MODELING THE DETERMINANTS OF JOB SATISFACTION IN VIETNAM

Nguyen Thi Phuong Mai

Nguyen Tuong Anh

Nguyen Thi Ha Trang

Nguyen Ngoc Minh

Doan Quang Hung

Dao Ngoc Tien

Abstract: *Job satisfaction is taken into consider in developing countries since people's living standards have improved in recent years. The aim of our paper is to identify the determinants of job satisfaction in Vietnamese context using both ordered logit and generalized ordered logit models to deal with the invalidity of the parallel-lines assumption. In general, crucial predictors of job satisfaction include education, job status, job tenure, wage, relative income compared to others in the same sector, and wage policy. Meanwhile, we also clarify the different determinants that affect workers' job satisfaction in local versus FDI sectors thanks to the unique employer-employee matched survey provided by Center of Analysis and Forecasting, the Vietnam Academy of Social Sciences.*

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Acknowledgements: Nguyen Phuong Mai is a senior researcher at NISTPASS and ANCE (phuongmai@ance.vn). Nguyen Tuong Anh, Doan Quang Hung and Dao Ngoc Tien are lecturers at Hanoi Foreign Trade University. Nguyen Ngoc Minh and Nguyen Thi Ha Trang are researchers at DEPOCEN. We would like to thank supervisors to helpful comments. Financial support from Mekong Economic Research Network is gratefully acknowledged. Several previous versions of the paper were presented at Mekong Economic Research Network in Hanoi (2013), Vientiane (2013), and Phnom Penh (2014); we would like to thank participants of this network meeting for helpful comments.

I. INTRODUCTION

There has been a growing concern about job satisfaction, especially in developing countries such as Vietnam, since people's living standards have improved a lot over time; in other words, their basic needs have been met to some extent. According to Maslow hierarchy of needs (1943), people would like to fulfill higher needs when they have their basic needs satisfied, including physiological, safety, and belonging needs. Baghaei (2011) assumed the condition to satisfy these higher needs, which are esteem and self-actualization, should be present at work; meaning that, the job itself should be meaningful and motivating. Therefore, while there are confusions and debates about whether satisfied employees are productive employees (Saari & Judge, 2004), quality of jobs should be taken into considerations to not only meet the employees' needs but also to create motivation that may encourage them to perform better at work.

There are compelling reasons why economists should draw their attention to job satisfaction. Firstly, job satisfaction has been found to be a strong predictor of a worker's behavior and performance; for example, reported job satisfaction has been used to predict separations, resignations, and productivity of workers (Clark, Osward, & Warr, 1996; Freeman, 1978; Hamermesh, 1977; and Shields & Price, 2002).

Secondly, job satisfaction is one of the three most crucial predictors of overall well-being (Argyle & Martin, 1989; Clark, 1997; and A Sousa-Poza & AA Sousa-Poza, 2001). Freeman (1978) says that job satisfaction is a major determinant of labor market mobility because it reflects aspects of the work place that are not captured by standard objective variables. He points out that the subjective level of job satisfaction is a significant determinant of the probability of resignation. However, when he includes the intention of resigning in the model, the results show that depending on different samples, the impact of job satisfaction is either clearer or more blurred than the impact of the intention to resign. In a larger space when

socially identifiable exogenous variation is assumed not to affect job satisfaction, the impact of observed variables on mobility may make job satisfaction less significant because of the multicollinearity problem. In general, job satisfaction still contains much information about mobility in labor market.

Thirdly, considering the consequences of job dissatisfaction, Aziri (2011) postulates that it could lead to a wide range of negative impacts such as lack of loyalty, increased absenteeism, increasing number of accidents, and so on; as a result, the importance of job satisfaction is specially acknowledged.

It could be said that job satisfaction is one of the main positive emotional conditions stemming from pleasure (Crossman and Abou-Zaki, 2003). In developing country context, job satisfaction could affect the growth potential of organizations as well as of these countries; in other words, job satisfaction is considered as crucial feature of workers that has both direct and indirect impacts on the productivity, competitiveness, technology upgrading capacity of firms, and the integration capacity of countries.

Recently, the report on the labor market, "Vietnam Employment Trends Report 2010," also suggests that a greater focus on quality jobs is needed to broaden economic development, as well as to reduce vulnerability and poverty.[1] However, there has been still a paucity of research in this topic that could be efficient input and convincing evident for labor-relevant policies of Vietnamese government. The primary purpose of this study is to fill the gap in the literature for Vietnam by investigating the determinants of job satisfaction.

In our research paper we set out to study the key determinants of job satisfaction for Vietnamese workers. We not only focus on a number of important policy-relevant variables such as wage policy and training plan for workers, but also attempt to investigate other important potential variables which may affect job satisfaction in

[1] http://vietnamnews.vnagency.com.vn/Economy/172057/decent-work-key-for-development.html and http://www.un.org.vn/en/ilo-agencypresscenter1-97/1689-ilo-and-molisa-release-the-vietnam-employment-trends-report-2010.html

Vietnam, such as absolute and relative wage (as commonly asked in the literature), union membership, and job position. Meanwhile, we attempt to disentangle the possible differences in job satisfaction of workers in domestic versus FDI firms.

The previous studies relied on labor force surveys, however, a number of important job-characteristics are missing, i.e. job-environment, peer workers, and human resource practices. Our research will utilize a unique employer-employee matched survey conducted by the North-South Institute (Canada) to investigate the determinants of job satisfaction.

By using this employer-employee matched survey, we expect to shed light on many work-related characteristics that influence the job satisfaction of workers in Vietnam. The rest of this paper is organized as follows. Section 2 discusses the effect of several crucial and interesting elements that may affect job satisfaction of workers, as presented in previous studies. Section 3 presents our data as well as the methodology we use in our paper. The results and some discussions are in Section 4. Section 5 summarizes and concludes.

II. LITERATURE REVIEW

As shown by previous researches, job satisfaction is often considered as a function of (i) the individual's personal characteristics, and (ii) the characteristics of the job itself (Khalid, Salim, & Loke, 2011). Job/employment characteristics may include hours of work, union membership, size of establishment, self-employment status, earnings, and job tenure. Meanwhile, individual characteristics such as age, gender, education, and marital status are also examined in previous studies (Belfield & Harris, 2002; Borjas, 1979; Clark & Oswald, 1996; Clark, 1997; Dipboye, Smith, & Howell, 1994; Freeman, 1978; Shields & Price, 2002; Witt & Nye, 1992). This subsection is an initial attempt to discuss the impact of several crucial and interesting elements that may affect job satisfaction of workers, as presented in previous studies.

