$ ( $SD$ )	$t / F$
Job satisfaction	3.88 (.64)			
Lower job satisfaction group	3.39 (.58)		3.50 (.47)	$t(444) = 15.27^{**}$
Job satisfaction group	4.28 (.34)		4.22 (.50)	
<b>Job performance</b>			3.89 (.61)	
Average job performance	3.52 (.79)	$t(444) = 8.479^{**}$	3.44 (.46)	
Good job performance	4.04 (.48)		4.09 (.55)	
<b>Gender</b>				
Male	3.93 (.64)	$t(399) = .422$ , ns	3.87 (.61)	$t(425) = .126$ , ns
Female	3.90 (.65)		3.88 (.61)	
<b>Marital status</b>				
Married	4.01 (.68)	$t(397) = -4.88^{**}$	3.97 (.64)	$t(424) = -4.30^{**}$
Unmarried	3.71 (.55)		3.71 (.52)	
<b>Age</b>		$F(3.392) = 12.08^{**}$		$F(3.418) = 12.05^{**}$
(1) 18-24 year-old	3.80 (.45)	(1) < (2), ns	3.77 (.50)	(1) < (2), ns
(2) 25-34 year-old	3.95 (.52)	(1) < (3)*	3.84 (.59)	(1) < (3) *
(3) 35-44 year-old	4.19 (.53)	(1) < (4)*	4.15 (.60)	(1) < (4)*
(4) Above 45-year-old	4.28 (.53)	(2) < (3)*	4.28 (.71)	(2) < (3)*
		(2) < (4)*		(2) < (4) = *
		(3) < (4), ns		(3) < (4), ns

Note: \* —  $p < 0.05$ , \*\* —  $p < 0.01$ ; ns — no statistical significance.

The result indicates that there is no a statistically significant difference between male and female employees on employees' job satisfaction and job performance ( $p > 0.05$ ). Therefore,  $H2a$  and  $H4a$  are rejected. However, it is also quite interesting to explore the statistically significant difference between job satisfaction and job performance by age ( $F_{(3.392)} = 12.08$ ,  $F_{(3.418)} = 12.046$  respectively). Besides, the 35–44 age group and the above 45-year-old group are more satisfied with their work and work more efficiently than the 18–24 age group and the 25–34 age group ( $p < 0.05$ ). In pairs of groups: the 18–24 age group and the 25–34 age group, and the 35–44 age group and the above 45-year-old group, however, there is no statistically significant difference in these indicators. Therefore, we sort

them into two main groups: (1) the 18–34 age group and the above 35-year-old group. Therefore, *H2b* and *H4b* are accepted. In terms of marital status (married and unmarried), we find out a statistically significant difference between job satisfaction and job performance. Specifically, the married is more satisfied ( $M = 4.01$  versus  $M = 3.71$ ,  $p = 0.000$ ) and has a higher job performance ( $M = 3.97$  versus  $M = 3.71$ ,  $p = 0.00$ ) than the unmarried. *H2c* and *H4c* are accepted. This proves that the marital status variable should be considered in the analysis of job satisfaction and job performance of employees.

The data is shown in Table 2 indicate that there is statistically significant correlation between job satisfaction on job performance ( $r = 0.675$ ,  $p < 0.01$ ). In addition, correlation coefficients of lower job satisfaction group, job satisfaction group and job performance are  $r = 0.477$  and  $r = 0.491$ ,  $p < 0.01$  respectively. The correlation coefficients of job satisfaction and average job performance, good job performance groups are  $r = 0.610$  and  $r = 0.645$ ,  $p < 0.01$  respectively. Thus, hypothesis *H5* is accepted. Moreover, the average scores of performance in the satisfaction group and the less satisfaction group are  $M = 4.22$  and  $M = 3.50$ , respectively ( $t_{(444)} = 15.27$ ,  $p < 0.01$ ). Hypothesis *H6* is also proven (Table 1). The difference between the average scores of job satisfaction in the two groups of job performance (average good and good) is statistically significant with  $M = 3.52$  and  $M = 4.04$ , respectively ( $t_{(444)} = 8.479$ ,  $p < 0.01$ ) (Table 1). It means that the better the job performance, the more job satisfaction. Hypotheses *H7* are confirmed.