Regarding job characteristics, from the literature review, women are found to be more satisfied with their jobs than men (Blanchflower & Oswald, 2001; and Clark, 1996). Literature indicates that there is a difference between males and females in terms of job satisfaction due to several assumptions. While normally we expect that female workers face more disadvantages than their male colleagues in the labor market, for instance, lower wage rate, worse promotion possibilities, which causes lower levels of job satisfaction, the "differential job inputs" hypothesis suggests that job-satisfaction levels between genders are equal, as the lower rewards for women are matched with lower inputs, such as education, or working time (A Sousa-Poza & AA Sousa-Poza, 2007). The "differential entitlement" hypothesis predicts that women have higher levels of job satisfaction due to different expectations, i.e., women may have learned to expect less than men for their inputs. In addition, the "own-gender referents" hypothesis suggests further that women use other women as their comparison group, therefore, female's job satisfaction levels do not need to relate to those of men. Finally, the "subjective rewards" hypothesis assumes that job satisfaction is determined by intrinsic aspects of a job such as perceived autonomy and variety, and since these features do not vary much between genders, job-satisfaction levels will be similar in spite of different objective rewards (A Sousa-Poza & AA Sousa-Poza, 2007). However, Phelan (1994) only found partial support for the "subjective rewards" hypothesis.

A U-shaped relationship between job satisfaction and age are reported (Clark, Osward, & Warr, 1996; Sloane & Ward, 2001; Blanchflower & Oswald, 2001). In more detail, U-shape linkage between job satisfaction and age means that in the very first years of employments, workers' job satisfaction generally decrease, and after reaching a minimum point, it steadily increase up to retirement (Clark, Osward, & Warr, 1996). To emphasize, older workers move to a job with more desirable characteristics and specific work values that are less desirable to younger workers. Additionally, older workers may hold lower expectations of their job than their younger colleagues do. Based on theoretical model of the job-matching mechanism

of Jovanovic, Borjas (1979) suggests that the older people seem to have higher job satisfaction due to having more experience in job sampling and likely to have a successful match more easily.

Empirical evidence about the link between education and satisfaction is not conclusive. “A higher educational level is expected to lead to high wages and good quality jobs, which are positively related to job satisfaction” (Albert & Davia, 2005). But education might also increase expectations about both wages and job features, and consequently reduce the level of job satisfaction. Meanwhile, higher job satisfaction is also found to be associated with marital status (Blanchflower & Oswald, 2001; and Clark, 1997).

Job characteristics are taken into account in previous research as important determinants of job satisfaction. To clarify, the impact of unions on job satisfaction may be a matter of empirical validation. Unions has been found to be associated with a lower level of job satisfaction since unions are often considered to be a “voice” institution, which encourages worker to express discontent during contract negotiation and to make formal grievances rather than resign. Meanwhile, there is an explanation of “reserve causation”. This means that dissatisfied workers select themselves into unions or form unions (Parlow, 2006). However, there may be some positive impacts of unions since it could help improve the work conditions, fringe benefits, and remuneration (Hammer & Avgar, 2005).

Job tenure and experience have also been studied in the literature. Freeman (1978) found these elements, however, have no effect on job satisfaction. Conversely, Hamermesh (1977) proposes that with the increase in years of experience, workers become more certain about their abilities, so their expectations could be met more easily, leading to higher levels of happiness.

According to Hamermesh (1977), job specific training is a part of the human capital model; therefore, it should be introduced in the job satisfaction equation. In detail,

the more a worker participates in training courses, the higher probability he is locked into the occupation, and hence, the level of uncertainty of his future wage is reduced. Moreover, training courses could not only improve the worker's ability and make him more confident in his job; but also gives better opportunities to increase his income or to have promotion. As a result, he reaches higher levels of job satisfaction than his colleagues who do not participate in any training course and could not get any benefit.

Among job characteristics that affect job satisfaction, wage (in terms of absolute and relative values) is considered as a crucial determinant that has been extensively investigated in the literature (Clark & Oswald, 1996; and Hamersmesh, 2001). The importance of absolute wage is obvious as it is an important factor when individuals decide whether or not to take up job offers. At the same time, the larger gap between offered wage and reservation wage, the higher probability workers take the job. Similarly, relative wage may also be important as individuals often compare their wage with certain benchmarks, i.e. their potential earnings, the salary of coworkers in the same factory or the industry average wage. Hamersmesh (2001) suggests that job satisfaction is affected by relative wage due to their differences in expectation.

In addition to the mentioned factors, there are a number of other factors that have been investigated in the non-economic literature, including (i) the relationship between the employees and their superiors and other co-workers: the social climate among co-workers, the degree of professional cooperation, and the sense of social belonging are believed to have influence on employees satisfaction; (ii) the organizational vision, culture, and ethical aspects of the organization, the ability of corporate management; and (iii) the number of working hours.

In the case of Vietnam, there are only a few studies on determinants of job satisfaction (Hoang, 2010; Thang et al., 2007; Thang & Napier, 2000; and Wachsberger et al., 2011). Using survey data that was collected in 1995 in Vietnam, Thang & Napier (2000) find high levels of commitment to organizations and job

satisfaction held by Vietnamese employees in spite of low wages. In the research conducted by Thang et al. (2007), job satisfaction was only mentioned as a small component of management practices relating to employee empowerment. While Hoang (2010) gives a general descriptive study on job satisfaction, Wachsberger et al. (2011) focuses on job satisfaction in informal sector.[2] By using household-based survey data, Wachsberger et al. (2011) creates a model covering a wide range of determinants of job satisfaction, such as institutional sector, job status, income, regions, job characteristics, workplace, and socio demographics.

In general, our paper aims to contribute solid findings towards the limited literature on determinants of job satisfaction in the Vietnamese context. This will be done based on a quantitative analysis, using data from a unique employer-employee matched survey. In addition, we also clarify the different determinants that affect workers' job satisfaction in local versus FDI sectors.

III. DATA AND METHODOLOGY

In our empirical model, job satisfaction can be described by the following latent variable model:

$$S^* = \mathbf{x}_i'\beta_1 + \mathbf{z}_i'\beta_2 + \varepsilon_i$$

where S* is a latent variable measuring level of job satisfaction that is assumed to be linearly related to the vector of explanatory variables x_i which influence an individual's utility from being in a job and the vector of firm characteristics z_i. In our data, job satisfaction is described as an ordinal response variable, indicating individuals are either very satisfied (S=2), rather satisfied/somewhat satisfied (S=1) or dissatisfied/extreme disatisfied (S=0) with their job. With this ordinal response variable, an ordinal logit/probit model is appropriate.[3]

[2] http://gracc.recherche.univ-lille3.fr/attachments/communications_perso_21/II.4.6%20WACHSBERGER%202.pdf
[3] The estimation of ordinal logit/probit model is performed using STATA software.

In order to use results of an ordinal logit/probit model, the most essential condition is the validity of parallel-lines assumption. The parallel-lines assumption states that the ordered logit coefficients in the model are the same across the level of response variable. Unfortunately, this assumption is often violated (i.e. the estimated coefficient would be biased); and in our paper, the assumption is not held. To solve this problem, we use generalized ordered logit models for ordinal dependent variables instead of the normal ordinal logit model, following William (2006).

As discussed above, most previous studies relied on labor force surveys, where a number of important job-characteristics are missing, especially job-environment, peer workers, and human resource practices. In our paper, we rely on an employer-employee matched survey that is provided by the Center of Analysis and Forecasting, Vietnam Academy of Social Sciences. As such, in our model, we explicitly specify two groups of variables. The vector $\mathbf{x}_i$ may include (i) earning; (ii) worker's characteristics that are collected from employees' questionnaire, and the vector $\mathbf{z}_i$ covers (iii) firm's characteristics from questionnaires on FDI and non-FDI firms in Vietnam.

With respect to earnings, previous studies have gone beyond relating job satisfaction to **a person's own earnings** as a primary determinant of job satisfaction. Among the factors believed to influence job satisfaction, **relative income** has attracted considerable attention since it is widely asserted that individuals are not only simply interested in the absolute wage they themselves receive, but also their wage relative to some reference group. This opinion derives from the view that an individual's happiness does not depend only on his/her own income but also on some reference level. Several studies have tested the hypothesis that this 'reference' or 'relative' income is an important determinant of job satisfaction. In our study, we follow an approach implemented by Hamermesh (1977, 2001) to derive relative income. In particular, Hamermesh (1977, 2001) defines 'relative income' as the difference between current income (y) and expected income (y*), which is obtained from an

estimated Mincerian earnings equation. Relative income is treated as a standard that makes individual workers relatively better or worse off.

In order to estimate the influence of job characteristics on job satisfaction, it is necessary to control for the personal characteristics of each worker. The data set contains a number of commonly used variables such as **education, gender, marital status,** and **age**. These variables are used in the literature as control variables.

The interesting part of our analysis may come from firm level characteristics. Thanks to the unique data set, we are able to match a number of firm level information, such as human resource practices and policies to information about individual workers, in order to assess whether these job-related firm level characteristics have any influence on the job satisfaction of workers. In comparison with previous literature which relies only on worker's characteristics to model worker's job satisfaction, this data set allows us to directly assess the firm level characteristics such as **efficiency wage policy** and **cost of training courses as percentage of revenue**.

Data and Descriptive Statistics

Dataset is taken from 2007 FDI survey done by the Center for Analysis and Forecasting (CAF), a member of the Vietnam Academy of Social Sciences. The survey is a product of research collaboration between CAF and Canada North-South Institute. The survey includes 220 FDI firms from 11 provinces and 130 non-FDI firms from nine provinces in Vietnam. For each interviewed firm, two types of questionnaires were taken. The firm questionnaire asks about the firm's various characteristics and performance. The labor questionnaire is to collect information on wages, work, and job satisfaction of workers. At each firm, 5-6 workers were selected; one of them at managerial level, and another is a technician specialist, for example, officers at functional department. It should be noted that employees who

have a college degree or above are selected into this category.[4] In total, there are 2,058 observations in the sample.

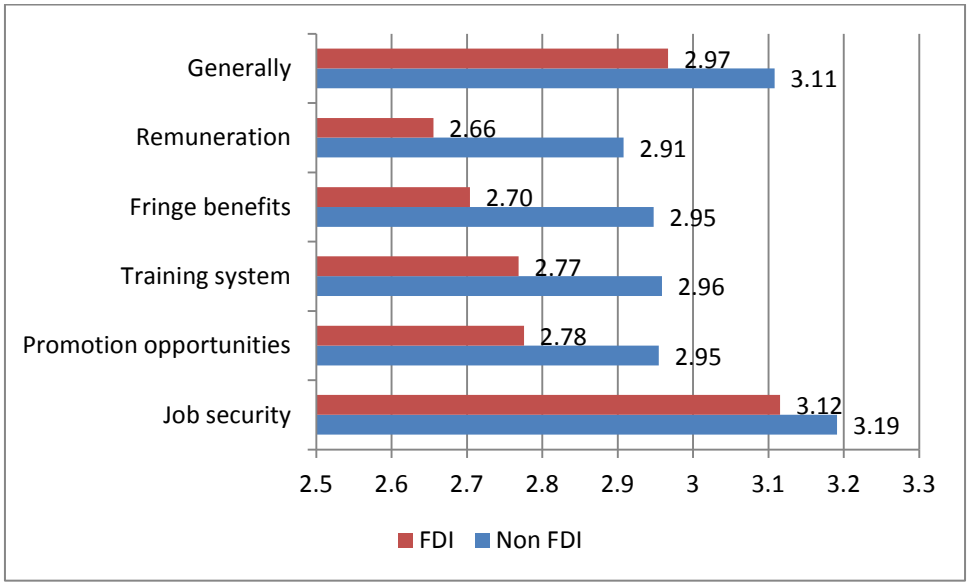
In our paper, we consider not only the overall job satisfaction of workers but also several dimensions of job satisfaction such as (i) the satisfaction with the remuneration (the pay), (ii) the satisfaction with job security, (iii) the satisfaction with promotion opportunities, (iv) the satisfaction with training system, and (v) the satisfaction with fringe benefits. All of the information about workers' job satisfaction, as well as other information about explanatory variables are covered in the survey. The descriptive statistics of the variables used in analysis is described in Table 1.

Figures 1 and 2 show the differences in job satisfaction by firm type and firm's wage policy. One of the striking and unexpected results is that employees from FDI firms report a lower level of job satisfaction than employees from domestic firms. Moreover, the lower level is expressed over all aspects of job satisfaction. This is somewhat unexpected as FDI firms are believed to pay a higher wage, and offer better fringe benefits as well as training opportunities. Another interesting result is that employees in firms that practice efficiency wage policy[5] have higher job satisfaction than their counterparts in other firms (Figure 2). In our following analysis, we take into consideration these two issues.

[4]Two people who are next interviewed is the employees directly taking in production/distribution/skilled services of equal to or over 4-level (in labor categories there are 6 to 7 level is the highest) or level 3 or over (in labor categories, level 4 or 5 is the highest): Finally is interviewing 2 employees who directly take part in production/distribution/semiskilled services or without skills equal to level 3 or lower (in labor categories there are 6 to 7 level is the highest) or level 2 or lower (in labor categories, level 4 or 5 is the highest).

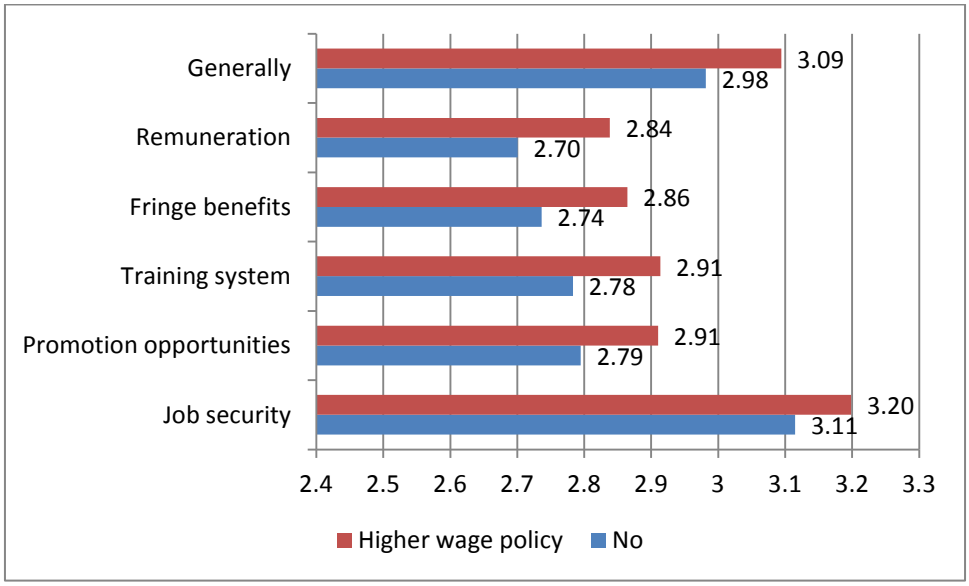
[5] In the firm questionnaire, respondents were asked to answer the question: "Does the firm have a policy of paying a premium above wages of other firms in the industry to secure appropriate staff?"