Table 2. Correlation coefficient between job satisfaction and job performance

Variables	Job satisfaction	Performance
Lower job satisfaction group		.477**
Satisfaction group		.491**
Average job performance group	.610**	
Good job performance group	.645**	
Job satisfaction		.675**

Note: \*\* —  $p < 0.01$

Which job satisfaction group makes the stronger impact on job performance? According to table 3, lower job satisfaction group tend to have a weaker impact on work performance than job satisfaction group (22.4% vs 23.8%). Furthermore, in both these groups, colleague is the strongest component affecting employee job performance ( $\beta = 0.427$  and  $0.323$ ). Nevertheless, job performance of lower job satisfaction group is more strongly influenced by salary than supervisors ( $\beta = 0.244$  vs  $0.114$ ,  $p < 0.01$ ), while job performance of job satisfaction group is more powerfully impacted by supervisors than salary ( $\beta = 0.265$  vs  $0.084$ ,  $p < 0.01$ ) (Table 3).

Table 3. Multivariate regression of the impacts of job satisfaction components on job performance by job satisfaction groups

Variables	Job performance of lower job satisfaction group		Job performance of job satisfaction group		Job performance	
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$
	$R^2 = .303, F(3.193) = 29.435$		$R^2 = .275, F(3.245) = 32.402$		$R^2 = .477, F(3.442) = 25.957$	
Salary	.244	.006	.084	.000	.137	.000
Colleagues	.427	.000	.323	.000	.441	.006
Supervisors	.114	.000	.265	.000	.195	.000
Job satisfaction	$R^2 = .224, F(195) = 57.493$		$R^2 = .238, F(248) = 78.424$		$R^2 = .455, F(445) = 371.29$	
	.477	.000	.491	.000	.675	.000

When analyzing the influence of job performance on job satisfaction according to job performance groups, the obtained data show that the average performance group took up 36.7% ( $F_{(1.134)} = 79,213$ ,  $\beta = 0.61$ ,  $p = 0.00$ ), while the good job performance group accounted for 41.6% of the variation in



employees' job satisfaction ( $F_{(1,308)} = 218.95, \beta = 0.64, p = 0.00$ ). Thus, the average job performance group has weaker impact on the job satisfaction of employees than the good job performance group. Additionally, the results about the influence of job performance on the components of job satisfaction analysis show that the average job performance group has a stronger impact on salary than the good job performance group ( $R^2 = 0.188$  versus  $R^2 = 0.182, p < 0.01$ ). Yet the average job performance group weakly impact on the satisfaction with colleagues ( $R^2 = 0.378$  versus  $R^2 = 0.431$ ), satisfaction with supervisors ( $R^2 = 0.282$  versus  $R^2 = 0.297$ ) and job satisfaction ( $R^2 = 0.367$  versus  $R^2 = 0.414$ ). It can be seen that average job performance group have a stronger effect on salary satisfaction, however, a weaker impact on satisfaction with colleagues, supervisors to compare with good job performance group (Table 4).

Table 4. Linear regression of the impacts of job performance on job satisfaction by job performance group

Variables	Salary		Colleagues		Supervisors		Job satisfaction		p
	R <sup>2</sup>	$\beta_0$	R <sup>2</sup>	$\beta_0$	R <sup>2</sup>	$\beta_0$	R <sup>2</sup>	$\beta_0$	
Average job performance group	.188	.440	.378	.618	.282	.533	.367	.610	.00
Good job performance group	.182	.43	.431	.658	.297	.55	.414	.645	.00

## Discussion

Employees' job satisfaction coincides with the study at the same period (Phan, 2020). The research findings are not statistically different from the pre-pandemic studies on job satisfaction and job performance, which can be explained by that fact Vietnam's capability to control the COVID-19 pandemic was quite good at the time of the study's survey in 2020. At the 25<sup>th</sup> ASEAN Coordinating Council, Prime Minister Nguyen Xuan Phuc shared with people around the world about Vietnam's experience in COVID-19 prevention and control. The lesson from Vietnam is early awareness of COVID-19's danger and being proactive right from the start. With high political determination, considering "fighting the epidemic as fighting the enemy", the Government has resolutely implemented many measures synchronously and flexibly, including isolation of the Vietnamese returning home and foreigners entering the country. Those in contact with positive cases have been quickly detected, especially zoning and focusing on combating the epidemic at the outbreaks" (Quoc Chan, 2020). Added with that are synchronous, flexible and drastic response measures, mobilizing the participation of the entire political system at all levels, sectors and people, including the assistance and use of military force (Cong Thuong newspaper, 2020).

In the first three stages of the epidemic (from January 23, 2020, to April 27, 2021), Vietnam had only 249 cases, 122 patients recovered (Le Hiep, 2020) and no cases detected in the factories where this research was conducted. The reserve of imported raw materials for production activities was still available. Domestic demands did not change much and orders from foreign partners in effect. Therefore, there was not any major change in the work or income of workers (no reduction of working hours or downsizing production scale). Employees felt safer when strictly following 5K measures in production with the factories' motto "Being safe to produce, production must be safe". COVID-19 prevention and control committees were established to promote the implementation of measures to prevent and control the epidemic. Besides, they purchased equipment and supplies for epidemic prevention (body temperature gauges, anti-spit masks, hand sanitizer), arranging sites for hand washing and dry disinfection. Production sites, company premises and canteens were installed with partitions for each table and spaced as regulated.

There is certain evidence reflecting the influence of marital status on job satisfaction, that is, married employees are more satisfied with their jobs than are their unmarried colleagues (Austrom et al., 1988; Hoboubi et al., 2017; Watson 1981). This is also consistent with research on the mental health of these two groups in COVID-19 situations about unexpected situations. Accordingly the unmarried are at higher risk than married people for mental illness following the experience of undesirable events (Thoits, 1987). Marriage, imposing increased responsibilities, forces them to have more stable work. The risk of being fired is high especially in the context of the pandemic. In such cases, many strive to cope up or adjust them with the facets they are dissatisfied with (Azim, Haque, Chowdhury, 2013). While employees, who are young and single, are still hesitant to decide a long-term commitment to work: whether it is a lifelong job or just a temporary job. Hence the level of their job satisfaction is lower than those who are older and married. In Vietnamese culture, marriage is an important thing in life because they should have a stable life. In other words, adults who want to develop their career need to ensure home and family as Vietnam is an agricultural country with a sedentary lifestyle. Marriage helps employees have a balanced and stable life to work more productively. Furthermore, getting married is seen as psychological and social maturity of the individuals. In Vietnam, the married not only are responsible to fulfill living conditions for their partner and children such as housing, facilities, quality of child rearing, but also for both sides of their families: paying visits, taking care and meeting their expectations. Therefore, their job satisfaction is the best way to feel secure in their jobs and take responsibilities of their family.

The literature on the relationship between job satisfaction and gender is very rich, although inconsistent (Bellou, 2010). The research on the impact of gender on distress during the COVID-19 crisis of Israeli employees demonstrated that gender predicted the dependent variables as well: women reported a higher level of sense of danger and distress symptoms, compared to men (Kimhi et al., 2020). However, this study shows that there is no significant difference between male and female employees in Vietnam between job satisfaction (consistent with the research by Giao, 2020) and job performance (consistent with the research by Hyde, 2015). This can be explained by gender equality in businesses. In Vietnam, gender equality is well noticed and implemented by the government. Many reports from international organizations have commented that Vietnam has taken a lot of actions to reduce discrimination and inequality between men and women. The government has established the policies and legal documents, such as the Law on Gender Equality and the Law on Prevention of Domestic Violence. They also organize several action programs such as: National Action Program on Gender Equality in the period 2016–2020, National Action Program on Prevention of Domestic Violence until 2020, etc., to protect women's rights in many fields of politics, economy, labor, education, health and in their families (Diep, 2018). According to the Human Development Report (2019), Vietnam has a gender inequality index of 0.296, ranking 117 out of 195 countries and territories (Gender Inequality Index, 2020), continuing to hold the top three countries with the lowest gender inequality index among ASEAN countries. The United Nations evaluates Vietnam as a bright spot to implement the Millennium Development Goals, and one of the countries with high achievements in gender equality. At the same time, it is ranked in the group of countries with the best gender equality achievements in Southeast Asia. This represents Vietnam's remarkable progress in achieving gender equality (Diep, 2018). In Vietnam, the difference in minimum wages between men and women is relatively small (Matt Cowgill và Phu Huynh, 2016). It is equality that makes male and female employees enjoy the same benefits and treatments, so there is no difference in job satisfaction and performance.