Figure 1: Job satisfaction of labor according to different criteria by firm type



Source: CAF Survey

Figure2: Job satisfaction of labor according to different criteria by wage policy



Source: CAF Survey

IV. ESTIMATION RESULT AND DISCUSSION

Determinants of Job Satisfaction in the Vietnamese Context

The estimation results for the whole sample are presented in Table 2. We firstly estimate model of overall job satisfaction for the whole sample using normal ordered logit method (NOLM) (Model 1, Table 2). And hence, considering the validity of the parallel-lines assumption, we used the *Brant* command in Stata to test the null hypothesis. The validity of Model 1, Table 2 is held if and only if the Brant test confirms that the parallel-lines assumption is satisfied. Unfortunately, the result of the test shows that the assumption is violated, and **the main problems** is with the variables of gender (***Male***), ethnicity (***Ethnic***), union membership (***Union***), job status (***Manager***), and the expense that firm uses for training (***Cost of training as % of revenue***).

To address the invalidity of the parallel-lines assumption, we used the generalized ordered logit method (GOLM) instead of the NOLM. The method frees "all variables from the parallel-lines constraint, even though the assumption may be violated only by one or few of them" (Williams, 2006). The result achieved from the GOLM can be interpreted is a series of binary logistic regressions. For example, in case of overall job satisfaction, Model 2, Table 2 contrast category 0 (*Dissatisfied*) **with** categories 1 (*Rather Satisfied*) and 2 (*Very Satisfied*); Model 3, Table 2 contrast categories 0 and 1 **with** category 2.

As there are different sub-domains of job satisfaction (e.g. satisfaction with pay, with fringe benefits, with promotion, with job security, and with training opportunities) in our data, we also estimate a separate model for each type of satisfaction using GOLM. The similar explanation is applied to these dimensions.

In term of **personal characteristics**, our estimation results suggest that the effects of gender are different among dimensions of job satisfaction. Firstly, the estimated coefficient of the gender variable is statistically insignificant in case of worker's

satisfaction with training and fringe benefit. Secondly, male workers seem to be more dissatisfied with their job satisfaction in general (Model 2, Table 2). Thirdly, they tend to report a higher satisfaction level than female colleagues in cases of pay and promotion opportunity (Models 5 and 9, Table 2). Finally, regarding satisfaction with job security, men often choose extreme dissatisfaction (category 0) or very satisfaction (category 2) **rather than** somewhat satisfaction (category 1).

Meanwhile, age and ethnicity do not seem to be important factors in determining job satisfaction. By contrast, education is found to be statistically significant and negatively related to job satisfaction. Individuals with higher education level are found to be more dissatisfied with their job. However, the influence of education differs across each type of job satisfaction. This is quite consistent with the literature for other countries, where more educated people seem to have higher expectations, thus lower satisfaction.

In terms of **family background**, the coefficients of marital status and number of children are statistically significant at the same time in cases of satisfaction with pay and fringe benefit. Our regression outputs show that workers who are married are often more satisfied with their wage, as well as fringe benefits than single workers (Models 4, 5, 12, and 13, Table 2). However, workers with more children tend to report that they are really dissatisfied with their pay, their promotion opportunity, and their benefit (Model 4, 8, and 12, Table 2). The results are plausible since the financial burden that affects the level of workers' satisfaction with wage (and fringe benefits also) is often shared between spouses, and increases when a worker has his own children.

In terms of **job characteristics**, there are a number of interesting results. Using NOLM, union membership, job status (being a manager) and job tenure are found not to have any association with job satisfaction. However, the results received from using GOLM change to some extent: (i) members of trade union seem to be more satisfied with training course (Model 10, Table 2); (ii) but managers tend to complain

about their work more than other workers in general (Model 2, Table 2), as well as their job security in particular (Model 6, Table 2); and (iii) job tenure affects positively overall job satisfaction of workers, the marginal effect of this factor, however, is decrease as the coefficient of variable *tenure squared* is negative (Models 2, and 3, Table 2).

Here, we focus on a number of variables of interest. Firstly, in terms of income, our estimation results provide evidence to suggest that in the case of Vietnam, both absolute income and relative income matter for job satisfaction. Absolute income variable is highly significant in the models of overall job satisfaction, job satisfaction with pay, job satisfaction with promotion opportunity, and job satisfaction with fringe benefits. Moreover, we have two types of "reference income" in our models. We hypothesize that individual workers may use the average income within the same firm/factory as a benchmark, and they may also use average wage in the sector as another one. The estimated results suggest that relative income matters, but in the case of Vietnam, individual workers tend to rely only on sectoral income/wage as their only benchmark.

Secondly, workers in FDI firms tend to report lower job satisfaction level than their peers working in Vietnamese domestic firms. This estimation result is consistent with the illustration in Figure 1, despite the fact that FDI firms tend to offer higher wage. It could be explained as the compensation, working environment, and other conditions that workers in FDI firms receive are not good enough to make them satisfied with their job. The more detailed analysis on the determinants of job satisfaction in the case of FDI firms in Vietnam will be presented at the next subsection.

Last but not least, we consider the effects of two important elements at the firm level that we attempt to investigate in this study: (i) efficiency wage policy, i.e. firms willing to pay higher salary to keep their staffs, and (ii) the expense they use for training. Both of these variables are statistically significant in our models. Employees working in firms that employ efficiency wage tend to report a higher level of job

satisfaction; likewise, working in firms that spend more in training (as a percentage of their revenue) is associated with higher job satisfaction. These two variables, we believe, are strongly associated with the human resource policy being employed at the firm level. Therefore, the implication is such that to improve workers welfare, wage is important, but non-wage benefits and wage policy may matter.

Determinants of Job Satisfaction in Cases of FDI and Domestic Firms

The significant difference between FDI firms and domestic firms in Table 2 suggests that we should explore these two groups of firms further. We, therefore, estimated job satisfaction models for FDI firms and domestic firms separately. Tables 3 and 4 present the corresponding estimation research. Estimating FDI and domestic firms separately reveals a number of important and interesting findings.

Similar to the case of whole sample, the Brant test continues rejecting the validity of parallel-lines assumption in both cases of FDI and domestic sectors. Under these circumstances, we use GOLM to estimate the impact of explanatory variables on all types of job satisfaction.

In general, **personal characteristics** such as gender, age, and ethnicity have different impacts on job satisfaction of workers in FDI sector versus domestic sector. Gender only impacts overall job satisfaction of workers in FDI sector (Model 2, Table 3), whilst this factor has impacts on several types of job satisfaction of workers in domestics sector. In more detail, male workers in local firms often report that they are (i) very satisfied with their pay **rather than** satisfied or dissatisfied (Model 5, Table 4); (ii) extremely dissatisfied with their job security **rather than** satisfied or very satisfied (Model 6, Table 4); and (iii) extremely dissatisfied or very satisfied **rather than** somewhat satisfied with their promotion opportunity (Models 8, and 9, Table 4).

Age affects satisfaction with pay and with promotion opportunity of workers in FDI sector, but affects satisfaction with job security, promotion opportunity, and fringe

benefit of workers in domestic sector. Ethnicity has impact only on satisfaction of training and fringe benefit of workers in local firms, while it affects all types of job satisfaction in FDI firms, except fringe benefit. Although higher education does not affect overall job satisfaction, it negatively impacts all other dimensions of job satisfaction, except satisfaction with promotion opportunities in the FDI sector. However, this factor only negatively affects workers' satisfaction with wage and job security in domestic sector.

In term of **family background,** marital status only affects workers' satisfaction with pay and benefit in FDI firms; but it affects all dimensions of job satisfaction in domestic firms except training part. While number of children affects several type of workers' satisfaction in FDI firms such as wage, training, and fringe benefit, it does not make any impact on in domestic sector.

In general, the effects of **job characteristics** are extremely different between the two types of firms. The first striking finding is the effect of union membership. Considering both FDI and domestic sector as a whole sample, we were unable to find the impact of union membership on workers' job satisfaction, except satisfaction with training system (i.e., employees participating in a union are more satisfied with their firm's training system). However, when estimating separately, we detect heterogeneity in the impact of union membership for different types of firms. Whilst union membership has a negative impact on job satisfaction of employees working in domestic firms, it has a positive impact for employees in FDI firms. These opposite impacts of union membership may suggest that the operation of unions within two sectors differ from each other. In other words, it seems to be that trade unions in FDI firms are more effective, and help to ensure the benefit of participants rather than in domestic sector.

Managers in FDI firms are less satisfied with their job in general, as well as their wage, job security, and fringe benefits in particular. The results imply that even though FDI firms often offer higher salary and incentives than domestic firms do,

managers in FDI firms may face more uncertainty, more responsibility, as well as more competitiveness than their colleagues in domestics firms. This could lead to greater dissatisfaction with job in general as well as compensation in particular. By contrast, managers in domestic firms seem to be more satisfied with their fringe benefits. In addition, in the FDI sector, job tenure has only effect on workers' satisfaction with job security; meanwhile, in domestic sector, it has an effect on all types of job satisfaction except job security. In general, the effect of tenure on job satisfaction is positive in both sectors; however, the marginal effect of this factor is decrease as the coefficient of variable *tenure squared* is negative.

Asides from overall job satisfaction and satisfaction with pay, wage also positively impacts other dimensions of job satisfaction of workers in FDI firms as well as domestic firms. For workers in FDI firms, wage raises the level of satisfaction with fringe benefits. While for workers in domestic firms, it increases the level of all other types of job satisfaction. However, relative income tends to impact on only the satisfaction of workers in FDI firms. The results suggest that there could exist the competitive wage in FDI sector; by contrast, the wage levels among domestic firms are relatively similar.

The next striking result is the impact of the efficiency wage policy. It seems that this policy works only for FDI firms. While the estimated impact of efficiency wage policy for FDI firms is strong, positive and statistically significant, the impact of this policy in domestic sector is not statistically significant. It may imply that either domestic firms do not have this practice (few observations) or workers select themselves differently into these two types of firms, i.e., workers who consider the efficiency wage policy prefer to work in FDI sector.

The final important determinant of job satisfaction is the cost of training as percentage of firm's revenue. In general, training is statistically significant in case of domestic firms; it may have huge effect on workers in this sector, and help them improve their productivity, leading to higher level job satisfaction they could get. By

contrast, training courses create effect only on overall job satisfaction and satisfaction with job security of worker in FDI sector.

V. CONCLUSION

In this paper, we have investigated the determinants of job satisfaction for Vietnamese workers. As this concept is still relatively new in Vietnam, it is not captured in labor force surveys, household survey, or enterprise survey. Our research is made possible thanks to the unique data from the Center of Analysis and Forecasting, the Vietnam Academy of Social Sciences. This survey, although not focusing on workers' job satisfaction, allows us to match employee information with employer data, and to consequently determine the job characteristics as well as the firm characteristics that affect job satisfaction of workers.

Our estimation results indicate that in the Vietnamese context, age, ethnicity, union membership and relative income compared to others in firms generally do not affect workers' job satisfaction. Important predictors of job satisfaction include education, job status, job tenure, wage, relative income compared to others in the same sector, and wage policy. However, when we separate the firms into FDI and domestic sectors, the determinants in each sector are different. For example, gender and job tenure affect only job satisfaction of workers in domestic sector, but not of workers in FDI sectors; while several elements such as number of children, relative income, and wage policy only affect workers' satisfaction in FDI firms. Even in cases of common determinants that impact both sectors, the ways that determinants affect workers' job satisfaction in each firm type are also dissimilar. While union membership has a negative impact on job satisfaction of employees working in domestic firms, it has a positive and significant impact for employees in FDI firms. Our results, thus, suggest detailed policy implications for each sector are necessary to raise the level of job satisfaction of Vietnamese workers as well as to encourage them to work more efficient.

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Table 1: Summary of Statistics of Variables Used in Analysis