Research results on the influence of age on job satisfaction are also inconsistent (Savery, 1996; Pook et al., 2003). The research on the impact of working age on distress (a type of emotion) during the COVID-19 crisis among Israeli employees found out that older age predicted lower levels of sense of

danger and distress symptoms (Kimhi et al., 2020). In this study, job satisfaction and job performance tend to be higher in the older group (above 35 years old) than in the younger group (from 18 to 34). Firstly, it can be explained by characteristics of the subjects. They are manual workers so physical strength is the most important. Yet people are no longer strong at the age above 35, so they are less likely to look for other jobs and have a higher desire for stability. Secondly, younger people often have high expectations for different dimensions of work. By the time, however, expectations will decrease as the challenges and work experiences do not suit their standards. Such reduced standards are able to help them have a more positive attitude to work and close the gap between their actual work and expectations. Thus, the older the employees are, the more satisfied with their jobs they are.

The results show that the older employees tend to have higher job performance than the younger ones. This result is not similar to Skirbekk's study that job performance decreases after the age of 50, especially in jobs that require constant improvement of knowledge, fast problem-solving speed, while other jobs with experience and expression were less affected (Skirbekk, 2004). Several studies reveal that job performance is related to communication skills, information processing speed, strength and endurance, health, self-discipline, flexibility, administrative capacity and strategies, math proficiency, vocabulary, education, motivation, energy, and work experience (Van Ours, Stoeldraijer, 2011). In this research, the jobs are related to production line with a high degree of specialization, so speed is an important factor. In other words, young employees can take advantages of these jobs. The psychological characteristics of the older such as desire to contribute, high sense of discipline, prudence, meticulousness, maturity in work, good receptivity, experience, and vocational skills occupation, however, can be important factors affecting job performance at the age above 35. Because Vietnamese older employees often have a more favorable family situation when their children have a higher ability to take care of themselves. Hence, they do not need to pay much attention to the family and can devote themselves to the work. Moreover, Vietnamese enterprises require employees to take a skill improvement exam to serve as a basis for ranking career ladders corresponding to salaries. It is facile for older employees as their professional skills have gradually been improved over the years. Finally, the older are often the active and typical nucleus of the enterprise in many different aspects, especially job performance. They are selected and retained after the equitization process. All the above can partly illuminate the job performance of the older employees who are more productive than younger ones.

The study finds out that there is a positive, statistically significant correlation between job performance and three components of job satisfaction: salary, colleagues, supervisors as well as employees' job satisfaction. This result supports the results that the mean score of productivity index showed a direct significant relationship with job satisfaction dimensions (work, supervision and co-workers) (Hoboubi et al., 2017). Increased stress leads to reduced productivity and increased satisfaction leads to increased performance (Halkos, Bousinakis, 2010). Our findings are in line with research by Ayalew et al., (2019), which states that job satisfaction positively affects employees' job performance. It can be explained that job satisfaction is needed by an employee to improve the performance of each individual even though, according to its nature, job satisfaction itself varies from one person to another (Sapta, Muafi, Setini, 2021). Furthermore, attitudes had behavioral consequences, that is, attitudes to the job led to behaviors, i.e., performance on the job (Judge et al., 2001).