Variable	All data			FDI sector			Domestic sector		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Overall job satisfaction	959	1.031	0.579	682	1.004	0.564	277	1.097	0.609
Satisfaction with pay	903	0.764	0.634	642	0.704	0.627	261	0.912	0.629
Satisfaction with job security	928	1.148	0.599	661	1.136	0.595	267	1.176	0.609
Satisfaction with promotion opportunity	699	0.877	0.637	512	0.842	0.635	187	0.973	0.634
Satisfaction with training	652	0.877	0.679	461	0.805	0.673	191	1.052	0.663
Satisfaction with fringe benefit	791	0.837	0.660	577	0.792	0.673	214	0.958	0.608
Male (male = 1)	959	0.522	0.500	682	0.494	0.500	277	0.592	0.492
Age	959	33.924	7.961	682	32.952	7.352	277	36.318	8.861
Ethnic (Kinh=1)	959	0.968	0.177	682	0.972	0.165	277	0.957	0.204
Higher Education (higher edu = 1)	959	0.552	0.498	682	0.579	0.494	277	0.484	0.501
Married (married = 1)	959	0.886	0.318	682	0.874	0.332	277	0.917	0.276
Number of children	959	1.236	0.850	682	1.157	0.822	277	1.430	0.888
Union (member=1)	959	0.668	0.471	682	0.657	0.475	277	0.697	0.460
Manager (manager = 1)	959	0.260	0.439	682	0.261	0.440	277	0.256	0.437
Tenure	959	6.230	5.322	682	5.510	3.878	277	8.003	7.536
Tenure squared	959	67.113	133.639	682	45.377	58.893	277	120.629	222.240
Wage income (mil. VND)	959	2.626	2.375	682	2.945	2.470	277	1.841	1.910
Relative income compared to others in firms	959	1.059	0.605	682	1.046	0.669	277	1.091	0.405
Relative income compared to others in the same sector	959	0.453	0.498	682	0.509	0.500	277	0.314	0.465
Efficiency wage policy (wage policy = 1)	959	0.347	0.476	682	0.314	0.464	277	0.430	0.496
Cost of training as % of revenue	959	0.661	3.119	682	0.823	3.620	277	0.261	1.098
FDI (FDI = 1)	959	0.711	0.453						

Table 2: Determinants of Job Satisfaction - Whole Sample

	Ologit model	Gologit models										
VARIABLES	**Overall job satisfaction**	**Overall job satisfaction**		**Satisfaction with pay**		**Satisfaction with job security**		**Satisfaction with promotion opportunity**		**Satisfaction with training**		**Satisfaction with fringe benefit**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Category		0	1	0	1	0	1	0	1	0	1	0	1
Male	-0.132	-0.473**	0.166	0.1	0.607***	-0.377*	0.285*	-0.216	0.487**	-0.087	0.125	0.169	0.344
	(0.139)	(0.188)	(0.178)	(0.149)	(0.232)	(0.214)	(0.158)	(0.178)	(0.233)	(0.182)	(0.213)	(0.161)	(0.211)
Age	0.003	0.001	0.001	0.026*	-0.002	0.006	-0.013	0.026	-0.006	0.001	0.001	0.005	0.003
	(0.014)	(0.013)	(0.013)	(0.015)	(0.022)	(0.021)	(0.014)	(0.018)	(0.022)	(0.018)	(0.019)	(0.016)	(0.019)
Ethnic (Kinh=1)	-0.157	0.466	-0.65	-0.382	0.518	-0.432	-0.628*	-0.852	-0.597	0.198	0.611	-0.282	-0.12
	(0.490)	(0.451)	(0.422)	(0.482)	(0.872)	(0.626)	(0.380)	(0.726)	(0.709)	(0.671)	(0.986)	(0.460)	(0.495)
Higher Education	-0.377**	-0.379**	-0.379**	-0.654***	-0.584**	-0.468**	-0.486***	-0.156	-0.308	-0.749***	-0.232	-0.535***	-0.710***
	(0.153)	(0.158)	(0.158)	(0.167)	(0.261)	(0.230)	(0.175)	(0.192)	(0.252)	(0.212)	(0.255)	(0.180)	(0.245)
Married	0.019	0.005	0.005	0.423*	1.286**	0.11	0.425	0.303	0.653	0.235	0.197	0.477*	0.916*
	(0.230)	(0.248)	(0.248)	(0.257)	(0.592)	(0.348)	(0.285)	(0.290)	(0.481)	(0.307)	(0.398)	(0.283)	(0.480)
Number of children	0.012	0.015	0.015	-0.324***	-0.091	-0.097	0.04	-0.244*	0.05	-0.19	0.115	-0.212*	-0.059
	(0.113)	(0.113)	(0.113)	(0.120)	(0.182)	(0.151)	(0.116)	(0.133)	(0.157)	(0.132)	(0.150)	(0.126)	(0.153)
Union (member=1)	0.103	0.121	0.121	0.031	-0.013	0.108	0.257	0.245	0.073	0.497***	0.158	0.129	-0.04
	(0.158)	(0.155)	(0.155)	(0.159)	(0.252)	(0.219)	(0.168)	(0.189)	(0.248)	(0.191)	(0.237)	(0.172)	(0.232)
Manager	-0.252	-0.555**	0.018	-0.214	-0.016	-0.595**	-0.161	0.166	0.431	-0.096	0.043	-0.245	-0.083
	(0.200)	(0.225)	(0.214)	(0.200)	(0.303)	(0.279)	(0.207)	(0.241)	(0.289)	(0.236)	(0.291)	(0.209)	(0.279)
Tenure	0.063	0.063*	0.063*	-0.004	0.047	0.072	0.028	-0.024	0.032	0.057	-0.011	-0.004	0.03
	(0.040)	(0.037)	(0.037)	(0.043)	(0.063)	(0.052)	(0.038)	(0.051)	(0.061)	(0.045)	(0.052)	(0.044)	(0.054)
Tenure squared	-0.002	-0.002*	-0.002*	-0.001	-0.002	-0.002	-0.001	0	-0.001	-0.002	0	0	-0.001
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Wage income (mil. VND)	0.096***	0.091**	0.091**	0.156***	0.091**	0.074	0.045	0.078	0.109**	0.051	0.021	0.104**	0.100**
	(0.036)	(0.037)	(0.037)	(0.048)	(0.046)	(0.080)	(0.040)	(0.055)	(0.049)	(0.051)	(0.052)	(0.050)	(0.048)
Relative income compared	-0.134	-0.133	-0.133	-0.12	-0.162	-0.258	-0.008	-0.079	-0.114	-0.096	-0.173	-0.203	-0.17
to others in firms	(0.092)	(0.118)	(0.118)	(0.120)	(0.176)	(0.177)	(0.134)	(0.139)	(0.173)	(0.145)	(0.192)	(0.126)	(0.155)
Relative income compared	0.458***	0.466***	0.466***	0.757***	0.148	0.382	0.333*	0.254	-0.359	0.099	0.167	0.691***	0.255

to others in the same sector	(0.172)	(0.178)	(0.178)	(0.195)	(0.286)	(0.282)	(0.199)	(0.219)	(0.275)	(0.237)	(0.287)	(0.202)	(0.256)
Efficiency wage policy	0.331**	0.346**	0.346**	0.379**	0.276	0.535**	0.305*	0.223	0.232	0.546***	0.173	0.258	0.175
	(0.145)	(0.149)	(0.149)	(0.160)	(0.227)	(0.235)	(0.158)	(0.183)	(0.225)	(0.192)	(0.225)	(0.171)	(0.222)
Cost of training	0.066**	0.002	0.084***	0.013	0.063**	0.122**	0.039*	-0.001	0.059**	0.054*	0.041	0.004	0.057**
(% of revenue)	(0.029)	(0.025)	(0.022)	(0.021)	(0.025)	(0.052)	(0.023)	(0.028)	(0.027)	(0.032)	(0.028)	(0.025)	(0.024)
FDI	-0.535***	-0.511***	-0.511***	-0.971***	-0.773***	-0.119	-0.216	-0.541**	-0.372	-0.824***	-0.586**	-0.903***	-0.219
	(0.169)	(0.168)	(0.168)	(0.184)	(0.236)	(0.238)	(0.176)	(0.221)	(0.251)	(0.234)	(0.242)	(0.206)	(0.238)
Cut 1	-1.775***												
	(0.686)												
Cut 2	1.573**												
	(0.680)												
Constant		1.501**	-1.339**	0.538	-3.640***	2.325***	-0.83	1.182	-2.014**	0.933	-2.200**	1.209*	-2.626***
		(0.625)	(0.606)	(0.640)	(1.144)	(0.818)	(0.599)	(0.927)	(0.983)	(0.879)	(1.113)	(0.663)	(0.817)
Observations	959	959	959	936	936	966	966	721	721	679	679	820	820
Brand test of parallell line assumption	**Reject**												