This study also demonstrates the effect of salary satisfaction on job performance. Pay is among the most important constructs acting on work motivation (Gelard, Rezaei, 2016). Equity theory can interpret this relationship. In general, employees always compare their efforts to contribute to the enterprise with the salary they receive, as well as their salary with their colleagues'. Equity is established when being thought to be achieved when the ratio of employees' input to output is equal to that of a referent other (Memon, Salleh, Baharom, 2017). With the same effort contributed, if the

individual's salary is lower than that of others (unfairly), dissatisfaction with the salary will occur. At this situation, the individual can respond by lowering his/her level of effort, thereby bringing his/her ratio closer in line with the referent (Currall et al., 2005). Thus, it can be said that salary satisfaction promotes effort, creativity in work and high performance. Moreover, social exchange theory claimed "voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others" (Blau, 1968). Salary satisfaction means employees get benefits. When their expectations are met by the enterprise, they are responsible for working hard with higher productivity like a way of responding positively to the support of the organization.

Some authors mentioned that the satisfaction with interpersonal relationships such as supervisors and colleagues have an impact on employees' job productivity. Interpersonal communication and relationship in recent years has been consistently placed highly as an important requirement for conducting successful job performance in the organizations. Workplace interpersonal relationship is a very important issue that influences the level of employee productivity in any organization (Nwinyokpugi, Omunakwe, 2019). The greater the density of relationships within the organization, the greater is the impact on organizational efficiency and productivity (Lee, Dawes, 2005). Employees who have an open relationship with their supervisors are more likely to establish productive working relationships with them, enhance job performance and contribute to organizational productivity (Tsai, Chuang, Hsieh, 2009). Characteristics of communication between supervisors and employees with high frequency, openness and accuracy, performance and feedback are positively related to employee's performance. On the other hand, interpersonal contacts are also a dimension that needs considering. Interpersonal contacts can help employees engage in knowledge transfer and lead to innovative ideas that improve productivity. Interpersonal contacts can also promote employee job satisfaction and motivation, which in turn leads to increased productivity (Delmas, Pekovic, 2013).

Even though the components of job satisfaction all have an impact on job performance, the relationship with colleagues has the strongest impact. Obviously, the relationship with colleagues is horizontal and regular, while the relationship with the leader is vertical, less frequent, so employees get more support and learning from colleagues. Therefore, satisfaction with colleagues has a stronger impact on performance than satisfaction with supervisors. In the income structure of employees in Vietnamese enterprises, salary only accounts for a part, the rest is income other than salary: overtime pay, bonus, and so on. In order to receive non-wage income, employees have to go through different levels of evaluation: personal self-assessment of their job performance, assessment from colleagues at the team, and assessment from management and emulation councils (leaders, trade unions, departments). The assessment from colleagues is the closest level of evaluation that does not determine the results of employee evaluation, although it is the basis for evaluation at the next levels.

The difference in the level of influence of salary and supervisor on the performance of the two groups of job satisfaction as mentioned above shows interesting things. For the lower job satisfaction group, the material compensation gives employees a positive attitude at work. On the contrary, for the job satisfaction group, the mental compensation, especially from the supervisor such as caring, listening and sharing, strongly promotes the employees' job performance.

Analyzing different job performance groups demonstrates that average job performance group have a stronger effect on salary satisfaction, however, a weaker impact on satisfaction with colleagues, supervisors to compare with good job performance group. In other words, the average job performance group better explained the variation in salary satisfaction, but worse explained the variation in satisfaction with interpersonal relationships. We argue that good job performance group expect to satisfy higher social needs such as being loved, respected and heard. Employees seem to feel their own positive values, recognized dedication and positive appreciation by their colleagues

and supervisors. Then they have become more and more pleased with these relationships in the organization. In contrast, the average performance group expects more about the income (salary) that they will receive. Employees have a desire to meet material needs to maintain life rather than to satisfy spiritual needs. It can be said that job performance is associated with the satisfaction of material needs (salary).

The results reveal surprises about the role of relationships and salary. Relationships (colleagues, supervisors) have a strong impact on job performance of the job satisfaction group and job satisfaction of the good job performance. Meanwhile, salary has a strong impact on the performance of the less satisfaction group and the job satisfaction of the average performance group.

## Conclusion

Up to the time of the study, despite the COVID-19 pandemic, most employees are still satisfied with their jobs and have good performance. It is unnecessary for supervisors to pay attention to gender when recruiting because of non-statistically significant difference by gender between job satisfaction and job performance. In addition, the married enjoy their work and perform better, so supervisors should encourage and show more care to unmarried employees to enhance their organizational commitment, work engagement. During this time, older employees have satisfaction with their jobs and a better performance than younger ones. Therefore, supervisors should organize more training courses to foster knowledge, skills, and attitudes for young employees.