Robust standard errorrs in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1

Table 3: Determinants of Job Satisfaction - FDI sector

	Ologit model	Gologit models											
VARIABLES	**Overall job satisfaction**	**Overall job satisfaction**		**Satisfaction with pay**		**Satisfaction with job security**		**Satisfaction with promotion opportunity**		**Satisfaction with training**		**Satisfaction with fringe benefit**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Category		0	1	0	1	0	1	0	1	0	1	0	1
Male	-0.262	-0.486**	-0.041	0.195	0.271	-0.31	0.296	-0.116	0.23	-0.052	0.201	0.133	0.27
	(0.176)	(0.231)	(0.230)	(0.174)	(0.293)	(0.259)	(0.192)	(0.205)	(0.276)	(0.206)	(0.263)	(0.184)	(0.247)
Age	0.018	0.034	0.001	0.041**	-0.014	0.04	-0.021	0.038*	-0.046*	0.011	-0.027	0.024	0.007
	(0.016)	(0.023)	(0.020)	(0.017)	(0.029)	(0.026)	(0.018)	(0.021)	(0.025)	(0.020)	(0.024)	(0.017)	(0.021)
Ethnic (Kinh=1)	0.326	0.157	0.443	-0.383	-0.628	-0.459	-0.12	-0.549	-0.596	-0.071	13.331***	-0.107	13.180***
	(0.440)	(0.574)	(0.715)	(0.536)	(0.840)	(0.746)	(0.519)	(0.748)	(0.931)	(0.675)	(0.409)	(0.535)	(0.343)
Higher Education	-0.360*	-0.35	-0.406	-0.593***	-0.531	-0.590**	-0.265	-0.025	-0.217	-0.976***	0.116	-0.541**	-0.734**
	(0.192)	(0.247)	(0.266)	(0.198)	(0.359)	(0.293)	(0.212)	(0.221)	(0.310)	(0.251)	(0.350)	(0.213)	(0.304)
Married	-0.044	0.224	-0.402	0.624**	0.575	0.475	0.233	0.348	0.146	0.47	-0.075	0.546*	0.637
	(0.268)	(0.350)	(0.347)	(0.296)	(0.591)	(0.400)	(0.322)	(0.335)	(0.514)	(0.360)	(0.504)	(0.324)	(0.484)
Number of children	-0.021	-0.18	0.165	-0.404***	0.098	-0.225	0.134	-0.259	0.311	-0.291*	0.159	-0.260*	-0.142
	(0.134)	(0.182)	(0.162)	(0.148)	(0.235)	(0.207)	(0.147)	(0.159)	(0.202)	(0.157)	(0.186)	(0.151)	(0.177)
Union (member=1)	0.412**	0.371	0.491*	0.073	0.389	0.178	0.662***	0.228	0.348	0.456**	0.547*	0.246	0.422
	(0.176)	(0.233)	(0.254)	(0.178)	(0.330)	(0.247)	(0.206)	(0.216)	(0.320)	(0.217)	(0.318)	(0.190)	(0.290)
Manager	-0.594**	-1.021***	-0.118	-0.396*	-0.359	-0.846***	-0.34	0.175	0.499	-0.222	-0.405	-0.576**	-0.573
	(0.250)	(0.287)	(0.300)	(0.232)	(0.377)	(0.311)	(0.258)	(0.279)	(0.357)	(0.272)	(0.411)	(0.240)	(0.373)
Tenure	0.075	-0.013	0.164	-0.012	0.194	0.142	0.232**	-0.054	0.117	-0.034	0.281	-0.063	0.089
	(0.077)	(0.104)	(0.112)	(0.083)	(0.142)	(0.116)	(0.097)	(0.100)	(0.143)	(0.099)	(0.194)	(0.085)	(0.128)
Tenure squared	-0.006	-0.001	-0.01	-0.003	-0.011	-0.01	-0.017**	-0.001	-0.005	0.001	-0.021	0.001	-0.006
	(0.005)	(0.007)	(0.007)	(0.006)	(0.010)	(0.007)	(0.007)	(0.006)	(0.010)	(0.006)	(0.014)	(0.006)	(0.009)
Wage income (mil. VND)	0.096**	0.134**	0.069	0.142***	0.006	0.094	0.012	0.034	0.077	0.037	0.063	0.111**	0.131**

	(0.046)	(0.067)	(0.055)	(0.049)	(0.070)	(0.097)	(0.060)	(0.057)	(0.073)	(0.058)	(0.079)	(0.054)	(0.058)
Relative income compared	-0.229**	-0.238*	-0.248*	-0.185	-0.592**	-0.345*	-0.024	-0.082	-0.262	-0.179	-0.144	-0.287**	-0.310*
to others in firms	(0.099)	(0.139)	(0.141)	(0.129)	(0.231)	(0.186)	(0.144)	(0.145)	(0.209)	(0.148)	(0.225)	(0.134)	(0.161)
Relative income compared	0.465**	0.466*	0.497*	0.740***	0.775**	0.139	0.276	0.234	-0.193	0.189	-0.018	0.665***	0.24
to others in the same sector	(0.207)	(0.280)	(0.271)	(0.219)	(0.348)	(0.326)	(0.235)	(0.247)	(0.332)	(0.267)	(0.368)	(0.231)	(0.310)
Efficiency wage policy	0.365**	0.621**	0.218	0.390**	0.490*	0.639**	0.211	0.381*	0.211	0.752***	0.38	0.326*	0.446*
	(0.179)	(0.277)	(0.236)	(0.188)	(0.295)	(0.293)	(0.193)	(0.223)	(0.289)	(0.229)	(0.285)	(0.196)	(0.256)
Cost of training	0.05	-0.025	0.072***	0.007	0.043	0.116**	0.021	-0.006	0.051	0.049	0.017	-0.003	0.043
(% of revenue)	(0.032)	(0.029)	(0.022)	(0.023)	(0.028)	(0.048)	(0.026)	(0.030)	(0.034)	(0.034)	(0.031)	(0.027)	(0.027)
Cut 1	-0.538												
	(0.650)												
Cut 2	2.954***												
	(0.665)												
Constant		0.589	-2.849***	-0.809	-2.618**	1.136	-1.829**	0.13	-1.163	0.513	-15.615***	-0.138	-16.163***
		(0.857)	(0.913)	(0.749)	(1.252)	(1.061)	(0.793)	(0.995)	(1.326)	(0.894)	(0.853)	(0.741)	(0.831)
Observations	682	682	682	669	669	692	692	531	531	483	483	602	602
Brand test of parallell line assumption	**Reject**												

Robust standard errorrs in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1

Table 4: Determinants of Job Satisfaction - Domestic sector

	Ologit model	Gologit models										
VARIABLES	**Overall job satisfaction**	**Overall job satisfaction**		**Satisfaction with pay**		**Satisfaction with job security**		**Satisfaction with promotion opportunity**		**Satisfaction with training**		**Satisfaction with fringe benefit**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Category		0	1	0	1	0	1	0	1	0	1	0	1
Male	-0.075	-0.417	0.148	-0.488	0.894*	-1.012*	0.002	-0.736*	1.190**	-0.312	-0.094	0.122	0.618
	(0.276)	(0.431)	(0.362)	(0.346)	(0.517)	(0.542)	(0.340)	(0.421)	(0.604)	(0.420)	(0.427)	(0.377)	(0.535)
Age	-0.021	-0.033	-0.012	-0.012	0.031	-0.074*	0.018	-0.012	0.079**	-0.04	0.024	-0.080**	0.021
	(0.030)	(0.035)	(0.034)	(0.031)	(0.041)	(0.039)	(0.027)	(0.037)	(0.038)	(0.037)	(0.038)	(0.034)	(0.044)
Ethnic (Kinh=1)	-0.94	1.062	-1.558**	-0.88	16.569***	-0.439	-1.256*	-15.169***	-0.827	13.374***	-14.563***	-0.344	-0.936
	(0.943)	(0.708)	(0.610)	(1.075)	(0.501)	(0.988)	(0.734)	(0.833)	(0.994)	(1.294)	(1.331)	(0.865)	(0.735)
Higher Education	-0.088	0.144	-0.397	-0.853**	-0.449	-0.135	-0.570*	-0.558	-0.14	-0.261	-0.486	-0.468	-0.029
	(0.261)	(0.383)	(0.365)	(0.344)	(0.426)	(0.410)	(0.334)	(0.426)	(0.523)	(0.412)	(0.479)	(0.365)	(0.483)
Married	0.087	-0.404	0.446	-0.731	18.755***	-14.634***	0.901	0.455	16.368***	-0.285	0.467	0.122	18.144***
	(0.570)	(0.781)	(0.971)	(0.765)	(1.496)	(0.495)	(0.766)	(0.720)	(1.241)	(0.771)	(0.946)	(0.736)	(1.557)
Number of children	-0.059	-0.064	-0.035	-0.119	-0.615**	0.34	-0.265	-0.325	-0.413	0.015	-0.054	-0.157	-0.199
	(0.194)	(0.271)	(0.241)	(0.256)	(0.302)	(0.261)	(0.209)	(0.315)	(0.309)	(0.316)	(0.305)	(0.287)	(0.296)
Union (member=1)	-0.615	0.631	-1.511***	0.178	-0.501	-0.134	-0.607	0.064	-0.767	0.707	-0.632	-0.293	-1.359**
	(0.454)	(0.521)	(0.496)	(0.398)	(0.539)	(0.525)	(0.392)	(0.488)	(0.601)	(0.569)	(0.557)	(0.437)	(0.614)
Manager	0.323	0.218	0.372	-0.011	0.316	-0.249	0.077	0.143	0.201	0.252	0.639	1.124*	0.979*
	(0.340)	(0.589)	(0.401)	(0.507)	(0.605)	(0.623)	(0.399)	(0.682)	(0.598)	(0.671)	(0.523)	(0.679)	(0.559)
Tenure	0.217***	0.213**	0.242**	0.157*	0.134	0.109	0.079	0.166*	0.1	0.203*	0.095	0.240**	0.084
	(0.072)	(0.107)	(0.098)	(0.080)	(0.131)	(0.116)	(0.074)	(0.098)	(0.139)	(0.105)	(0.096)	(0.107)	(0.117)
Tenure squared	-0.006***	-0.007**	-0.007**	-0.006**	-0.006	-0.002	-0.002	-0.006*	-0.004	-0.007**	-0.003	-0.007**	-0.002

	(0.002)	(0.003)	(0.003)	(0.003)	(0.005)	(0.004)	(0.002)	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)
Wage income (mil. VND)	0.292**	0.449	0.286**	1.071***	0.533***	0.468	0.311**	1.305***	0.277*	0.973**	0.057	1.109**	0.13
	(0.117)	(0.276)	(0.135)	(0.349)	(0.199)	(0.332)	(0.135)	(0.441)	(0.167)	(0.380)	(0.087)	(0.485)	(0.102)
Relative income compared to others in firms	0.464	0.508	0.46	0.61	0.747	0.523	-0.014	-0.093	0.384	0.427	-0.234	0.518	0.347
	(0.360)	(0.548)	(0.410)	(0.451)	(0.478)	(0.466)	(0.351)	(0.500)	(0.473)	(0.562)	(0.496)	(0.487)	(0.573)
Relative income compared to others in the same sector	0.234	0.113	0.286	0.791	-1.06	1.095	0.382	-0.316	-0.718	-0.927	0.402	0.462	-0.083
	(0.358)	(0.591)	(0.471)	(0.560)	(0.718)	(0.725)	(0.458)	(0.645)	(0.740)	(0.775)	(0.607)	(0.597)	(0.609)
Efficiency wage policy	-0.171	-0.084	-0.163	0.264	-0.428	-0.105	0.105	-0.361	-0.234	0.164	-0.333	-0.352	-1.254**
	(0.317)	(0.488)	(0.405)	(0.388)	(0.410)	(0.515)	(0.351)	(0.454)	(0.532)	(0.499)	(0.447)	(0.451)	(0.513)
Cost of training	0.515***	0.619*	0.422***	0.784*	0.816***	2.526	0.651***	0.247	0.736***	0.389**	0.392***	0.122	0.843***
(% of revenue)	(0.147)	(0.347)	(0.137)	(0.409)	(0.182)	(2.106)	(0.132)	(0.203)	(0.127)	(0.159)	(0.132)	(0.189)	(0.179)
Cut 1	-2.039												
	(1.387)												
Cut 2	1.326												
	(1.366)												
Constant		0.002	-1.034	0.614	-39.377***	17.764***	-1.454	15.230***	-20.784***	-13.065***	12.335***	1.671	-19.868***
		(1.308)	(1.428)	(1.361)	(2.209)	(1.382)	(1.257)	(1.253)	(1.977)	(1.618)	(2.281)	(1.371)	(2.161)
Observations	277	277	277	267	267	274	274	190	190	196	196	218	218
Brand test of parallell line assumption	**Reject**												

Robust standard errorrs in parentheses *** p < 0.01, ** p < 0.05, * p < 0.1