In any situation, even during the COVID-19 pandemic, there is a statistically significant correlation between job satisfaction and job performance. Employees' job satisfaction and performance have a reciprocal relationship, so supervisors have to pay attention not only to enhancing job satisfaction but also to improving working performance for employees to create the best motivation for enterprise development.

Organizations need solutions to establish good relationships in order to increase the job performance of the job satisfaction group and increase the job satisfaction of the good performance group in two ways: formal and informal. Accordingly, there should be clear and civilized rules of behavior and communication among employees and between employees-supervisors in the workplace. Besides, creating a working environment in which people are willing to cooperate, support, trust, participate in sightseeing and travel activities together is also what managers need to pay special attention to. Increasing salary satisfaction is also something that organizations need to consider to increase the job productivity of the less satisfaction group and enhance the job satisfaction of the average performance group. It is the development of a transparent and fair wage policy that is consistent with the effort spent, and must ensure the employees life needs.

## Limitations

The study has not considered other variables that might participate in the relationship between job satisfaction and job performance, for example, personality traits, type of enterprises, to have more multidimensional and interesting explanations.

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# Удовлетворённость работой, производительность труда работников и их взаимоотношения во время COVID-19 пандемии во Вьетнаме

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**Аннотация.** *Цель.* Исследование направлено на то, чтобы, во-первых, описать текущую ситуацию и влияние демографических факторов, таких как пол, возраст и семейное положение, на удовлетворённость работой, производительность труда работников и их взаимоотношения во время пандемии COVID-19 во Вьетнаме. Во-вторых, — выяснить уровни влияния среди различных групп удовлетворённости работой на производительность работы и наоборот, уровни влияния среди различных групп производительности труда на удовлетворённость работой. *Дизайн исследования.* Данные были собраны с помощью опроса на «удобной» выборке из 485 работников, работающих на швейных и обувных фабриках в промышленных зонах городов Ханой и Хошимин. В этом исследовании были разработаны и проверены на надёжность две шкалы — «Шкала удовлетворённости работой» и «Шкала производительности труда». *Результаты.* Удовлетворённость трудом находится на умеренном уровне, а производительность труда — на среднем уровне. Между текущими результатами и результатами подобных исследований до пандемии COVID-19 статистически значимые различия не обнаружены. Кластерный анализ показывает, что существует две группы работников, разделённых по степени удовлетворённости работой и производительности труда. Различий по полу между указанными группами не обнаружено. Женатые люди более удовлетворены работой и более продуктивны, чем неженатые; молодые — менее удовлетворены трудом и менее продуктивны, чем работники старших возрастов ( $p < 0,01$ ). Группа работников с высокой удовлетворённостью трудом демонстрирует большую производительность труда, чем группа с низкой удовлетворённостью трудом. При этом группа работников с высокой производительностью труда более удовлетворены трудом, чем группа со средней производительностью ( $p < 0,01$ ). Неожиданными оказались результаты, свидетельствующие о роли взаимоотношений и заработной платы. Взаимоотношения (с коллегами по работе, а также с руководителем) оказывают сильное влияние на производительность труда работников, высоко удовлетворённых трудом, а также — на удовлетворённость трудом у работников с высокой производительностью труда. Между тем, заработная плата оказывает сильное влияние на производительность труда у работников с низкой удовлетворённостью трудом, а также — на удовлетворённость трудом у работников со средней производительностью труда. *Практические следствия.* Полученные результаты позволяют предложить некоторые рекомендации для повышения удовлетворённости трудом и производительности труда, на основе чего обеспечивается устойчивое развитие организации. *Ценность результатов.* В исследовании оценивается разница в уровне влияния компонентов удовлетворённости трудом на производительность труда при кластеризации работников по группам с различной степенью удовлетворённости трудом. Аналогичным образом в исследовании также анализируется влияние уровня производительности труда на степень удовлетворённости трудом.

**Ключевые слова:** пандемия COVID-19; удовлетворённость трудом; производительность труда.